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4.0 INFORMATION REQUESTS RECEIVED FROM THE PUBLIC

4.1 Wabush Resident (PC 01)

4.1.1 PC 01-1

1) That adequate dust control measures be put in place for tailings, operation and pits as this will affect the quality of life in the adjoining town (Wabush).

Alderon Response to PC 01-1

Alderon does recognize the potential for dust emissions during the operation of the proposed mine. The effects of the operation of the Project on Air Quality were assessed in Chapter 14 (Volume 1 of the EIS) and dust control measures were identified and committed to by Alderon, including, but not limited to:

- Dust suppression on roads;
- Crusher buildings equipped with dust collection systems;
- Enclosed crushed ore reclaim tunnel;
- Process plant feed system enclosed with dust collection;
- Wet processing;
- Rail car loading hopper equipped with dust collection system; and
- Progressive reclamation of the tailings pond.

Since issuing the EIS additional dust modelling has been undertaken based on a refined set of inputs. The results of this additional dust modelling for total suspended particulate matter (TSP), particulate matter less than 10 microns in diameter (PM_{10}) and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) for the 24-hour averaging time period are presented in Figures 4.1.1, 4.1.2 and 4.1.3 below. As shown in these figures the maximum predicted 24-hour concentrations of TSP, PM_{10} and $PM_{2.5}$ within Wabush are below the limits stipulated in the provincial *Air Pollution Control Regulations* of 120 µg/m^3, 50 µg/m^3 and 25 µg/m^3, respectively. Model results show no exceedance of Newfoundland and Labrador standards for dust due to the contribution of the Project. Therefore, the quality of life in Wabush will not be significantly adversely affected by dust. A follow-up program will be implemented, including methods to monitor the construction and operation of the mine for compliance with the EIS and with stipulations about environmental performance that will be prescribed and enforced by NLDOEC.

Figure 4.1.1 Additional Dust Modelling for Total Suspended Particulate Matter (TSP)

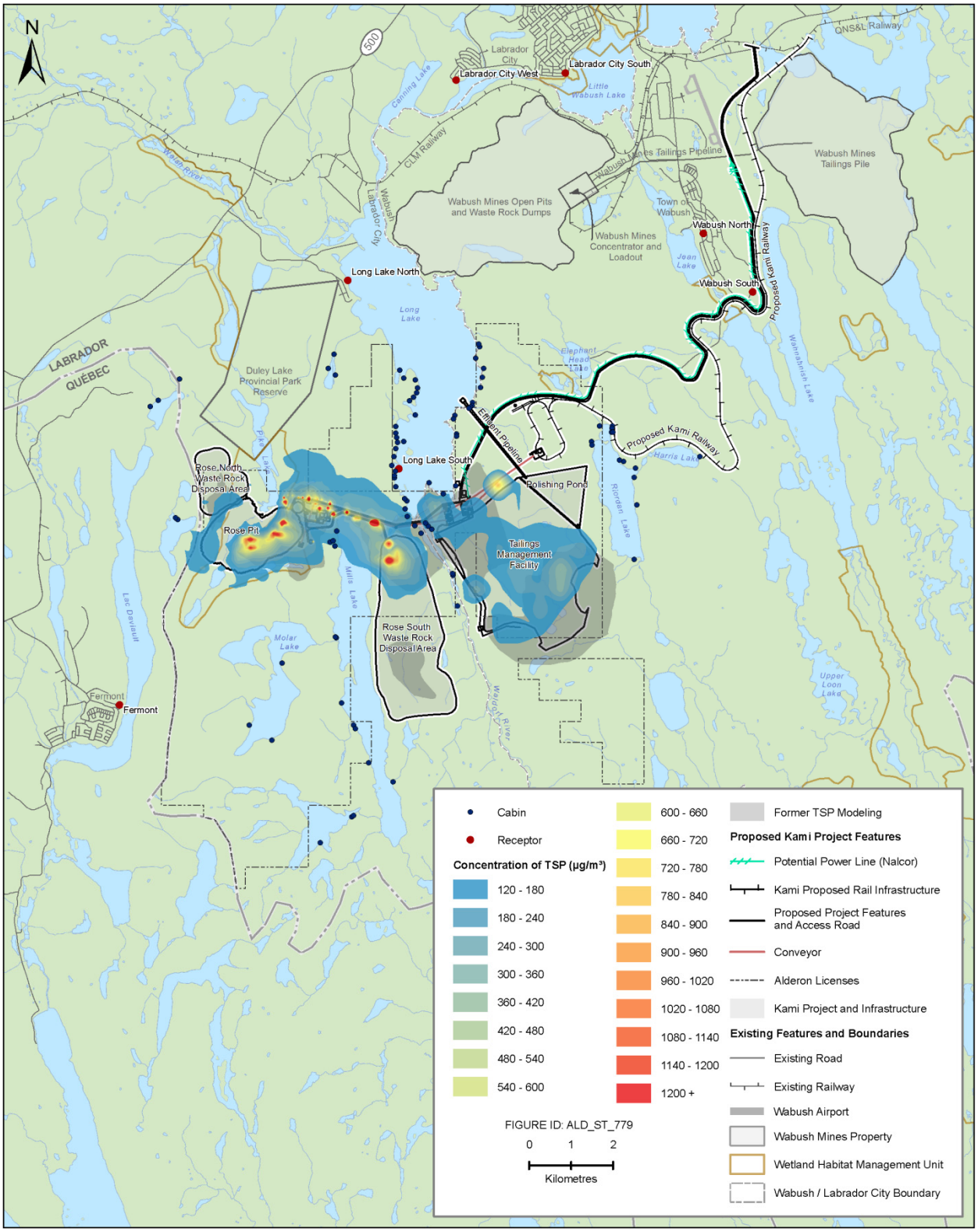


Figure 4.1.2 Additional Dust Modelling for Particulate Matter less than 10 Microns in Diameter (PM_{10})

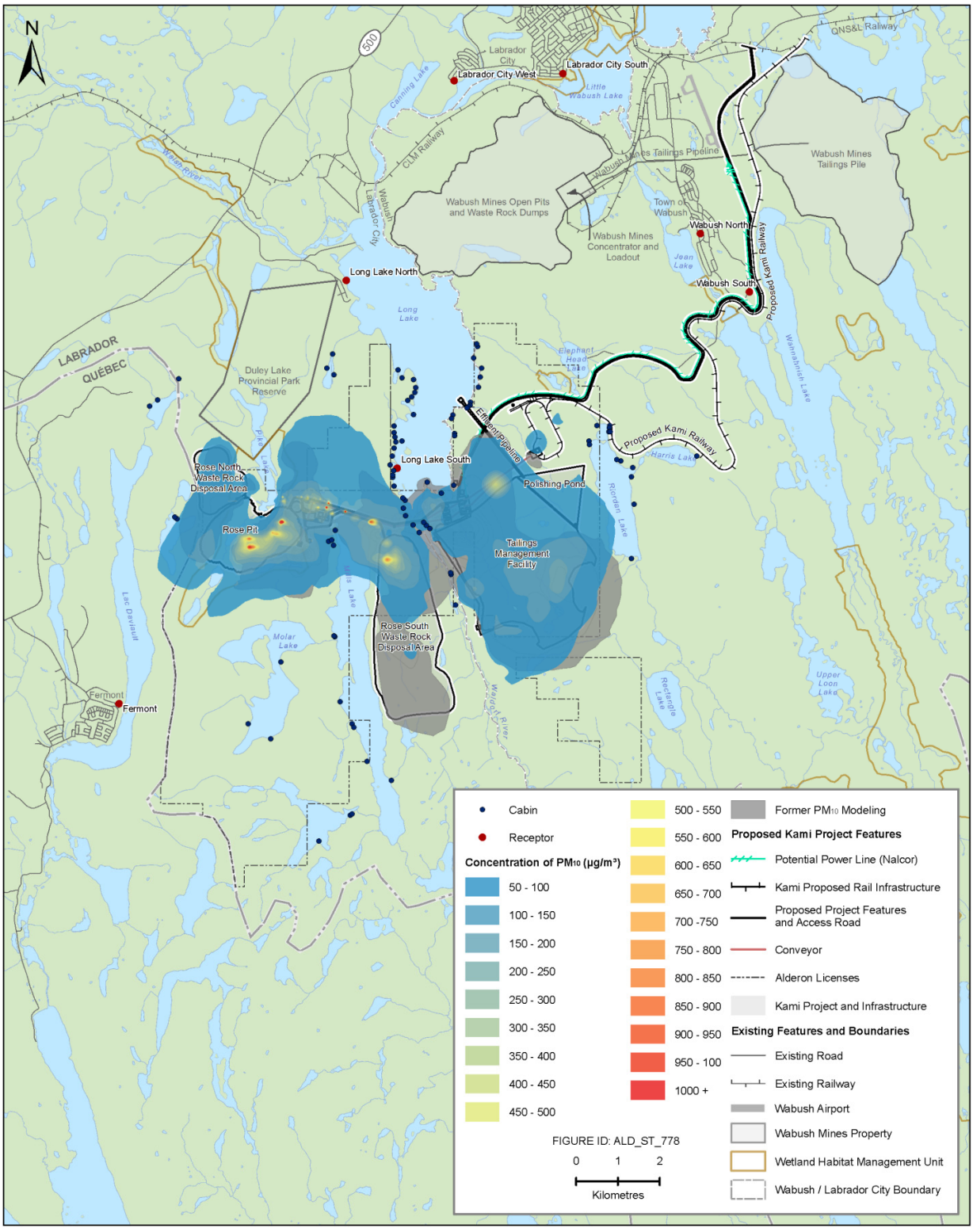
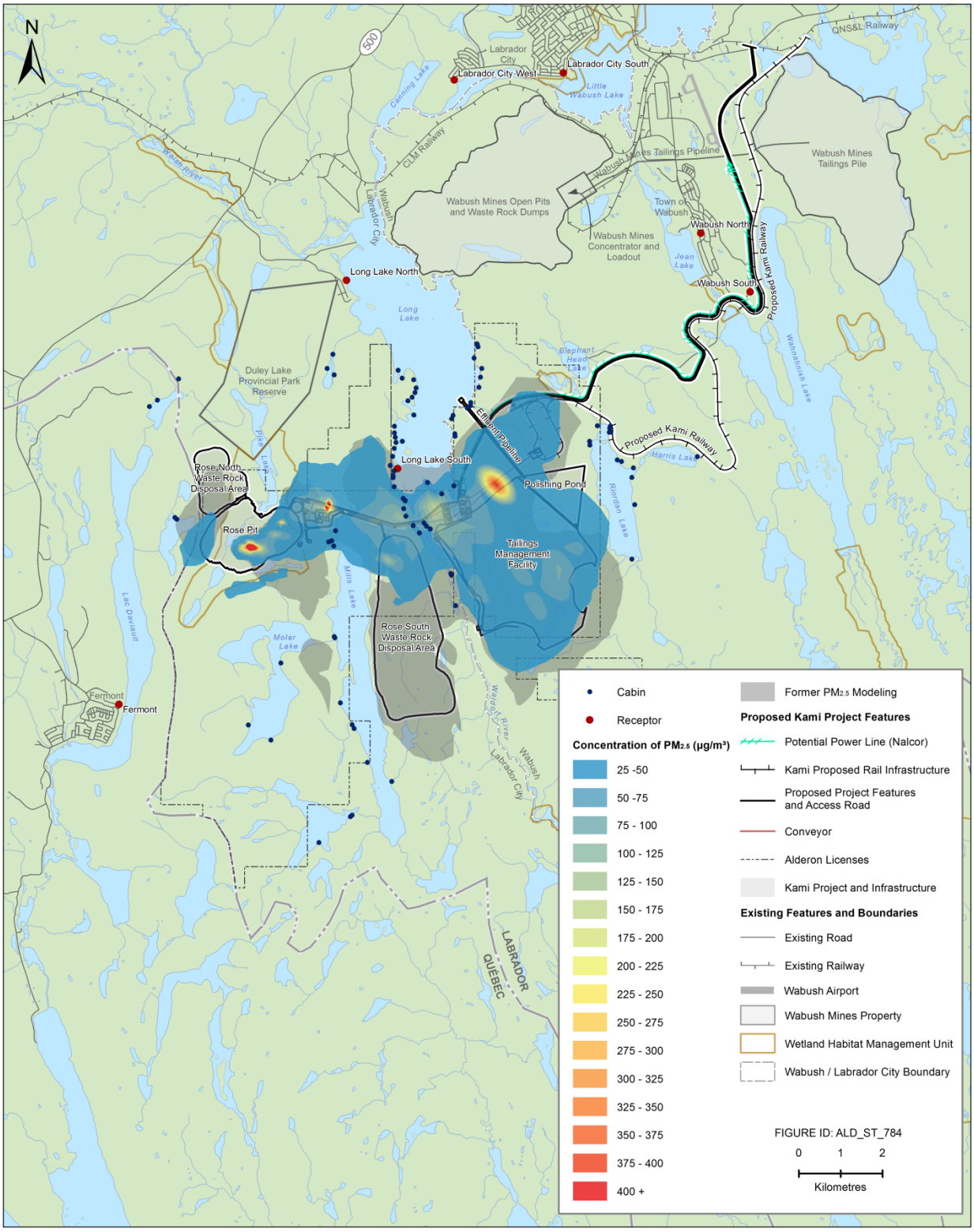


Figure 4.1.3 Additional Dust Modelling for Particulate Matter less than 2.5 Microns in Diameter ($PM_{2.5}$)



4.1.2 PC 01-2

2) That the Town of Wabush does not become a throughway for the property and work camp as alternate routes were/are available.

Alderon Response to PC 01-2

Alderon has and will continue to consult with the Town of Wabush with respect to the road access route to the site and the impact of increased traffic on the proposed route. As per Section 27, page 27-7 of the EIS, Volume 1, Alderon is committed to the following:

- Develop transportation arrangements (workers to be bused to the Project site); and
- Construct an access road to the Project site to minimize Project-related traffic on public roads and through residential areas.

Alderon will build a new road to access the mine site, thereby avoiding Grenfell Drive and eliminating concerns about increased traffic and lack of safety within the Town of Wabush. The location of this road can be found in Chapter 2, Section 2.4.1 of the EIS, Volume 1. Further, Alderon will develop transportation arrangements for workers to be bussed to the Project site, thereby minimizing the number of Project related vehicles on the road.

4.1.3 PC 01-3

3) That the routing of the road/railway take into consideration the safety of residents who have long used the routes to access recreation areas and trails.

I am not adverse to progress, just want to ensure that it is done responsibly and errors of the past are not repeated.

Sincerely,

********* *****

Alderon Response to PC 01-3

The rail line proposed for the Project will not cross any public roads. Potential effects and mitigation measures for outdoor recreation activities and land use are described in Section 23.5.4 in Volume 1 of the EIS. Access to the Project site will be restricted to ensure the safety of workers and the public. A new access road is proposed to be located to the east of Wabush to minimize the effects of Project traffic on the communities and recreation areas. Alderon has also committed to working with local user groups (e.g., snowmobile clubs) to address specific Project concerns (Section 23.6.1 of Volume 1). As a result, Alderon has taken into consideration the safety of residents in planning the Project.

An assessment and evaluation of the likely environmental and socioeconomic effects and benefits of the Project is provided in Volume 1 of the EIS. This includes information on

recreational land use such as access to recreational areas (Chapter 23 of Volume 1). Alderon has engaged community members and stakeholders with a view to addressing a number of potential effects on these areas of concern. To date, Alderon has:

- held discussions with the White Wolf Snowmobile Association with a view to identifying safe alternate routes for snowmobile trails affected by the Project;
- begun engaging with a number of cabin owners with respect to the potential for the Project to adversely affect safe year round access to their cabins. A letter was sent on November 26, 2012 notifying cabin owners of this issue and informing them that Alderon will contact them in January 2013 to open discussions concerning measures aimed at providing safe alternate access routes (please see attached sample letter in Appendix T).

The design of the rail / road routing to access the site has and will continue to address the safety of residents who use these areas to access recreational areas and trails. Some access may be altered and access trails re-routed to ensure that residents' safety is not impacted by accidently entering the mine operations area.

As per Section 27, page 27-6 of the EIS, Volume 1, Alderon has committed to the following (selected text) with respect to access around the site:

Change in Access:

- Work with local snowmobile and cross country ski organizations to replace trail equal to the amount lost.

Cabin Use:

- Continue engagement with cabin owners.
- Work with cabin owners to address Project effects on access.

4.2 Fermont Resident (PC 02)

4.2.1 PC 02-1

Roughly translated:

"Hello, being a citizen of Fermont and staying across from site of the future mine, I am simply opposed. There will be toxic dust deposited, the noise of machines, not to mention the vibration and other toxic dust from blasting. I really believe this mine must not see the (light of) day. I don't want to say good-bye to my quality of life and even less to that of my children."

Alderon Response to PC 02-1

The Environmental Assessment process is designed to identify potential adverse environmental effects and propose mitigation measures which can be used to address those adverse effects. This includes redesign of Project elements, access routes and technologies, where required, to reduce adverse environmental effects. The EIS for the proposed Kami Mine has examined the potential effects of dust and noise during Project operation and construction and the findings are presented in Chapter 14 of Volume 1 of the EIS. The potential effects have been found to be not significant based on the criteria noted in the evaluation. Additional dispersion modelling was conducted to account for changes in Project design; this confirmed the avoidance of significant adverse effects.

The additional dust modelling was conducted based on revised model inputs and these results also indicate that the potential effects of dust emissions will be not significant. Once the final design of the Kami Mine is completed, dust emissions will again be modelled to account for any changes from the current design. The Sustainability Management Framework (Appendix J) will include a detailed monitoring plan for Project construction and operation.

The potential effects of dust, noise and vibration during Project operation and construction have been assessed and the findings have been presented in Chapter 14, Volume 1. Proposed mitigation measures to address these effects were outlined in Sections 14.6.1.1, 14.6.1.3, and 14.6.1.4 in Chapter 14 of the EIS, and include, but not limited to:

- numerous dust control measures incorporated into design and operational controls;
- use of mufflers on equipment and replacement of some heavy diesel equipment by quieter electric powered equipment;
- enclosed conveyor motors;
- maintenance of a vegetation buffer between the Project and nearby residents and cottages that will work to reduce impacts of air pollutants, noise and site lighting;
- limiting train speed to 50 km/hr or less; and

- use of continuous welded track and ballast system, with oilers installed as needed to eliminate wheel flange noise on curves.

The model results, as showed in Sections 14.6.2.1 and 14.6.2.3 of Chapter 14, Volume 1, show no exceedance of Québec standards for dust or noise (Québec *Clean Air Regulation*; Traitement des plaints sur le bruit et exigencies aux ent qui le génèrent) due to the contribution of the Project. Therefore, with the implementation of the above dust, noise and vibration control measures, the quality of life in Fermont will not be significantly adversely affected.

4.3 Fermont Resident (PC 03)

4.3.1 PC 03-1

Hello.

I am writing to share my concerns regarding the Alderon project that is being carried out near the Fermont town limits.

Since the government launched the Plan Nord project, our town has already undergone many different changes. We have yet to receive the information needed to properly follow the developments resulting from this plan. The residents of Fermont are already looking for ways to be heard, since we have been all but forgotten in all the hoopla over the project.

Alderon Response to PC 03-1

The Kami Mine is entirely located in Labrador and, as such, is not part of the Plan Nord, which is an initiative of the Province of Québec. Alderon has acknowledged and responded to the concerns of the citizens of Fermont pertaining to the Project and has developed a substantial history of engagement with the citizens of Fermont and community stakeholders. These engagement activities include two public information sessions; ongoing engagement with the Town Council of Fermont; consultation with the Mouvement citoyen de Fermont as requested; and the publication of the Plain Language Summary and Volume 1 of the Kami EIS in French on the website of the Canadian Environmental Assessment Agency. The EIS was also delivered to the Public Library and the Town Hall in Fermont.

In compliance with the EIS Guidelines, Alderon held a consultation session on March 15, 2012, in Fermont to explain the Project, describe the potential effects of the Project on Fermont, and receive public comments.

As part of Alderon's ongoing public engagement initiative, Alderon has exceeded the regulatory requirements as outlined in the Environmental Assessment Guidelines by holding an additional consultation session following the EIS submission during the public comment period on October 25, 2012.

Alderon has incorporated community concerns expressed by the community of Fermont into the Project design. At the consultation session on March 15, 2012, some residents expressed concern over the proximity of the proposed Rose South Waste Rock Disposal Area (RSDA) to the Town of Fermont (approximately 2 km). In response to these concerns, Alderon made the decision to move the RSDA approximately 5 km east of the original site to mitigate the potential effects on the community. This change to the Project layout is illustrated in Figure 5.1 in Volume 1 of the EIS.

Additional information on Alderon's engagement with the citizens of Fermont, is found in Volume 1, Chapter 10 of the EIS and Chapter 10 of this Amendment.

4.3.2 PC 03-2

Recently, the residents of Fermont were informed of another mining project: the Alderon project. This mine will straddle the Labrador/Québec border. It will be located less than 5 km from our town. We already have two mines nearby: one is 17 km away, and the other is 10 km away. When the wind is blowing in a particular direction, we already get dust from those mines in Fermont! With a mine less than 5 km away, I have to wonder how my family will live. Are we going to have to wear air masks?? When we go to Labrador and see the residue that their mine has left on their town, we are stunned by the difference in how our mines manage their residue. When people visit us in Fermont, we often take them to see Labrador City; they are always surprised by the red snow that covers the city landscape. There aren't any environmental regulations in Labrador! Must we let our quality of life and air be destroyed?

Alderon Response to PC 03-2

The Alderon mine will not straddle the Labrador/Québec border. The mine is located entirely within Labrador. The Kami mine and associated infrastructure will be located more than 5 km distant from the municipal boundaries of the Town of Fermont.

Ambient air concentrations of dust due to mining operations are subject to and are compliant with the NLDOEC regulations for air contaminants (listed on pages 14-10 and 14-11 in Volume 1 of the EIS). As the comment notes, the wind is generally directed away from Fermont, but does blow from the mine site toward Fermont roughly 5 percent of the time. The EIS took these conditions into account, using detailed meteorological conditions over a three year period, including winds blowing directly toward Fermont. The results indicate that there should not be adverse effects on ambient air quality in Fermont (as shown in the Volume 1 of the EIS on pages 14-53 through 14-58), and that mitigation measures outlined in the EIS (page 14-44) should contain dust emissions within the mine boundary. Alderon has designed the equipment inventory to include four water trucks that will be used routinely, or can be dispatched to control emissions if a problem arises.

Also, as part of Alderon's Sustainable Management Framework (Appendix J) for the Project, the Environmental Management System will include a comprehensive air monitoring program which will provide evidence of conformance of the mine to environmental standards. The ambient air quality monitoring program is also developed in partnership with the NLDOEC as a continuous improvement initiative for ambient air quality in Newfoundland and Labrador.

4.3.3 PC 03-3

And what about the noise? Right now they are only doing exploration work, and we are already being subjected to the noise of helicopters and drills.

Alderon Response to PC 03-3

All potential noise effects from construction and operation of the Kami mine are addressed in Chapter 14 of Volume 1 of the EIS. Alderon will comply with provincial regulations and federal guidelines associated with noise associated with the Kami mine. It is unlikely that helicopters will be used in the operation, and drilling will be largely confined to within the walls of the operating pit.

Following the environmental assessment approval, a Blasting Plan will be developed and implemented in compliance with all applicable laws, regulations and industry best practices, and with consideration of safety, environmental and social issues as identified throughout the EIS. See Section 2.6.2 of Volume 1 of the EIS for more information. Effects of the Project on the atmospheric environment, including air quality, noise, vibration and dust have been assessed and mitigation measures identified. During Project activities, blast noise and vibration will be monitored and will comply with regulatory standards. See Sections 23.5.2.1, 23.6.3 and Chapter 14 (Atmospheric Environment) of Volume 1 of the EIS for more information.

4.3.4 PC 03-4

I am also concerned about Daviault Lake, which is located near the project. This lake means a lot to us. First, the lake surrounds the town. Second, we have been using the lake for many different activities since I was little (I'm 30 years old) – both water sports and winter sports. There is a marina on the lake, across from the future site of the tailings disposal site. We swim in the lake, fish in it, go boating on it and so on. In the winter, it's a prime location for anyone who enjoys the outdoors: we snowmobile, snowshoe, cross-country ski, snowkite and surfkite. A campground is being developed on the lakeshore. Since we live in a remote area, enjoying nature is the only activity we have!

Alderon Response to PC 03-4

An assessment and evaluation of the likely environmental and socioeconomic effects and benefits of the Project is provided in Volume 1 of the EIS. This includes information on use of land and resources for recreational purposes (Chapter 23 of the EIS, Volume 1).

The Project will not overlap with Lac Daviault and will therefore not likely affect current use of the lake for recreation. Based on viewshed analysis only some waste rock areas will be visible from the western shores of Lac Daviault. Although blasting may be audible, vibrations are not expected to be felt on the western shore. Modelling of noise resulting from the Project indicate that noise levels will not exceed Health Canada guidelines at Lac Daviault. Modeling of dust dispersion indicates that dust levels at Lac Daviault will not be elevated as a result of the Project.

The Project is not anticipated to have adverse effects on activities at Lac Daviault except for some visibility of Project features. Effects of the Project on the atmospheric environment, including air quality, noise, vibration and dust have been assessed and mitigation measures

identified. Please refer to Sections 23.6.2, 23.6.4 and Chapter 14 (Atmospheric Environment) in Volume 1 of the EIS.

Following the environmental assessment approval, a Blasting Plan will be developed and implemented in compliance with all applicable laws, regulations and industry best practices, and with consideration of safety, environmental and social issues as identified throughout the EIS. See Section 2.6.2 in Volume 1 of the EIS for more information. Effects of the Project on the atmospheric environment, including air quality, noise, vibration and dust have been assessed and mitigation measures identified. During Project activities, blast noise and vibration will be monitored and will comply with regulatory standards. See Sections 23.5.2.1, 23.6.3 and Chapter 14 (Atmospheric Environment) in Volume 1 of the EIS for more information.

4.3.5 PC 03-5

I imagine that the development of this mine will expose minerals that will be carried by groundwater and leach into Fermont's water supply.

Alderon Response to PC 03-5

Based on the assessment conducted in Volume 1, Section 16.6 the EIS, there are no pathways whereby leachate could leave this mine and migrate towards Fermont. Fermont is located several kilometres west of a major watershed divide and a large lake which would act as a boundary to any seepage. During normal operating conditions, all groundwater flow will be inward towards the open pit mine. Therefore, based on hydraulic gradients there will not be a pathway for groundwater flow from the mine towards Québec. After the mine is closed and decommissioned, the mine will flood, and groundwater flow directions should return to near existing equilibrium conditions.

4.3.6 PC 03-6

We worry that a project such as Alderon will ruin many long-term plans. If there are no environmental regulations in Labrador, I understand why Labrador City looks the way it does! We don't want to stop this project; we just want the people of Fermont to be considered in all this! We would like the project to be moved a little farther away on their side of the border. We would like to maintain natural beauty, quality of life and health in our municipality! We need someone to help us before we are invaded by mining companies that often have power because of their money! We are a small community that is beginning to understand what the Innu are experiencing! We are having everything taken away before our eyes without any opportunity to voice our concerns – even though we have been here since the closure of Gagnonville! We want development, but we want smart development! Our town is increasingly becoming a work site; we are fighting to regain the quality of life that we have lost over the years. Is it normal for a town's development to be decided by mining companies, with our services and community activities shrinking year after year?

I hope that you will hear us; we want to maintain our quality of life! We don't want to see our landscape and activities disappear for the sake of a mine! Please help us!! This is a true David and Goliath situation! We are trying so hard to be heard! The problems are not just short-term, but more long-term as well. Will these mining companies turn our town into a ghost town? If no moratorium is imposed on these mining companies, they'll set up in my backyard...which is practically the case with the Alderon project! Are you going to take away all we have left – nature?!

Thank you for taking the time to read my message and for taking the concerns of the residents of Fermont into consideration. Please consider this an impassioned plea for help!

Alderon Response to PC 03-6

Environmental assessment is a planning process which engages stakeholders and involves enhancing Project design and minimizing adverse effects on the environment is used to enhance through engagement of stakeholders. As a key stakeholder, Fermont has been given careful consideration throughout Volume 1 of the EIS and the Fermont area was addressed by a comprehensive set of environmental surveys and modeling. While the community is addressed within the EIS too frequently to provide an exhaustive list, the importance of Fermont with respect to the environmental effects analyses is evidenced by the following:

- Volume 1, Section 6.3 discusses residential, commercial and industrial land use in Fermont as activities to be considered in cumulative effects assessment throughout all VEC chapters;
- Fermont has been considered in the Study Area design for all VECs, detailed in Chapters 14.0 through 26.0 of Volume 1;
- the Fermont area has been addressed by comprehensive environmental surveys and modeling (e.g., Sections 14.6.1, 14.6.2, 15.6.3, 16.6.2, 18.5, 18.7, 19.6, 20.6.1, 21.7, 22.7.1, 22.7.2, 22.7.3. 23.6, 24.6, 25.6, and 26.4 of Volume 1);
- the location of Fermont is indicated on all reference maps throughout Volume 1 of the EIS; and
- issues raised by residents of Fermont are included with those of other public stakeholders in the "Issues" sub-section of each VEC chapter. Also provided is a summary response to each issue raised and the location in Volume 1 of the EIS for more detailed information.

Alderon's Communities Relations Policy, provided in Section 1.1.1 of Volume 1 of the EIS, states:

> *"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."

Recognizing the Town of Fermont and its residents as key stakeholders, Alderon has engaged with the community through a range of consultation activities. Chapter 10 of Volume 1 of the EIS provides a description of all consultation and engagement activities undertaken by Alderon as a part of the development of the EIS for the Project. As required by the Guidelines and indicated by Section 10.4.1 of the EIS, the residents and the Town of Fermont are included as stakeholders. A detailed description of Alderon's consultation activities with the Town of Fermont and its residents is provided in Section 10.5.3 of the EIS. Table 10.14 of the EIS provides a summary of these consultation activities.

An assessment and evaluation of the likely environmental and socioeconomic effects and benefits of the Project is provided in the EIS. This includes information on health and community health (Chapter 25 in Volume 1 of the EIS) which addresses quality of life. Quality of life considerations have also been assessed in Chapter 23 of the EIS which includes use of lands and resources and related viewscapes. Atmospheric environment, including dust and noise, is described in Chapter 14. Effects (including air quality, noise, vibration and dust) have been assessed, and mitigation measures identified, in Chapter 14 (Atmospheric Environment) and in Sections 23.5.2.1 and 23.6.3 of Volume 1 of the EIS.

Residents of the larger western Labrador and Cote Nord regions self report as having high levels of life satisfaction and low levels of stress compared to their provincial counterparts (Section 25.5.2 in Volume 1 of the EIS). This may be in part because people in these regions enjoy higher than average employment rates and incomes than province residents. For instance, Fermont's and western Labrador's residents have lower unemployment rates than their respective provinces. Residents of these areas also have access to large wilderness areas with a range of recreational opportunities.

As addressed in Volume 1 of the EIS, Section 23.6, the Project is not expected to affect current land uses activities in Québec. Potential effects and mitigation measures for outdoor recreation activities and land use are described in Volume 1, Section 23.5.4. Alderon has been engaging with user groups to address Project effects (Volume 1, Sections 23.5.2.1 and 23.6.). Access to the Project site will be restricted to ensure the safety of workers and the public. A new access road is proposed to be located to the east of Wabush to minimize the effects of Project traffic on the communities and recreation areas. Alderon has committed to working with local user groups (e.g., snowmobile and cross country ski clubs) to address specific Project concerns (Section 23.6.1 in Volume 1).

The results of detailed viewshed analyses are presented in Volume 1, Chapter 23 of the EIS. The Project has been designed to have minimal visibility from the surrounding communities, including Fermont. As a result of concerns raised by residents of Fermont, Alderon redesigned the Project and moved the Rose South Waste Rock Disposal Area approximately 5 km east to minimize potential effects to viewscapes in and near Fermont. The Project will be visible from some recreation locations including some areas of Lac Daviault (Volume 1, Section 23.6.4).

Although blasting may be audible, vibrations will not be felt on the western shore of Lac Daviault. Modeling of noise levels resulting from the Project will not exceed Health Canada guidelines in this area. Modeling of dust dispersion indicates that dust levels at Lac Daviault will not be elevated as a result of the Project. See Sections 23.6.2, 23.6.4 and Chapter 14 (Atmospheric Environment) in Volume 1 of the EIS. Following the environmental assessment approval, a Blasting Plan will be developed and implemented in compliance with all applicable laws, regulations and industry best practices, and with consideration of safety, environmental and social issues as identified throughout the EIS. See Section 2.6.2 in Volume 1 of the EIS for more information. Effects of the Project on the atmospheric environment, including air quality, noise, vibration and dust have been assessed and mitigation measures identified. During Project activities, blast noise and vibration will be monitored and will comply with regulatory standards. See Sections 23.5.2.1, 23.6.3 and Chapter 14 (Atmospheric Environment) in Volume 1 of the EIS for more information.

Project effects on Health and Community Health are presented in Chapter 25 of Volume 1 of the EIS. People living in Fermont have a very low potential of coming into contact with any Project emissions. Furthermore, Project emissions are not expected to result in changes to air, water or soil that would likely pose a threat to human health. Public safety will be protected through Project site access restrictions throughout construction and operations. Project-related transportation and access systems will avoid the use of existing local roadways (especially within the communities), and Alderon will conduct ongoing consultation and communication forums with Fermont and other communities.

The Project will have beneficial effects such as employment and business opportunities which benefit communities and residents. Alderon's plans to attract and maintain a resident workforce, as well as its work rotations and transportation systems during construction, will help to minimize any negative social issues and interactions (e.g., increased drug and alcohol abuse) with the local communities.

4.4 Fermont Residents (PC 04)

4.4.1 PC 04-1

Here are our comments:

1- We found that every information session held by Alderon for the people of Fermont was organized with the goal of dividing the residents. What I mean is that they planned for information booths rather than a general meeting where each participant could express their views in front of everyone.

Alderon Response to PC 04-1

Alderon's approach to consultation included the following overall objectives: (i) to provide as much information about the Project to the public as possible; (ii) listen to and record comments from the public; (iii) respond to questions and concerns from the public using qualified expertise; and (iv) maximize the level of public participation in the consultation process.

The format employed at the public information sessions held in Fermont addressed the aforementioned objectives much more effectively than a general meeting, public forum or a Project presentation, and the same approach was used in other public information sessions held in Sept-Îles, Labrador City, and Wabush. These sessions were structured so that information stations were set up and manned by Alderon staff and qualified experts. All community members in attendance were given the opportunity to ask any question about the Project, and Alderon personnel were able to provide detailed responses and record community concerns.

Alderon held two public information sessions in Fermont (March and October 2012).

4.4.2 PC 04-2

2- Our main concern is air quality and dustfall. True, the wind direction is not always towards Fermont, but on days when the wind is blowing towards the town and blasting is scheduled, I am really not sure they will cancel the blasting, particularly if production is behind schedule…

Alderon Response to PC04-2

Following the environmental assessment approval, a Blasting Plan will be developed and implemented in compliance with all applicable laws, regulations and industry best practices, and with consideration of safety, environmental and social issues as identified throughout the EIS. See Section 2.6.2 in Volume 1 of the EIS for more information. Effects of the Project on the atmospheric environment, including air quality, noise, vibration and dust have been assessed and mitigation measures identified. During Project activities, blast noise and vibration will be monitored and will comply with regulatory standards. See Sections 23.5.2.1, 23.6.3 and Chapter 14 (Atmospheric Environment) in Volume 1 of the EIS for more information.

Alderon's Blasting Plan will provide detailed information on the blasting techniques, procedures, and monitoring. The Plan will address technical aspects of mine blasting as well as address the environmental interactions including impacts on wildlife, fish, and fish and the impacts of weather on blasting operations (dust, runoff, etc.). Municipal regulations and federal guidance documents limit the vibrations and airblast over-pressure levels to acceptable limits with respect to potential damage to infrastructure. If required, pre-blast surveys of buildings, towers, and other infrastructure in the area of the mine will be completed.

The blasting plan will be implemented by Alderon during the final design phase of the Project, and will incorporate all relevant meteorological factors pertaining to blasting. Blasting is carried out through a design process that is executed by professional blast specialists; careful monitoring of the blast is a routine part of the plan. While the odorous by-products of blasting may be carried off-site, by following the latest site blasting guidance (such as the Queensland Guidance Note QGN 20 v3 (available at http://mines.industry.qld.gov.au/assets/general-pdf/QGN-mgmt-oxides-nitrogen.pdf)), nitrogen dioxide concentrations from blasting are expected to disperse and fall below regulatory standards within the site boundary.

4.4.3 PC 04-3

3- We live in a mining town and we are very aware of that, but Québec Cartier took the initiative of building the town far from the mine. We residents of Fermont are really infuriated that a mining company is going to blight our landscape with a pile of rocks. Every time we visit Labrador City, we are saddened by the sight of a town surrounded by mining areas.

Alderon Response to PC 04-3

A detailed viewshed analysis, including a viewshed model, was conducted to predict the effects of the Project on viewscapes in nearby communities, parks, and recreational areas. The Rose South Waste Rock Disposal Area was relocated approximately 5 km to the east to minimize effects to Fermont. As a result, it will only be minimally visible from the Town of Fermont. As part of viewshed analysis, site-specific photosimulations were created to provide a comparison of the “no Project” and “with Project” environments. The following photosimulations are provided in the EIS for locations in the Fermont area:

- Fermont, Shore of Lac Daviault (1), page 23-108, Volume 1;
- Western shore of Lac Daviault, page 23-132, Volume 1;
- Northern Fermont (1), page 23-133, Volume 1;
- South of Fermont, page 23-134, Volume 1;
- Northern Fermont (2), page 23-135, Volume 1;
- Fermont Hiking Trail Peak, page 23-136, Volume 1;
- Fermont Hiking Trail Peak, page 23-137, Volume 1; and

- Fermont, Shore of Lac Daviault (2), page 23-138, Volume 1.

The placement of Project features has been designed so that they are only minimally visible from surrounding communities, including Fermont.

4.4.4 PC 04-4

4- We live in a remote area, and it is locals who personally pitch in to improve the lives of their fellow residents. A number of Fermont residents used all of their vacation days this summer to build a great new campground on the shores of Lac Daviault. If that was mentioned in the documents, I didn't see it. You can imagine the dismay of these men and women who will have the mine in full view, because it will be right across from them. Peaceful evenings around the campfire spoiled by the mine lights, the beeping of trucks backing up, and the hum of the trucks and buildings operating 24/7. I saw my 45-year-old neighbour with tears in his eyes. Is that what passes for respect for residents? No.

Alderon Response to PC04-4

As addressed in the Volume 1 of the EIS, Section 23.6, the Project is not expected to affect Other Current Use of Lands and Resources in Québec, including the current use of Lac Daviault for boating or camping. Project-specific mitigation includes installation of navigation signage around Project features that are present in waterbodies, including bridges and other watercourse crossings, working with local snowmobile and cross country ski organizations to address Project effects, and installation of hazard warning signs around the open pit after decommissioning as public safety measure. In addition, several mitigation measures developed to address effects on the Atmospheric Environment, specifically those related to noise and dust dispersion, will also mitigate effects on Other Current Lands and Resources.

Based on viewshed analysis only some waste rock areas will be visible from the western shores of Lac Daviault. To minimize effects on the citizens of Fermont, the Rose South Waste Rock Disposal has been relocated approximately 5 km to the east. Due to the relocation of the Rose South Waste Rock Disposal Area, the Project will be minimally visible from Fermont. A before and after photo-simulation was completed for Fermont, from the western shore of Lac Daviault and from the peak of Mont Daviault. This simulation showed that the Project is minimally visible. Section 23.6.4 in Volume 1 of the EIS provides the viewshed analysis and photo-simulations completed for the Project.

Although blasting may be audible, vibrations will not be felt on the western shore of Lac Daviault. Modeling of noise levels resulting from the Project will not exceed Health Canada guidelines in this area. Modelling of dust dispersion indicates that dust levels at Lac Daviault will not be elevated as a result of the Project. See Sections 23.6.2, 23.6.4 and Chapter 14 (Atmospheric Environment) in Volume 1 of the EIS.

Following the environmental assessment approval, a Blasting Plan will be developed and implemented in compliance with all applicable laws, regulations and industry best practices, and with consideration of safety, environmental and social issues as identified throughout the EIS.

See Section 2.6.2 in Volume 1 of the EIS for more information. Effects of the Project on the atmospheric environment, including air quality, noise, vibration and dust have been assessed and mitigation measures identified. During Project activities, blast noise and vibration will be monitored and will comply with regulatory standards. See Sections 23.5.2.1, 23.6.3 and Chapter 14 (Atmospheric Environment) in Volume 1 of the EIS for more information.

4.4.5 PC 04-5

5- Environmental assessments are all well and good, but there has never been any mention of the psychological health of the residents of Fermont and Newfoundland. Studies conducted in Malarctic have shown that the mines had an adverse impact on the locals' mental health.

Alderon Response to PC 04-5

An assessment and evaluation of the likely environmental and socioeconomic effects and benefits of the Project is provided in Volume 1 of the EIS. This includes information on Health and Community Health (Volume 1, Chapter 25).

While it is difficult to obtain information on local health, particularly for smaller communities, the EIS used the best available information to consider the psychological well-being of residents of the western Labrador and Cote Nord regions (Section 25.5.2 in Volume 1 of the EIS). Residents of the larger regions self report as having high levels of life satisfaction and low levels of stress compared to their provincial counterparts. This may be in part because people in these regions enjoy higher than average employment rates and incomes than province residents and / or because they have access to many recreational opportunities.

The Project will have beneficial effects such as employment and business opportunities which benefit communities and residents. Alderon has committed to implementing mitigation measures to enhance beneficial effects and to avoid or reduce adverse effects on the communities near the Project. The company will implement pre-employment and ongoing programs for reduction of substance abuse among its workforce. Alderon is a participant in the Labrador West Community Advisory Panel and the Regional Task Force and the Fermont consultation committee initiated by the Town of Fermont, which address regional issues.

4.4.6 PC 04-6

6-…will we be able to swim in the lake, will we still be able to go fishing in the little lakes at the end of Lac Daviault, will the cross-country ski trail along Lac Daviault still be accessible, will we feel the blasting from this mine even more strongly than from the Bloom Lake and ArcelorMittal mines, will there be even more workers walking around our town.

Alderon Response to PC 04-6

Fermont and Lac Daviault are included within the Regional Study Area (RSA) and/or Local Study Areas (LSA) for the assessments of effects related to water quality, air quality and noise (Volume 1, Chapters 14 and 15). As addressed in Volume 1 of the EIS, Section 23.6, the Project is not expected to affect Other Current Use of Lands and Resources in Québec (Volume 1, Section 23.6), including the current use of Lac Daviault for recreational activities such as boating and camping. Project-specific mitigation includes installation of navigation signage around Project features that are present in waterbodies, including bridges and other watercourse crossings, working with local snowmobile and cross country ski organizations to address Project effects, and installation of hazard warning signs around the open pit after decommissioning as public safety measure. In addition, several mitigation measures developed to address effects on the Atmospheric Environment, specifically those related to noise and dust dispersion, will also mitigate effects on Other Current Lands and Resources.

Based on viewshed analysis only some waste rock areas will be visible from the western shores of Lac Daviault. To minimize effects on the citizens of Fermont, the Rose South Waste Rock Disposal Area has been relocated approximately 5 km to the east. Due to the relocation of the Rose South Waste Rock Disposal Area, the Project will be minimally visible from Fermont. A before and after photo-simulation was completed for Fermont, from the western shore of Lac Daviault and from the peak of Mont Daviault. This simulation showed that the Project is minimally visible. Section 23.6.4 in Volume 1 of the EIS provides the viewshed analysis and photo-simulations completed for the Project.

Although blasting may be audible, vibrations will not be felt on the western shore of Lac Daviault. Modeling indicates that noise levels resulting from the Project will not exceed Health Canada guidelines in this area. Modeling of dust dispersion indicates that dust levels at Lac Daviault will not be elevated as a result of the Project. See Sections 23.6.2, 23.6.4 and Chapter 14 (Atmospheric Environment) in Volume 1 of the EIS.

Following the environmental assessment approval, a Blasting Plan will be developed and implemented in compliance with all applicable laws, regulations and industry best practices, and with consideration of safety, environmental and social issues as identified throughout the EIS. See Section 2.6.2 in Volume 1 of the EIS for more information. Effects of the Project on the atmospheric environment, including air quality, noise, vibration and dust have been assessed and mitigation measures identified. During Project activities, blast noise and vibration will be monitored and will comply with regulatory standards. See Sections 23.5.2.1, 23.6.3 and Chapter 14 (Atmospheric Environment) in Volume 1 of the EIS for more information.

4.4.7 PC 04-7

7- To come back to the sessions organized by Alderon, it was really insulting to hear them practically always respond, “We will see in the studies,” “We assume,” “We will come back to that,” etc. It seemed like the representatives had no specific answers to give us.

Alderon Response to PC 04-7

As part of the planning process, EA is used in part of identify issues and concerns of importance to stakeholders. EA occurs at the early stages of planning, when final design decisions are being made, which allows for public and other stakeholder issues to be considered

Through engagement acThe Project is currently in the EA process, whiThe EA process is a planning tool, and input received during public engagement activities is used to identify issues of concern to the public, as well as to inform detailed design decisions and mitigation.

Alderon's approach to consultation included the following overall objectives: (i) to provide as much information about the Project to the public as possible; (ii) listen to and record comments from the public; (iii) respond to questions and concerns from the public using qualified expertise; and (iv) maximize the level of public participation in the consultation process.

In addition to the objectives above, public consultation is part of the EA process whereby

4.4.8 PC 04-8

8- Even for the tailings site, they told us with big smiles on their faces that they had decided to relocate it, but that they had to do more studies to see if that site has mineral potential. In my opinion, a company that was serious and cared about the residents' quality of life would have thought of that site to begin with and would have carried out prospecting in the area before considering the potential of that location. I am not a prospector, but I am sure it cannot be too hard for a big mining company to check the mining potential of its entire property.

Alderon Response to PC 04-8

Environmental assessment is a planning process which engages stakeholders and involves enhancing Project design and minimizing adverse effects on the environment is used to enhance through engagement of stakeholders. An assessment and evaluation of the likely environmental and socioeconomic effects and benefits of the Project is provided in Volume 1 of the EIS. This includes information on health and community health (Volume 1, Chapter 25) which addresses quality of life. Quality of life considerations have also been assessed in Chapter 23 of Volume 1 of the EIS which includes use of lands and resources and related viewscapes. Atmospheric environment, including dust and noise, is described in Volume 1, Chapter 14.

Residents of the larger western Labrador and Cote Nord regions self report as having high levels of life satisfaction and low levels of stress compared to their provincial counterparts (EIS Volume 1, Section 25.5.2). This may be in part because people in these regions enjoy higher than average employment rates and incomes than province residents. For instance, Fermont's and western Labrador's residents have lower unemployment rates than their respective provinces. Residents of these areas also have access to large wilderness areas with a range of recreational opportunities.

The construction of major development projects may result in a range of "nuisance effects" which have implications for the overall (real or perceived) quality of life and well-being of residents (EIS Volume 1, Section 25.6.2). Nuisance effects may include increased local and regional traffic, especially the movement of heavy equipment, materials and personnel, which can cause traffic delays and associated frustrations. However, these effects will be mainly felt in western Labrador and mostly during the construction phase and Alderon has committed to constructing a separate access road to route traffic around the Towns of Labrador City and Wabush. Traffic increases would not be solely attributable to activities at the Kami Mine.

Potential effects and mitigation measures for outdoor recreation activities and land use are described in Section 23.5.4 of Volume 1 of the EIS. Access to the Project site will be restricted to ensure the safety of workers and the public. A new access road is proposed to be located to the east of Wabush to minimize the effects of Project traffic on the communities and recreation areas. Alderon has committed to working with local user groups (e.g. snowmobile and cross country ski clubs) to address specific Project concerns (Volume 1, Section 23.6.1).

Viewshed analyses and before / after photosimulations were prepared for selected vantage points and have been included in Volume 1 of the EIS (Section 23.6.4). These show that the Project will be minimally visible from the three municipalities. The Rose South waste rock pile was relocated so that it is less visible from Fermont. The Project will be visible from some recreation locations including some areas of Lac Daviault (Volume 1, Section 23.6.4). Alderon has been engaging with user groups to address Project effects (Volume 1, Sections 23.5.2.1 and 23.6.3).

Following the environmental assessment approval, a Blasting Plan will be developed and implemented in compliance with all applicable laws, regulations and industry best practices, and with consideration of safety, environmental and social issues as identified throughout the EIS. See Section 2.6.2 in Volume 1 of the EIS for more information. Effects of the Project on the atmospheric environment, including air quality, noise, vibration and dust have been assessed and mitigation measures identified. During Project activities, blast noise and vibration will be monitored and will comply with regulatory standards. See Sections 23.5.2.1, 23.6.3 and Chapter 14 (Atmospheric Environment) in Volume 1 of the EIS for more information.

4.4.9 PC 04-9

9- We know that ArcelorMittal and Cliffs always want to project a good corporate image, but after a 40 year family history in mining, we could tell you a number of stories showing that money too often wins out over the workers' and residents' quality of life. For all their fine words, the Alderon representatives did not convince me they were sincerely committed to meeting northern residents' expectations.

I hope every day that this project never becomes a reality.

Alderon Response to PC 04-9

Alderon intends to establish itself as a good corporate citizen and a contributor to the well-being of all communities in the vicinity of the Project. This is stated in Alderon's Community Relations Policy and Aboriginal Relations Policy, in Volume 1, Section 1.1.1 of the EIS.

4.5 Town of Fermont (PC 05)

4.5.1 PC 05-1

I am writing to transmit the comments and concerns of the Town of Fermont in response to the public consultation period for the environmental impact statement of the Kami iron ore project.

Our analysis is based on the Plain Language Summary, the relevant sections of Volume 1 of the EIS (Parts I and II) and appendices F and G, and is supported by environmental specialists from Dessau Inc.

From our reading of the environmental impact statement, we see that the proponent, Alderon Iron Ore Corp., has taken into account some of the concerns we raised at the information session of March 15, 2012, and in our comments of March 19, 2012 on the EIS guidelines.

The relocation of the Rose South waste rock disposal area to the east of Mills Lake will reduce a number of the potential effects of the project on the residents of Fermont. However, a number of concerns remain and we feel the proponent should take them into account in its revised EIS.

The Plain Language Summary should generally elaborate more fully on the impacts and mitigation measures so that the French-speaking public is in a position to analyze the project. To the extent possible, the proponent should provide a more detailed summary document or, at the very least, a translation of excerpts related to issues that affect the French-speaking public so as to provide a better understanding of the impacts of the project and the measures that will be taken. It was noted that the EIS consists of a series of technical sectoral studies with no overall vision of the environmental effects of the project. We are also waiting for the Comprehensive Study Report that will be drafted by the Canadian Environmental Assessment Agency to be completed in terms of the description of the impacts and mitigation measures.

Alderon Response to PC 05-1

The Plain Language Summary does not contain the same level of detail as the EIS, because it is intended to be a concise summarization of information.

As stated in the EIS Guidelines, Alderon was required to translate the Plain Language Summary into French for the benefit of French-speaking community members and stakeholders. Alderon exceeded this requirement by producing the Plain Language Summary and Part I of Volume 1 of the EIS in French. Volume 1 pertained to the potential Project effects associated with Alderon's proposed operations in Labrador. Part I of Volume 2, which addressed Alderon's operations in the Port of Sept-Îles, QC, was also presented in French.

Alderon has also made the offer to provide detailed technical workshops in French as requested. Up to this point in time, one request for a technical briefing has been received. A session was provided to the Regroupement pour la Sauvegarde de la grande Baie de Sept-Îles and the Comité de défense de l'air et de l'eau in Sept- Îles on November 2, 2012.

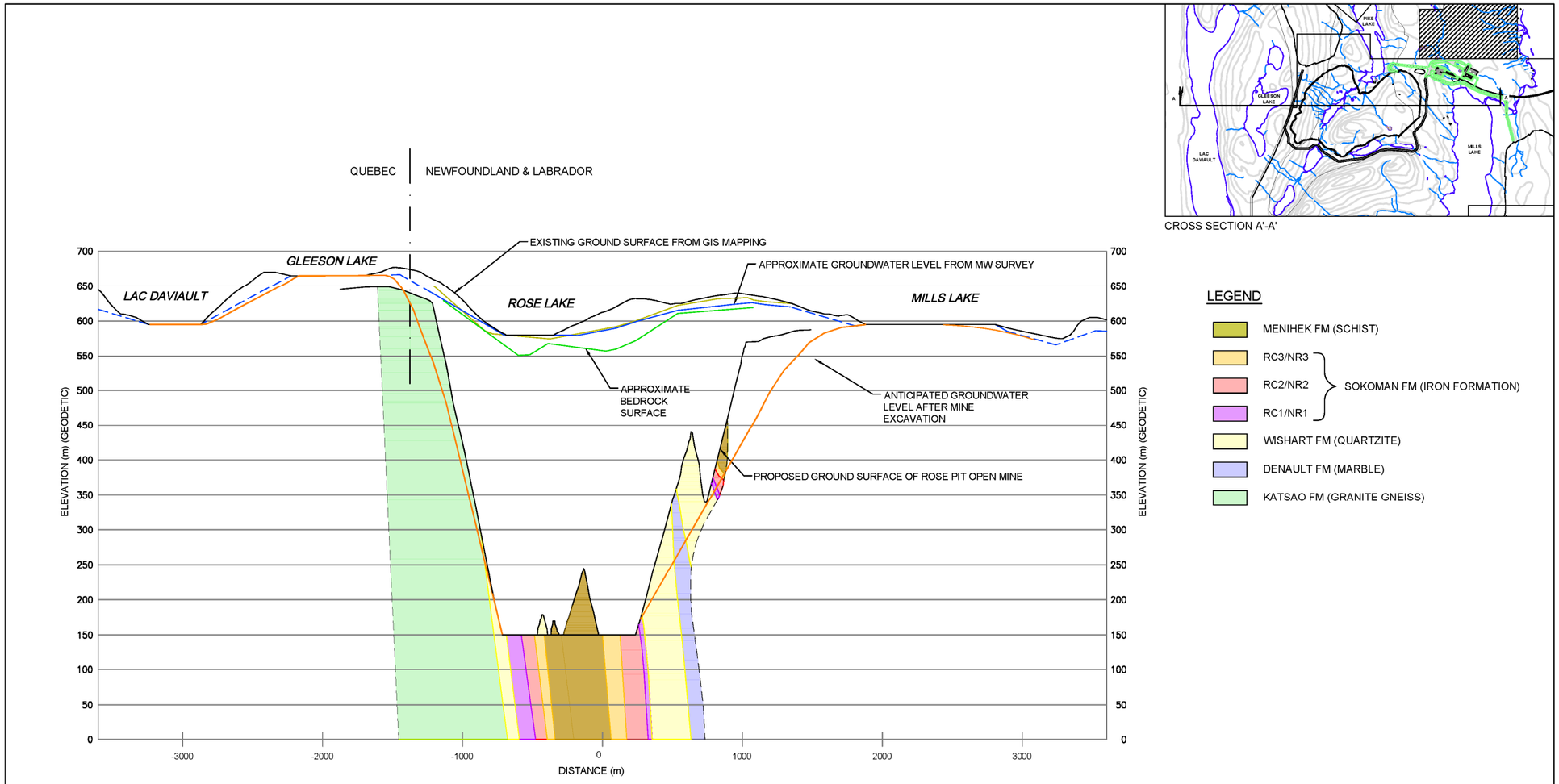
4.5.2 PC 05-2

The Plain Language Summary mentions that the project is located entirely within Labrador, approximately 6 km south of the Wabush Mines mining lease and in the vicinity of the towns of Wabush, Labrador City and Fermont. The cross section of groundwater elevation (Alderon Iron Ore Corp., 2012a Appendix A) clearly shows that the profile of Rose Pit extends several hundred metres beyond the Québec-Labrador border. The proponent will have to justify the fact that Rose Pit will be located partly in Québec and notify the appropriate Québec authorities.

Alderon Response to PC 05-2

The open pit will be wholly within Labrador and does not extend into Québec. Please refer to Figure 16.32 as presented in Volume 1, Chapter 16 of the EIS. This figure illustrates Rose Pit in relation to the Québec-Labrador border. The cross-section of groundwater elevation (titled "Cross-section Showing Approximate Regional Groundwater Level") provided in Appendix A (Figures and Drawings) of the Water Resources Baseline Study (Appendix G of EIS Volume 1) has been revised to correctly show the location of the Québec-Labrador border in relation to the open pit (Figure 4.5.1 below).

Figure 4.5.1 Cross-section Showing Approximate Regional Groundwater Level



NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

CLIENT: ALDERON IRON ORE		SCALE: AS SHOWN	DATE: JAN. 7, 2013
PROJECT TITLE: PROJECT DEVELOPMENT DESIGN KAMI MINE SITE		DRAWN BY: R.L.	CHECKED BY: R.M.
DRAWING TITLE: CROSS-SECTION SHOWING APPROXIMATE REGIONAL GROUNDWATER LEVEL		EDITED BY: -	REV. No: 1
		DRAWING No: 121614000-306-GE-06	
		CAD FILE: 121614000-306-GE-06.dwg	

4.5.3 PC 05-3

Effects of blasting

The operation of the open pit mine will require the regular use of explosives throughout the duration of the project. The proponent plans to use bulk emulsion type explosives (Alderon Iron Ore Corp., 2012b, p. 2-48). The detonation of these explosives generates toxic nitrogen dioxide, nitric acid and carbon monoxide emissions that form orange clouds over the explosion site (Mainiero, Harris and Rowland, 2007). Depending on climatic conditions, the clouds could move towards the town of Fermont. Given that the environmental assessment provides few details on the impacts associated with blasting and given that the scientific literature contains little information on the pollutant concentrations in these clouds, it is difficult to assess the potential effects on and risks to the residents of Fermont.

When blasting is carried out at nearby mines, it is not unusual to hear the explosions and feel the vibrations in Fermont. The mines are located over 10 km from the town. With respect to the Kami mine, the pit where the blasting will be carried out will be less than 5 km from the town's centre. It is clear to us that impacts of blasting at the Kami mine will be felt by the residents of Fermont. The proponent should recognize this fact and take the appropriate mitigation measures. We also ask that a monitoring program for noise and vibrations within the town of Fermont be implemented.

Although the EIS states that the proponent will implement a mine plan (blasting plan) that will include measures to reduce dust emissions (Alderon Iron Ore Corp., 2012b, p. 2-48), we feel that specific mitigation measures should be included in the environmental assessment, such as limiting blasting when the wind is blowing towards the town of Fermont (i.e., north-northeasterly or northeasterly winds).

Alderon Response to PC 05-3

The potential effects of blasting have been assessed in Section 14.6 of Volume 1 of the EIS, under the following topics: vibrations, air quality, and noise. Alderon has engaged a professional blasting consultant further describe effects of blasting at locations around the Rose Pit. The findings of this review are discussed below.

While it will be possible to feel and hear the blasting activity from the Rose Pit, the ground vibrations from the blasting will not be sufficient to impact foundations in Fermont. Vibration levels are highly dependent upon the amount of explosive that is instantaneously detonated and the distance away from the detonation location. It is Alderon's intention to sequence blast events with multiple holes by detonating one hole at a time. Each hole will contain approximately 1,000 kg of explosives. The blasting consultant has analyzed the magnitude of vibrations that would result from 2,000 kg of explosives being detonated instantaneously and has determined that structures within 600 m are not likely to suffer foundation and/or structural damage and predicted air blast levels would be between 120 and 123 dB. Fermont is

approximately 3.5 km away from the southwest edge of the pit and at this distance, the ground and air vibration levels are well below those that would damage structures. Alderon is committed to blast design and monitoring the air blast and ground vibration levels from blasting activities at the mine and limiting the mass of explosives that are instantaneously initiated so that vibrations are minimized. This is critical not only for the protection of infrastructure in the surrounding communities, but for protection of Alderon's on-site infrastructure and the adjacent environment.

Blast events will be taken during daylight hours and while the specific initiation time has not been determined it is expected that most of the blasts will occur between the hours of 3:00 to 5:00 in the afternoon. At its most active, blasting may occur on a daily basis, however this frequency will likely be reduced as the pit develops. Blasts will range in size from approximately 50,000 to 500,000 tonnes of rock blasted. In the context of mines around the world these are large blasts and this is consistent with practices at other mines in western Labrador area. Current calculations from experience with this type of rock at other operations in the area suggest that the Project will need to use 0.35 to 0.40 kg of explosives per tonne of rock blasted. Consistent with Alderon's efforts to reduce the vibrations from blasting, individual blast holes will be sequenced so that the explosives do not all blast at the same time and any blast will take a few seconds to be completely detonated.

A Blasting Plan will be developed following release from the EA process. The Blasting Plan will also include contingencies related to meteorological conditions during blasting so that applicable short-term exposure limits for blasting-related noxious gases are not exceeded. The latest procedures for blasting during meteorological conditions of concern (sustained low winds in the direction of Fermont) – such as those found in the Queensland Guidance Note QGN 20 v3 (“Management of oxides of nitrogen in open cut blasting” – available at http://mines.industry.qld.gov.au/assets/general-pdf/QGN-mgmt-oxides-nitrogen.pdf) will be incorporated into the Blasting Plan.

Mitigation of noxious gases will also substantially reduce exposure to total suspended particulate (TSP) from blasting. Even so, blasting, when considered in the whole context of open-pit mining operations such as crushing and transportation, is generally considered to be a negligible source of TSP (US Environmental Protection Agency, July, 1991 - Review of Surface Coal Mining Emissions Factors found at http://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=2000EANW.PDF).

As part of its Sustainability Management Framework (Appendix J), Alderon is committed to enhancing NLDOEC’s current ambient air quality framework with new ambient air quality monitoring stations. Should ambient TSP (and associated fractions of particulates smaller than 10 um or 2.5 um in diameter) increase beyond acceptable standards due to mining operations (including blasting), procedures in Alderon’s Environmental Monitoring Framework will outline additional mitigation measures, such as water spraying and reduced blasting during meteorological conditions of concern, to reduce ambient particulate concentrations below acceptable standards.

4.5.4 PC 05-4

We therefore ask that the proponent expand on its analysis of the effects on the noise, air quality and vibrations associated with blasting and identify relevant mitigation measures.

Alderon Response to PC 05-4

Following the environmental assessment approval, a Blasting Plan will be developed and implemented in compliance with all applicable laws, regulations and industry best practices, and with consideration of safety, environmental and social issues as identified throughout the EIS. See Section 2.6.2 in Volume 1 of the EIS for more information. Effects of the Project on the atmospheric environment, including air quality, noise, vibration and dust have been assessed and mitigation measures identified. During Project activities, blast noise and vibration will be monitored and will comply with regulatory standards. See Sections 23.5.2.1, 23.6.3 and Chapter 14 (Atmospheric Environment) in Volume 1 of the EIS for more information.

Alderon's Blasting Plan will provide detailed information on the blasting techniques, procedures, and monitoring. The Plan will address technical aspects of mine blasting as well as address the environmental interactions including impacts on wildlife, fish, and fish and the impacts of weather on blasting operations (dust, runoff, etc.). Municipal regulations and federal guidance documents limit the vibrations and airblast over-pressure levels to acceptable limits with respect to potential damage to infrastructure. If required, pre-blast surveys of buildings, towers, and other infrastructure in the area of the mine will be completed.

4.5.5 PC 05-5

Water Quality of Daviault Lake

Given the prevailing hydrogeology of the region in which the project will be located, the study area will be exposed to the impacts of mine excavation, particularly the lowering of the water table. This impact is raised in the EIS, but is not considered significant because the area is not inhabited. Moreover, the EIS states that the drinking water supply of the town of Fermont is not threatened due to the topography and presence of large lakes (Gleeson and Daviault), which act as hydraulic boundaries (Alderon Iron Ore Corp., 2012c, p. 16-80).

Alderon Response to PC 05-5

Based on the assessment of the area, Gleeson Lake should provide a hydraulic boundary condition that will maintain groundwater levels in this area. Upland lakes in predominantly bedrock dominated topography are expected to have very low bottom sediment permeability; otherwise the lake would not persist in the dry season. Depending on the permeability of the lake bottom exfiltration may not be significantly increased even with a decrease in water level below the lake. Therefore, surface water recharge to Gleeson Lake would continue to follow its

current drainage route to Daviault Lake. A revised cross-section is provided in Figure 4.5.1 which shows the expected impacts on groundwater levels in the area.

4.5.6 PC 05-6

It seems very possible that the lowering of the water table could have impacts on these lakes since, according to the analysis presented in Appendix G of Volume I of the EIS, the lowering of the water table would reach Gleeson Lake (Alderon Iron Ore Corp., 2012a Appendix A). This lake drains into Daviault Lake and is part of the Moisie River watershed. We believe that the lowering of the water table could result in a drop in the water level of Gleeson Lake, and could even cause the lake to dry up entirely. It could also result in a reduction of inflows to Daviault Lake. The environmental impacts, particularly on the ecosystem, of a change in the hydrological regime of Gleeson Lake and Daviault Lake should therefore be covered in more detail in the EIS. The transboundary nature of the impact and the Québec legislation should also be taken into account. A hydrogeologic model would allow for a true assessment of the impacts of the mine on Gleeson Lake and Daviault Lake.

In addition to being an important recreation/tourism area in the region, Daviault Lake is considered by the Town of Fermont to be a potential source of drinking water. It is therefore important that the EIS take into account the role of Gleeson Lake in the recharge of Daviault Lake.

Alderon Response to PC05-6

Lac Gleeson and Lac Daviault are located in Québec and are situated in a separate watershed area then the one that the proposed open pit is located in. The distribution of precipitation will be maintained on each side of the surface / groundwater divide and the rate of groundwater infiltration/overland flow will not be altered. Based on the assessment presented in the EIS, Volume 1, Chapter 16 (Water Resources), there will be very little alteration to the groundwater divide due to the construction of the open pit. As the Project is not likely to extensively alter the groundwater divide, no significant adverse effect on the flow of water to Lac Daviault is expected.

4.5.7 PC 05-7

Sound Environment

In its environmental assessment, the proponent took account of the fact that under Instruction No. 98-01 (Note d'instruction 98-01 concernant les niveaux maximum de bruit 98-01) issued by the Québec Department of Sustainable Development, Environment, Wildlife and Parks (MDDEFP), the area is zoned Level II for the town of Fermont (i.e., intended for multiple unit dwellings, mobile home parks, institutions or campgrounds). In fact, the noise barrier corresponds to this level. However, there are also single detached houses and rowhouses that should be considered Level I. If we consider the values for Level I, noise generated by the mine operations will be such that the sound level will

exceed the standard set by the MDDEFP for night-time noise (Night Level I: 40 dBA) by 7.5%. The Town of Fermont therefore asks that mitigation measures be identified to mitigate night-time noise.

Moreover, because Fermont is a mining town, workers sleep at all hours of the day. The Town therefore asks that measures also be taken to ensure peace and quiet is maintained both day and night.

Alderon Response to PC 05-7

The distinction between zones reflects the fact that mixed zones, with both single family and multiple family dwellings, will generally have a higher level of background sound, therefore less susceptible to other sounds. Fermont has a mix, and the sound level was estimated for the worst case conditions at the point closest to the Project. The sound level is likely to be lower than that predicted most of the time. Additionally, a very relevant criterion that is advocated by Health Canada comes from the WHO (1999 – Guidelines for Community Noise. World Health Organization, Geneva) and states that the 8 hr nighttime sound level should not exceed 30 dBA within the bedroom. As most residences offer an attenuation of 15 dBA from outdoor sound levels to indoor levels, even with partially opened windows, it is predicted that this level will be met in Fermont, as presented in Volume 1 of the EIS, Section 14.6. During the day, the background sound levels in Fermont were measured to be 3 dBA higher than the worst case predictions from the mine; in terms of sound energy, this is twice as high as that from the mine, but not considered to be problematic for sleeping.

4.5.8 PC 05-8

Air Quality

It would be useful for the proponent to compare the results of atmospheric dispersion modelling against the Québec criteria (Government of Québec, 2011) because, as presented in the windrose, winds blow towards Fermont and Québec 5-8% of the time (Alderon Iron Ore Corp., 2012c, p. 14-53) and because Fermont is essentially the closest inhabited area to the mine.

Alderon Response to PC 05-8

The air dispersion modeling for the EIS comprehensively included winds from all directions, including those directly towards the Town of Fermont. Québec regulations for criteria air contaminants match those for Newfoundland and Labrador. The effects of the Project on ambient air quality were found to be not significant based on Newfoundland and Labrador ambient air regulations. The same result would therefore be found based on Québec ambient air quality standards.

Additionally, Table 4.5.1 shows the 24-hour maximum ambient concentrations of nitrogen oxides (NOx), total suspended particulate (TSP), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and metals of concern compared to Québec, Newfoundland

and Labrador, and Ontario regulations. Ambient concentrations as a result of Project activities are not expected to approach within an order of magnitude of Québec regulated limits.

Table 4.5.1 Predicted 24-hour Maximum Ambient Concentration Levels for VOCs, PAHs and Metals from Kami Mine Operations

Contaminant		Predicted Maximum 24-hour Ambient Concentration ($\mu g/m^3$)		Regulation			% of Standard	
		Location 1	Location 2	NL	Ontario	Québec	Location 1	Location 2
CAC	NOx	17.75	31.78	200	200	207	8.9%	15.9%
	TSP	41	32	120	120	120	34.2%	26.7%
Ambient Concentration from Diesel Combustion								
VOC	Acrolein	0.006	0.010	-	0.4	-	1.45%	2.59%
	Acetaldehyde	0.036	0.065	-	500	-	0.01%	0.01%
	Benzene	0.042	0.075	-	2.3	10	1.82%	3.26%
	1,3-Butadiene	0.004	0.007	-	10	-	0.04%	0.07%
	Formaldehyde	0.078	0.140	-	65	-	0.12%	0.22%
Metal	Antimony	0.00004	0.00007	-	25	-	0.00%	0.00%
	Arsenic	0.00004	0.00007	0.3	-	-	0.01%	0.02%
	Cadmium	0.00004	0.00007	2	-	-	0.00%	0.00%
	Chromium VI	0.00001	0.00003	-	0.0007	-	2.03%	3.64%
	Manganese	0.00008	0.00015	-	0.4	-	0.02%	0.04%
	Mercury	0.00010	0.00019	2	-	-	0.01%	0.01%
	Nickel	0.00007	0.00012	2	-	-	0.00%	0.01%
PAH	Benzo(a)pyrene	0.00004	0.00007	-	0.005	-	0.83%	1.49%
	Naphthalene	0.04	0.07	-	22.5	-	0.17%	0.31%
Ambient Concentration from Particulate Emissions								
Copper		0.0007	0.0005	50	50	2.5	0.03%	0.02%
Lead		0.0002	0.0002	2	0.5	-	0.05%	0.04%
Vanadium		0.0015	0.0012	2	2	-	0.08%	0.06%
Zinc		0.0011	0.0009	120	120	-	0.00%	0.00%
Arsenic		0.00004	0.00003	0.3	0.3	-	0.01%	0.01%
Cadmium		0.000008	0.000006	2	0.025	-	0.03%	0.03%
Mercury		0.000000	0.000000	2	2	-	0.00%	0.00%
Nickel		0.0007	0.0006	2	0.2	-	0.37%	0.29%

4.5.9 PC 05-9

Light Pollution

The proponent stated in its EIS that the town of Fermont falls in the E2/E3 category of the International Commission on Illumination (Alderon Iron Ore Corp., 2012c, p. 14-15). Although sky glow at the centre of the town of Fermont ranges from 19.04 to 19.47 mag/arcsec2, night-time light conditions outside the urban core are clearly at a different level, possibly E1, and the arrival of the mine project will have, without a doubt, an effect on light pollution in the region. The EIS mentions that the impacts on sky glow will be low, but the proponent does not support its statement with modelling or quantitative assessments. No information is provided on the impacts of light pollution on tourism activities, particularly Northern Lights watching, which is the lifeblood of this sector of the local economy. As a result, we feel that the effects of the project on night-time light conditions are unclear and require further study.

Alderon Response to PC 05-9

In recent years, light impact has become recognized as an area of concern for environmental assessment. Alderon has used an approach that allows for the detection of adverse impacts on the environment, should they occur, and has adopted design guidelines to help avoid adverse impacts from lighting. In documenting existing light levels, the team used a light sensor designed for astronomy applications in order to quantify the dark quality of the night sky. These measurements can be repeated after the Project is realized to determine the success of mitigation strategies employed in the design. The main mitigation is a design element that calls for the use of horizontal cutoff lighting that direct all light downward, and not upward to the sky. This kind of lighting can greatly reduce the skyglow that is associated with industrial development, and the glare and light trespass due to the horizontal transmission of light. The site lighting plan has not yet been developed, as this will be part of the detailed design.

Alderon recognizes the importance of the dark sky and Northern Lights watching activities. It will therefore incorporate technology that is favourable to reducing offsite effects of Project lighting while maintaining basic requirements for site safety and security, as outlined in Sections 14.6.1 and 14.6.2 of Volume 1 of the EIS.

4.5.10 PC 05-10

Municipal Infrastructure

The EIS states that most material and equipment will be transported by rail. However, a significant proportion of large parts and equipment will be shipped via Route 389 between Fermont and Baie-Comeau. This traffic will have adverse effects on infrastructure, including the complete closure of the road in one direction, and will increase road safety risks. It should also be noted that rehabilitation work scheduled for Route 389 in the coming years could disrupt road transport associated with the mine project. We recommend that the environmental assessment examine the impacts of the

project on Québec infrastructure, particularly Route 389, and on road safety on the Québec side of the project.

Alderon Response to PC 05-10

As discussed in Volume 1, Chapter 24 of EIS, there are safety concerns associated with some sections of Route 389 between Fermont and Baie-Comeau. In 2004, the Ministère du Transport du Québec approved the Route 389 Restoration Plan, which identified several risk areas and sections requiring upgrades (e.g., Fermont to Fire Lake). These upgrades began in 2011 and were to occur over the subsequent ten years. Given the heavy use of this road, the Fermont Town Council has asked for the schedule to be condensed to five years. Both the Newfoundland and Labrador Department of Transportation and Works and Québec Ministère du Transport regulate highway safety and construction maintenance in their respective provinces and are accustomed to road construction – vehicle traffic interactions. They will ensure proper signalling and other safety precautions are in place in their respective jurisdictions. Alderon will work with transportation and municipal authorities, in particular, the Route 389 Safety Committee in Baie Comeau, to help plan for and manage any additional demands caused by their Project on the road system in and near Fermont (Sections 24.5.11.2 and 24.6.1.1 in Volume 1 of the EIS).

4.5.11 PC 05-11

Compensatory measures should also be implemented to offset the loss of an important snowmobiling area as a result of the project in order to minimize the impacts on this tourism activity, which is also essential to the local economy. Should the snowmobile trail be relocated, we would expect the proponent, Alderon Iron Ore Corp, to contribute financially.

Alderon Response to PC 05-11

An assessment and evaluation of the likely environmental and socio-economic effects and benefits of the Project is provided in Volume 1 of the EIS. This includes information on recreational land use such as snowmobiling (Volume 1, Chapter 23). As addressed in Volume 1 of the EIS, Section 23.6, the Project is not expected to affect recreational activities in Québec, including snowmobiling and the current use of Lac Daviault for boating or camping. Project-specific mitigation includes installation of navigation signage around Project features that are present in waterbodies, including bridges and other watercourse crossings, working with local snowmobile and cross country ski organizations to address Project effects, and installation of hazard warning signs around the open pit after decommissioning as public safety measure. For public safety reasons, access will be limited in restricted zones for the life of the Project (Volume 1, Section 23.6.1). Signs will be posted to alert users of areas to be avoided. Progressive rehabilitation will be used so that restricted areas become available as soon as possible. Alderon will work with the White Wolf Snowmobile Club to address Project effects. No snowmobile trails on the Québec side of the border will be near the Project footprint.

In addition, Alderon is committed to participating in the Fermont Consultation Committee initiated by the Town of Fermont to assist in identifying potential issues and concerns related to the mining operations in the area.

4.5.12 PC 05-12

Conclusion

In 2004, the Mining Association of Canada launched the Towards Sustainable Mining initiative (Mining Association of Canada, undated). The guiding principles of this initiative place significant emphasis on community priorities, needs and interests through all stages of mine projects. Although the proponent, Alderon Iron Ore Corp., is not a member of the Mining Association of Canada, we believe that it should respect the guiding principles of the initiative. The proponent should therefore take account of our concerns in its EIS of the Kami iron ore project.

On behalf of the residents of Fermont, I hope that our concerns regarding the implementation of this project will be heard and integrated into the next version of the EIS. Please do not hesitate to contact me for more information or to discuss any of the points raised in this letter.

Alderon Response to PC 05-12

Alderon remains committed to the principles of sustainability as outlined in the Project environmental policy. In accordance with this policy approach, Alderon has been responding to the public comments on the EIS received to date in this Amendment.

Alderon has an established history of responding to public comments by incorporating suggested changes in the Project design and decision-making processes. For example, in response to public comments made by residents of Fermont, Alderon has made the following Project changes:

- relocation of the Rose South Waste Rock Disposal Area 5 km east of its original location (Figure 5.1 in Volume 1 of the EIS);
- included Fermont in the following baseline studies and monitoring initiatives:
    - Land and Resource Use (EIS Volume 1, Chapter 23);
    - Air Quality and Noise Monitoring and (EIS Volume 1, Chapter 14);
    - Socio-Economic (EIS Volume 1, Chapter 24 and 26);
- committed to participating in a consultation committee comprised of a number of mining companies in the Fermont area; and,
- committed to participating in the committee responsible for safety on Route 389.

Alderon commits to joining the Mining Association of Canada following sanction of the Project and release from the Environmental Assessment Process.

4.6 Town of Labrador City (PC 06)

4.6.1 PC 06-1

Appended Letter:

Please accept this letter as the Town of Labrador City's comment on the above referenced document. We thank you for the opportunity to have input and request that the matters raised in the comments presented below be incorporated into the requirements of the proponent in demonstrating the overall environmental impact of the proposed project.

As referenced in our letter of November 19th, 2011 regarding the initial environmental registration for this project, the proposed project scope would have a detrimental effect on one of the Habitat Management Units officially designated in the Municipal Wetland Stewardship Agreement that the municipality has entered into with province. There are a number of other likely impacts of this proposed project that warrant careful consideration prior to a decision on release from further assessment.

The scope of work as we understand it would involve the development of the Rose Pit and a portion of the Rose North Waste Rock Disposal Area immediately within the Pike Lake South Habitat Management Unit. The Habitat Conservation Plan developed as part of the Wetland Stewardship Agreement specifically states "Activities within Management Unit(s) will be managed on a sustainable use basis, whereby permitted activities do no result in the loss of wetland or waterfowl populations."

It is obvious that the development of the mine pit and waste rock pile in the location proposed will essentially result in the loss of a significant portion of if not the entire Pike Lake South Management Unit and would undoubtedly have some adverse effects on the environment surrounding the immediate area of the Management Unit.]

Should this project be released as proposed, the impacts on the habitat management unit and surrounding area would result in a total loss of important waterfowl habitat that cannot be replaced within the area of the development. The proponent must be required to outline necessary compensatory and restorative measures they propose in order to ensure that there is "no net loss" of habitat. This may involve for instance such measures as establishing comparable habitat in another area that meets with the approval of the municipality and the Department of Environment and Conservation. In addition to restorative measures to compensate for loss of habitat within the management unit, the proponent must be required to clearly outline the mitigative measures they will establish to limit the effects of the project's operation on the environment immediately surrounding the area of the proposed development. These mitigative measures must be coupled with stringent compliance monitoring and reporting protocols. Any decisions considered with regard to loss of habitat within a habitat management unit and subsequent comparable replacement, must involve consultation with the Stewardship Association of Municipalities Inc. as such decisions

would be precedent setting for other association members who have Municipal Wetland Stewardship Agreements.

Alderon Response to PC 06-1

Alderon is committed to sustainable development of the Project and has made every reasonable effort to design Project infrastructure so as to avoid interaction with environmentally sensitive areas, including the Management Units within the municipal planning boundaries of the Towns of Labrador City and Wabush. However, Alderon acknowledges that a portion of the Pike Lake South Management Unit overlaps the proposed Rose Pit and would be lost as a result of the development of the mine.

It is Alderon's position that the establishment of the Pike Lake South Management Unit failed to take into account prior and existing mineral claims held by Altius Resources Inc and therefore the rights of the license holder were not considered. Briefly, on March 7, 2005, the Town of Labrador City entered into a Municipal Wetland Stewardship Agreement with the Province under the auspices of the Eastern Habitat Joint Venture (EHJV). The Municipal Wetland Stewardship Agreement identified and recommended nine candidate areas, including the Pike Lake South Management Unit, for inclusion as protected areas under the Town's Municipal Plan. On December 28, 2007, the Town of Labrador City Municipal Plan (2007 – 2017) and Development Regulations came into effect and the nine candidate management units referred to in the Municipal Wetland Stewardship Agreement were classified as conservation areas and made subject to restrictions respecting future development. The Town Plan further provided that any loss of habitat within a Management Unit was to be replaced either by improving existing habitat or constructing new wetland habitat.

The Pike Lake South Management Unit overlaps in its entirety mineral licence 0011927M which was issued to Altius Resources Inc. (Altius) by the Department of Natural Resources on April 24, 2006. This licence was ultimately grouped as mineral licence 15980M and transferred to Alderon Iron Ore Corp. on December 8, 2010. Mineral licence 0011927M was issued to Altius prior to the enactment of the Municipal Plan and Development Regulations. There is no evidence that Altius was made aware that the area was recommended for protection at the time Altius acquired its mineral interests or that Altius's mineral interests were identified by either the Town or the provincial government during the development, drafting, review and approval of the Municipal Plan. A full chronology of these events is set out in Appendix R.

Mineral exploration and development is essential to the present and future viability of the western Labrador area. As a result most of the undeveloped land within the Town's municipal planning boundaries, including the land surrounding the Pike Lake South Management Unit, has been designated as Mining Reserve—Rural. According to Section 3.11 of the Municipal Plan, "Almost the entire landmass within the Town's planning area has either commercial mineral reserves or high potential to contain mineral resources that are economically feasible to develop. Because of these valuable mineral reserves the Council's intent is to protect these areas from development that would hinder future developments of these mineral reserves. The development of iron ore mining in the area is the main economic engine that drives the Town

and all its subsidiary business." In addition, according to the 2012 Habitat Conservation Plan developed by the Town, "the Stewardship Zone and Management Units were designated to try to avoid important areas for mineral exploration."

In view of the importance of mining to the economic viability of the region and given the legal issues associated with the creation of the Pike Lake South Management Unit as a protected area without recognition of the underlying mineral rights or consultation with the holders of those rights, Alderon proposes to work with the Town of Labrador City to implement a strategy that will permit the development of the Project while advancing the protection of wetlands. This solution will involve the following:

- An amendment to the 2007 Municipal Plan to repeal the current zoning classification of the Pike Lake South Management Unit and permit the development of the Project, if and when it is released from environmental assessment. Section 28 of the *Urban and Rural Planning Act, 2000* provides for a review of a municipal plan and development regulation within five years of the date on which the plan and development regulations initially came into effect and it is Alderon's understanding that a review of the Town Plan and Development Regulations is currently underway. Alderon will work with the Town in the preparation of the necessary amendment to the Municipal Plan and Development Regulations.
- Entry into a Corporate Municipal Stewardship Agreement with the Town of Labrador City to establish a process to identify and implement conservation initiatives. The proponent has been advised by the Department of Environment and Conservation that, as a result of the number of mining claims within the Town's municipal planning boundary, there are no suitable locations for alternative habitat to replace the portion of the Pike Lake South Management Unit which will be lost as a result of the development of the Rose Pit. Under the proposed Corporate Municipal Stewardship Agreement, Alderon will commit to work with the Town to identify and implement community conservation initiatives consistent with the objectives of wetland stewardship. Alderon has further been advised by the NLDOEC that the negotiation of a municipal Stewardship Agreement with the Town is a bilateral negotiation between the two parties and that they will not be involved in the negotiations.

Alderon acknowledges the concerns of the Stewardship Association of Municipalities respecting the loss of the Pike Lake South Management Unit. However, in Alderon's view, the circumstances surrounding the creation of this Management Unit – including the failure to take into account pre-existing and valid mineral interests and the recognition in the Town Plan of the importance of the development of mineral interests – are sufficiently unique that no adverse precedent will be set.

4.6.2 PC 06-2

The impacts of the development on the environment and adjacent land uses will not be limited to within the proposed footprint of the development. Lands in close proximity to the proposed site are used for a variety of recreational purposes such as snowmobiling

and hunting and fishing. In addition there is a provincial park and a number of private cabins within and in close proximity to the proposed site of this project. The municipalities of Labrador City and Wabush are both down-hill and down-stream so to speak from the development and any upset or contamination of a water body neighboring the project site would very likely have impacts that would reach Little Wabush Lake which borders both municipalities. A "zone of influence" type analysis should be mandatory in order to model and evaluate the extent and level of impact on water, air (dust and noise) and visual aesthetics changes that will result for the areas within and surrounding the proposed development. This will help to ensure that the impact assessment phase of the project evaluation is as thorough as practically possible. The proponent must then clearly outline how these impacts will be minimized or eliminated where at all possible.

Alderon Response to PC 06-2

Alderon has conducted studies of the recreational activities undertaken by community members in close proximity to the PDA. These studies include a zone of influence analysis and assess the potential effects of dust, noise, light, and a number of other sources on air quality, water quality and visual aesthetics. To view the results of these studies, please refer to Volume 1 of the Kami EIS. In addition to the public information sessions held in Labrador City, Wabush and Fermont, Alderon has contacted 86 cabin owners in the vicinity of the Project and offered to discuss with them individually any questions relating to the environmental studies.

Alderon has also held discussions with the White Wolf Snowmobile Association with a view to identifying alternate routes for snowmobile trails affected by the Project. Alderon has also consulted with the Newfoundland and Labrador Department of Tourism, Culture and Recreation and the Newfoundland and Labrador Outfitters Association to gain a better understanding of fishing and hunting activities in the vicinity of the Project.

Alderon acknowledges that the environmental assessment should not be limited to the proposed footprint of the Project and asserts that the EIS has been conducted with a “zone of influence” style of analysis. For the assessment of potential Project effects on VECs (Volume 1, Chapters 14 through 26 of the EIS), Local and Regional Study Areas were delineated according to environmental factors and characteristics specific to each VEC. As noted by the reviewer, the geographic extent of Project effects may be greater than the PDA for some VECs; this has been a key factor in determining the extent of the Local and Regional Study Areas for each individual VEC. In addition, the significance criteria for Project effects on each VEC are directly related to environmental changes within the Local or Regional Study Areas. As such, the determination of significance of Project effects for each VEC applies to the entire geographic range of Project-related changes in environment, which often extends beyond the PDA.

An example is provided by the assessment of potential Project effects and land use activities such as snowmobiling, hunting, fishing, and cabin use, as well as effects on special areas such as provincial parks (Volume 1 of the EIS, Chapter 23: Other Current Use of Lands and

Resources). The RSA extends beyond the Project footprint and was delineated according to the nature of land and resource use activities. Extracted from page 23-15:

> "*The RSA for Other Current Use of Lands and Resources covers an area of approximately 46,000 km^2. This area is used to provide a regional context for land use patterns across western Labrador and in adjacent areas of eastern Québec.*
>
> *The RSA was delineated to include the multiple travel routes used in western Labrador, including both roads and other cleared corridors which provide access to the country via snowmobile or ATV. Within the boundaries of the RSA are a number of roads and byways that provide access throughout the region, including the Trans Labrador Highway Phase I (TLH) and two well-travelled smaller roads between the TLH near Twin Falls to locations on Smallwood and Ossokmanuan reservoirs. There are also two major hydroelectric transmission corridors that are used for travel into the region from west and southwest of Churchill Falls, and south of the TLH. Other potential travel arteries within the RSA include the Québec North Shore and Labrador Railway (QNS&L) and its corridor, the extensive network of groomed snowmobile trails, and the many off-road trails and paths connecting with remote waterbodies and privately owned cabins. It is along these and other arteries that people from Labrador and, to a lesser extent, Québec can access hunting, fishing, trapping and other harvesting and land use locations throughout the region (Figure 23.2).*"

As such, the assessment of Project effects on this VEC applied to the geographic extent of the RSA, beyond the Project footprint. Detailed baseline information on recreational activities is provided in Volume 1, Section 23.5 of the EIS, pages 23-51 to 23-73.

Other examples of zone of influence based analyses conducted for the environmental assessment include the assessment of potential Project effects on water (Section 16.6 in Volume 1 of the EIS), noise and dust (Volume 1, Section 14.6), and viewsheds (Volume 1, Section 23.6.4). As discussed in Volume 1, Section 14.6.2.1, the air quality modeling extended beyond the Project footprint to consider the towns of Labrador City, Wabush, and Fermont. Water quality modeling and viewshed analysis were also conducted in Volume 1, Chapters 16 and 23 respectively. The model results were used to assess the environmental effects of the Project outside the Project footprint, when the results indicated such was the case.

Wherever possible, adverse Project effects have been avoided through Project design. In the case of any unavoidable adverse effect, appropriate mitigation measures have been identified. Mitigation measures applicable to each adverse Project effect on VECs are listed within Chapter 13 and in Chapters 14 through 26 in Volume 1 of the EIS.

An assessment and evaluation of the likely environmental and socioeconomic effects and benefits of the Project is provided in Volume 1 of the EIS. This includes information on recreational activities and amenities such as snowmobiling, hunting, fishing, cabins and Duley Lake Provincial Park (Volume 1, Chapter 23). Changes in viewscapes are addressed in

Volume 1, Section 23.6.4. Atmospheric environment, including dust and noise, is described in Volume 1, Chapter 14. Volume 1, Chapter 16 addresses effects on water resources.

The effects assessment has also included background baseline studies for which key informants, in Labrador City, Wabush and Fermont were interviewed about regional land use activities (Section 23.5 in Volume 1 of the EIS). To view the results of these studies, please refer to Volume 1 of the EIS. Public information sessions were held in Labrador City, Wabush and Fermont, Alderon has also contacted 86 cabin owners in the vicinity of the Project and held discussions with the White Wolf Snowmobile Association, Newfoundland and Labrador Department of Tourism, Culture and Recreation, and the Newfoundland and Labrador Outfitters Association. Interview topics covered recreational and subsistence activities including hunting, fishing, trapping, boating / water navigation, snowmobile and ATV use, wood harvesting, berry picking, cabin-use, outfitting, bird-watching and geo-caching. Information supplied by participants (though questionnaires and mapmaking exercises) was used to supplement official sources that may be only provide partial information on regulated activities and required reporting. The statements and assumptions regarding recreational activities are based on the results of these interviews.

Residents use snowmobiles for riding on trails and on frozen ponds and lakes. They use these machines to access remote areas and participate in activities such as hunting, ice-fishing, trapping, travelling to cabins and collecting firewood. A network of local and long distance groomed trails ranges from west of Fermont to Churchill Falls. Some of these trails intersect with Project features near Wabush (Section 23.5.4 in Volume 1 of the EIS). For public safety reasons, access will be limited in restricted zones for the life of the Project (Volume 1, Section 23.6.1). Signs will be posted to alert users of areas to be avoided. Progressive rehabilitation will be used so that restricted areas become available as soon as possible. Alderon will work with the White Wolf Snowmobile Club to address Project effects.

Hunting is limited in the areas where Project features will be constructed (Volume 1, Section 23.5.5). Some hunting occurs near Wabush, Little Wabush, Wahnahnish, Riordan and Rectangle Lakes. Residents hunt small game and birds near Long Lake and Lac Daviault, Waldorf River and the south end of Long Lake. Hunting will not be displaced except in a small area where little hunting activity currently occurs. Alderon will implement a no harvesting policy and a firearms prohibition for staff at the Project site to ensure that workers do not interfere with local harvesting activity (Volume 1, Section 23.6.1).

No recreational fishing was recorded within the Project footprint and it appears that fishing activity is limited in the surrounding area (Volume 1, Section 23.5.3). Two informants noted fishing in the area between Wahnahnish and Jean Lakes and another informant noted fishing in those areas as well as the area between Elephant Head and Wahnahnish Lakes. Within the local study area which includes Labrador City, Wabush and Fermont, the main fishing areas are those with easy road access and in proximity to recreational cabins. These include Long Lake, the Waldorf River area, south along Waldorf River to Swanson and Strawberry Lakes, the Riordan and Harris Lake areas, Rectangle Lake and Wahnahnish Lakes. Ice-fishing occurs on Twocum, Jean and Wahnahnish Lakes. Where bridges are required for the Project, Alderon will

construct them so that they do not prohibit navigation (Volume 1, Section 23.6.1). Signage will be posted to inform boaters of any in water Project features.

Recreational cabins are used throughout the region for leisure and subsistence activities such as hunting, fishing and snowmobiling. Cabins are accessed by boat, road, trails and woods roads using ATVs or trucks (Volume 1, Section 23.5.2). As mentioned above, during the winter months, snowmobiles are used to access cabins via snowmobile trails and across lakes and ponds. Changes in access may result from Project infrastructure and activities Alderon will work with cabin owners and snowmobile clubs to address Project effects on access (Volume 1, Section 23.6.3).

As stated above, Alderon has engaged with cabin owners to hear and understand their concerns. The company will continue to meet with property owners, especially those who will potentially be directly affected by the Project. Three cabins are located in the immediate area of the Project and may overlap with Project features. To engage with owners and to mitigate effects Alderon has committed to: preparing an inventory of cabins and owners; engage with owners to hear their concerns; and to mitigate significant adverse effects on properties (Volume 1, Section 23.6.3).

Cabin users in the PDA may experience the effects of noise and dust from construction and operations activities (Volume 1, Section 23.6.3). Alderon has committed to mitigation that will reduce the effects of noise and dust on cabin users. Alderon will use industry best practices, regulatory standards and the Project EPP for dust suppression at the tailings management facility and at the waste rock disposal areas. The company will noise reduction through road speed restrictions; reduction of train vibrations through speed limits and design measures for train tracks; and development of a Project-specific blasting plan.

Viewshed analyses and before / after photosimulations were prepared for selected vantage points and have been included in the EIS (Volume 1, Section 23.6.4). These show that the Project will be minimally visible from the three municipalities. Project will be visible from some recreation and cabin locations including Duley Lake Provincial Park Reserve, parts of Long Lake, Mills Lake, Walsh River and Riordan Lake in western Labrador (Section 23.6.4). Alderon has been engaging with cabin owners in the Project area and has developed a strategy to mitigate adverse effects on cabin owners (Sections 23.5.2.1 and 23.6.3 in Volume 1).

Effects (including air quality, noise, vibration and dust) have been assessed, and mitigation measures identified, in Chapter 14 (Atmospheric Environment) and in Sections 23.5.2.1 and 23.6.3 in Volume 1 of the EIS. Alderon has committed to developing a Project-specific blasting plan. During Project activities, blast noise and vibration will be monitored and will comply with regulatory standards.

Potential effects and mitigation measures for outdoor recreation activities and land use are described in Section 23.5.4 of Volume 1 of the EIS. Access to the Project site will be restricted to ensure the safety of workers and the public. A new access road is proposed to be located to the east of Wabush to minimize the effects of Project traffic on the communities and recreation

areas. Alderon has committed to working with local user groups (e.g., snowmobile and cross country ski clubs) to address specific Project concerns (Volume 1, Sections 23.6.1).

4.6.3 PC 06-3

We would like to stress the importance of the proponent having to carefully consider the demands that the construction and subsequent operations phase of their proposed project will have on the infrastructure of the neighboring municipalities. This will undoubtedly place demands on existing systems and resources and this must be carefully considered in the context of the collective demands being placed on the region by current operations and planned expansions of the other major mining operations within the region.

Alderon Response to PC 06-3

An assessment and evaluation of the Project on individual infrastructure and on infrastructure within the municipalities and the region, and the cumulative effect of this and other mining projects on infrastructure, has been carefully considered in Volume 1 of the EIS (Chapter 24). This includes identification of infrastructure (e.g., recreational, municipal, housing, industrial and commercial, transportation) and infrastructure related groups (e.g., recreational, municipal, business) that will be affected. It also includes identification of issues and effects management strategies to be used to lessen or enhance the effect of the Project on infrastructure. These are outlined in Table 24.1 of Volume 1 of the EIS.

The monitoring of demands on Community Services and Infrastructure is the role and responsibility of relevant government departments and agencies, and is part of the normal planning processes. Alderon will assist by liaising with the departments and agencies, as requested, and through the timely provision of information about Project activity and plans (Section 13.11 in Volume 1 of the EIS).

For those changes to infrastructure for which the Project is accountable (e.g., road access to the mine site, rail haulage, company housing), Alderon will take direct responsibility and obtain appropriate permits and advise appropriate organizations, agencies and government of their plans. For those changes to infrastructure that are the responsibility of government (e.g., municipal and provincial roads, airport, community infrastructure, education, health), Alderon will forecast and advise on mine changes that will affect this infrastructure. For those changes to infrastructure where the responsibility is less certain (e.g. child care; specific mine training and laboratories / shops), Alderon will work with appropriate agencies to deliver effects management strategies as appropriate.

Alderon's position is to first continue its engagement with relevant agencies and organizations using the Community Advisory Panel to receive input on, and address infrastructure issues related to western Labrador and using the Labrador West Regional Task Force to receive input on, and address cumulative infrastructure issues related to, mining activities within the Labrador Trough. An initial action will be to:

- develop a Project accommodations strategy and an MOU with municipalities using input from appropriate committees and agencies and taking into consideration any changes to supply and demand of various accommodation types; and
- communicate the strategy to both CAP and the Regional Task Force (Section 13.11 in Volume 1 of the EIS).

With regard to the above, Alderon MOUs have been signed by the Town of Wabush and the Town of Labrador City. The MOU is designed to address potential impacts of the Project upon community infrastructure and services including but not limited to:

- land use planning;
- Project employee accommodations;
- community infrastructure; and
- community services.

The MOUs will also allow the towns and the Company to work together to develop a comprehensive approach to infrastructure and service issues and to explore opportunities to specifically address Project related infrastructure and accommodation issues through consideration of the following initiatives:

- examination of existing infrastructure and accommodations programs and services in the towns;
- identification of Project impacts upon community infrastructure and accommodations;
- consideration of new and creative approaches for the management of Project effects upon community infrastructure and accommodations;
- collection of housing and infrastructure data related to the Project and the creation of resource materials for Project employees;
- exploration of partnership opportunities between the town and Alderon; and
- support for comprehensive planning processes to minimize adverse Project effects upon infrastructure and accommodations.

Transport Canada has recently completed airport upgrades and will soon be releasing a Wabush Airport Master Plan. Alderon will work with the town of Wabush to accommodate increased air traffic and associated activity at the airport (Table 24.1 in Volume 1 of the EIS).

Recent studies of the railway have suggested strategies for upgrades and alternatives. As stated in the EIS, implementation of these strategies has been incorporated into the negotiations for a rail haulage contract been Alderon and QNS&L (Table 24.1 in Volume 1 of the EIS).

To minimize effects of construction and operations on local roads and the TLH, Alderon will build an access road to the Project site to avoid using Grenfell Drive and will develop transportation arrangements to and from the Project site to minimize vehicle traffic (Section 13.11 in Volume 1 of the EIS). The Company will also supply water to the mine site during construction through groundwater wells and work with Nalcor Energy to ensure Alderon's power demand will not place additional pressure on the existing power supply (Volume 1, Section 13.11). During Project activities, blast noise and vibration will be monitored and will comply with regulatory standards (Table 24.1 in Volume 1 of the EIS). These measures should minimize identified Project effects on western Labrador's infrastructure.

Possible cumulative effects of the Project, along with six other mining projects, on community infrastructure in the Labrador Trough was assessed and evaluated in Volume 1 of the EIS (Section 24.7). It was determined that cumulative effects from these mines could create the following issues:

- a shortage of available and affordable housing and rental units and limited temporary accommodations;
- electrical consumption that exceeds capacity of the current infrastructure;
- an inadequate wastewater distribution centre (Labrador West) which would be at or near capacity with an influx of 800 workers and their families;
- an antiquated water filtration plant (Fermont);
- insufficient facilities and services for seniors (already a problem);
- insufficient capacity for women needing temporary or longer term shelter (already a problem);
- limited child care (Fermont); and
- limited health care services and infrastructure (Fermont).

Alderon is a new member of the western Labrador community and wants to ensure that the Project will benefit the region. Alderon will continue to be an active member of community organizations such as CAP and the Regional Task Force, which addresses issues related to the region. The key to Alderon's success within the community at large will be regular, timely and current communications about such important matters as increased cumulative demands on community infrastructure and collaborative initiatives to address the issues.

4.6.4 PC 06-4

The EIS provides an opportunity for the proponent to provide baseline data to aid in the consultation process with all stakeholders with the objective to minimize the negative impacts associated with the proposed development and in accordance with the principle of adjacency, maximize the socio economic opportunities within the region both in terms of direct, indirect and induced benefits. Impacts on such things as housing, labor market, secondary industry capabilities and social systems such as health care, education and

associated secondary service supply must be carefully considered and evaluated. Consultation with all stakeholders will be essential to developing solutions to minimize the impacts that such demands will have on the region.

Alderon Response to PC 06-4

An assessment and evaluation of the Project on community services and infrastructure and the cumulative effect of this and other projects on housing, community services, and health services has been carefully considered in Volume 1 of the EIS (Chapter 24). This includes identification of the infrastructure, services, and related groups that will be affected and identification of issues and effects management strategies to be used to lessen or enhance the Project's effect on these services. These are outlined in Table 24.1 of Volume 1 of the EIS.

Several issues related to housing were identified and addressed in Volume 1 of the EIS. These include lack of available housing for workers, the effect of a temporary construction camp on housing and the community, and the effect of the demand for housing for operations and maintenance personnel on housing type and market price and on people with fixed or low incomes. Alderon understands the housing issue in terms of both supply and demand. An initial action will be for Alderon to develop a Project accommodations strategy using input from the municipalities as well as other appropriate housing related committees and agencies and taking into consideration any changes to supply and demand of various accommodation types. The strategy, which will be communicated and discussed with both CAP and the Regional Task Force (Section 13.11 in Volume 1 of the EIS), may include such measures as the use of temporary accommodations and the development of new company housing. Expanding the local housing stock would both benefit the Project and provide a legacy for western Labrador.

The Project will not cause significant effects on housing during construction because most of the workers will be transitory, housed in temporary accommodations and likely use a rotational fly-in / fly-out system. During operations and maintenance approximately 800 new residents will relocate to the region, many with families. However, this should not significantly affect the region as it will not occur for two or more years, an accommodations strategy will be in place, a number of effects management strategies will have been enacted, some new housing will have been built for Alderon's employees and housing needs will continue to be carefully monitored (Volume 1, Section 24.9). Alderon will also develop transportation arrangements for both to and from western Labrador and within the region (Volume 1, Sections 24.6.1 and 24.6.2).

With specific reference to the development and finalization of an Accommodations Strategy, Alderon will engage the two towns over the coming months with a view to conducting comprehensive discussions aimed at finalizing the Strategy that is acceptable to both communities. These discussions have commenced with the Town of Wabush and are expected to begin shortly with the Town of Labrador City.

The Town of Wabush has commissioned an engineering report that presents a number of deficiencies in the town's infrastructure and the potential effects of the Project on current infrastructure. The Report advances a number of recommendations for improvements and mitigation measures. Alderon has been in discussions with the Town of Wabush and will

continue this engagement with a view to making commitments to resolve deficiencies and mitigate the identified effects.

The Accommodations Strategy will be based on the Project being released by the federal and provincial governments from the Environmental Assessment process and the Project receiving sanction in Q4 of 2013. Construction of the mine/mill will commence at that time and would extend for the duration of 22 months, ending in Q3 2015. Alderon's plan is to lease the services of a temporary camp to house contract workers during the construction phase. Discussions are underway with a number of providers for that service.

For the operations phase of the Project, Alderon has publically stated its preference to hire permanent employees who reside in the western Labrador region. Over the coming months Alderon will be working closely with the Towns of Wabush and Labrador City to ensure that appropriate infrastructure is in place to meet this objective.

Several issues related to community services were identified and addressed in Volume 1 of the EIS. These include insufficient child care, health care, seniors' facilities, women's shelters, women's resources and counselling (Volume 1, Section 24.5.4). Services for women (e.g., obstetrical care, child care and emergency accommodations, services and infrastructure) could be affected during the operations / maintenance phases. Alderon will work with the responsible authorities (e.g., Labrador-Grenfell Health and the towns of Labrador City and Wabush), CAP and the Regional Task Force to help minimize adverse effects. Because this phase is several years away, time is available to collectively address possible increasing demands.

In addition to working with CAP and the Regional Task Force on some of these issues, Alderon will work with Labrador-Grenfell Health to help determine if adequate primary health care resources would be available during the Project's operations and maintenance phase when more than 800 workers, some with families, are anticipated to relocate to western Labrador. Further, Alderon will provide a first-aid office at the construction site with a nurse, emergency response team and emergency vehicles and it will provide construction workers with pre-employment physicals and an induction orientation addressing health, safety, environmental and human resource policies and practices (Volume 1, Section 24.6.1.1). As part of Alderon's Sustainable Management Framework, the Project's Safety, Health and Environmental Emergency Response and Spill Response Plan, will include policies and procedures to reduce the likelihood of accident to as low a level as is reasonably practical. An emergency response protocol will be coordinated with emergency health services in western Labrador (Volume 1, Section 24.6.1.2).

Western Labrador has decreased in population from its high in the mid-1970's, and its population is aging with growth in all age cohorts above 45 resulting in fewer children and primary and secondary school facilities operating well below capacity. As discussed in Volume 1, Section 24.6.1, of the EIS, it is anticipated that the existing capacity of schools in western Labrador will be able to accommodate any Project-related increase in the population of school-aged children during Operations and Maintenance. Alderon will work with the Labrador School Board and the provincial Department of Child, youth and Family Services throughout the

Project to provide any relevant information on education needs during the operations and maintenance phase to minimize the effects on school and training facility and services capacity. In addition, as noted on Page 24-61 in Volume 1 of the EIS, Alderon has met with College of the North Atlantic (CAN) representatives to discuss requirements for Project-related training and to inform them about potential Project demands on training facilities in western Labrador. The CNA has the ability to customize courses related to Project needs and Alderon will meet regularly with CNA representatives to discuss this possibility prior to the start of construction.

Alderon is a new member of the western Labrador community and wants to ensure that this Project will benefit the entire region. The Company will continue to be an active member of community organizations such as CAP and the Regional Task Force. The key to the Company's success within the community will be regular, timely and current communications about such important matters as increased demands on community services and infrastructure, particularly as they relate to in-migration of Project personnel.

4.6.5 PC 06-5

In closing we feel it necessary to reference the fact that mineral extraction within the planning area of the Town of Labrador City by the Town's major employer is subject to an annual grant-in-lieu of tax and it would be the expectation of the municipality that a permit to develop from the province be contingent upon the proponent negotiating a similar agreement with the municipality.

Alderon Response to PC 06-5

Alderon intends to establish itself as a good corporate citizen and a contributor to the economic well-being of both communities. In this regard, Alderon recognizes that it has an obligation to contribute to the tax base of the Towns of Labrador City and Wabush because of the Project's location inside the boundaries of both municipalities. Alderon has signed an MOU with each town that will provide a forum for discussion of a suitable municipal tax contribution.

4.7 Town of Wabush (PC 07)

4.7.1 PC 07-1

To Whom It May Concern:

Please find the attached document regarding the Alderon Kami Iron Ore Project on behalf of the Town Council of Wabush addressing the concerns regarding this project within the Towns Protected Watershed Area and the loss of the Jean Lake Rapids Management Unit.

The major issues with the Alderon Kami Iron Ore Project within the Town of Wabush Boundaries are the proposed Kami Railway route, which is within the Town of Wabush Protected Watershed Zone and the loss of the Jean Lake Rapids Management Unit. The Jean Lake Rapids Management Unit is part of a Habitat Conservation Plan with the Eastern Habitat Joint Venture program and the Town of Wabush. This program focuses largely upon signing wetland stewardship agreements with municipalities. Jean Lake Rapid Management Unit is designated by the Town for recreation and watershed purposes and is one of the few known places where the Endangered Harlequin Duck has been regularly spotted (Please see Appendix "A").

Alderon Response to PC 07-1

The existing crossing at Jean Lake Rapids consists of five culverts, approximately 100 m downstream of the outflow from Wahnahnish Lake and 500 m upstream of Jean Lake, and is currently used by the general public and others; the stream crossed connects Wahnahnish Lake to Jean Lake.

Alderon designed the rail and road crossing at the Jean Lake Rapids to address the potential effects of construction and operation phases of the Project on the local environment. The Project will require this crossing to accommodate a single rail line, main road access, power line, and snowmobiles. Further analysis and design indicates that the required crossing will be a single span precast concrete structure that will be constructed adjacent to the existing crossing. The structure will be designed to maintain navigability by allowing for a navigable envelope of at least 4 meters wide by 2 meters high above mean annual summer low flows.

In terms of the occasional observations of Harlequin Duck at this location, Alderon recognizes the species may use this location, particularly during spring staging activity. Harlequin Duck occur in fast-water streams in Labrador (Trimper et al. 2008), and has been observed in the Study Area (at the Jean Lake Rapids Management Unit [Wabush 2009]) on at least one occasion in recent years (C. Porter, pers. comm.) and 10 additional observations have been recorded in the western Labrador region between 2000 and 2009 (G. Parsons, pers. comm.). This species of special concern was not observed during any of the dedicated waterfowl surveys completed for the Project in 2011 or other aerial and ground surveys in 2012.

Regardless, examples of relevant mitigation measures outlined in Volume 1, Section 19.6 of the EIS to address potential effects on waterfowl, including Harlequin Duck, include the following:

- Project infrastructure will be sited (or routed [access roads / trails and rail lines]) to avoid, to the extent practical, important habitats, and the minimum practical footprint will be used for construction activities.
- Sediment barriers will be installed immediately after initial disturbance where heavily sediment-laden surface runoff has the potential to flow into any lake, river, stream, or wetland. Such measures may include (but are not limited to) surface water diversion ditches, silt fences, stone or brush cover, erosion control fabrics, settling ponds and other sediment filtration, and flow management products.
- Sediment barriers will be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of a trench) until replaced by permanent erosion controls or restoration of adjacent upland areas is complete.
- Upon completion of construction, all disturbed areas (e.g., exposed mineral soils) and construction staging areas not required for operation / maintenance and / or access of the mine will be graded to establish drainage patterns, blend with the natural terrain and allowed to revegetate, either naturally or with the use of an appropriate seed mixture, to promote native vegetation re-establishment. Seed mixtures will be selected as appropriate to the site conditions.
- If clearing occurs during the migratory bird breeding season (i.e., mid-May to July), procedures to reduce or eliminate the possible disturbance of active nests will be included in the Avifauna Management Plan.
- Waterbodies and wetland buffers (e.g., extra work area setbacks, refueling restrictions) will be clearly marked with signs and / or highly visible flagging until construction-related ground disturbing activities are complete.

Based on the incorporation of these mitigation measures and in consideration of environmental interactions, potential environmental effects at the Jean Lake Rapids were determined to be not significant to Harlequin Duck or other environmental components as a result of this properly designed crossing with the proposed mitigation measures in place.

The conservation function provided by the Jean Lake Rapids Management Unit will remain largely unchanged as a result of the Project. Alderon has designed its activities to maximize use of existing disturbances, minimize new disturbances, and ensure appropriate mitigation measures are implemented to ensure that the Project will not result in significant adverse effect on the surrounding area for potential staging Harlequin Duck or other environmental components.

Alderon has signed a Memorandum of Understanding (MOU) with the Town of Wabush. The purpose of the MOU is to establish a relationship whereby the parties agree to meaningful engagement, collaboration and cooperation in the design, development and implementation of strategies and initiatives to address the potential impacts of the Project upon the town. One of

the topics agreed to be discussed under the MOUs is land use planning. Within this framework, Alderon will engage with the town to discuss this matter.

References:

Parsons, G. Naturalist in Labrador West, Newfoundland and Labrador. Correspondence in 2011-2012.

Porter, C. Conservation Officer, Newfoundland and Labrador Department of Natural Resources, Wabush, Newfoundland and Labrador. Correspondence in September 2011.

Town of Wabush. 2009. Habitat Conservation Plan for the Town of Wabush. Prepared with the assistance of the staff of the Eastern Habitat Joint Venture. 57 pp

Trimper, P.G., P.W. Thomas and T.E. Chubbs. 2008. Harlequin Ducks in Labrador. Waterbirds 31 (Special Publication 2): 32-43.

4.7.2 PC 07-2

The Town of Wabush is not in favor of the proposed Kami Railway operating within the Watershed Zone and the Jean Lake Rapids Management Unit. Under Appendix "C" you will find the Town of Wabush Watershed Zone Regulations and an attached map stating no development is allowed within this zone. We would like to see the noted proposed route rerouted to avoid any devastating loss or harm to this area. The Town has requested to Alderon and the Provincial Government on numerous occasions specifically on rerouting the proposed railway. In the EIS section 2.8.3. Transportation, states 5 options for the proposed Kami Railway. The Town would prefer to see the Kami Railway rerouted to Option 2 as it's out of the residential areas of town and in the industrial area of town (Please see Appendix "B").

Alderon Response to PC 07-2

Alderon has reviewed comments within the EIS Information Requests from NLDOEC Water Resources Management Division (WRMD) and the Town of Wabush and has since met with both parties to review their respective concerns directly. Alderon is aware of, and understands the concerns regarding the Wahnahnish Lake Protected Public Water Supply Area (PPWSA) and is committed to taking the necessary steps to ensure that the concerns of the Town and WRMD are addressed.

The engineering assessment of alternatives to the rail routing proposed in the EIS show that this is the only feasible option available to Alderon. This response outlines Alderon's engineering evaluation of rail routing options and the proposed go-forward approach to achieving an acceptable solution to address potential impacts to the Wahnanish Lake PWSA. The discussion below includes:

- A detailed description of the engineering analysis of routing options completed.

- Further discussion of the risk associated with the operation of rail line within the PPWSA.
- On the basis of advancing the Project using the currently proposed rail route, construction and operations strategies that will mitigate the risk of potential impacts to the PPWSA.
- A strategy to identify and construct a new water supply in the event that the Town of Wabush and WRMD are not in agreement with the strategies proposed by Alderon to implement the currently proposed rail route.
- A proposed consultation platform to be established between Alderon, the Town of Wabush, and WRMD to review and address the issues described herein in greater detail.

Alderon is confident that with modern rail construction, equipment, and operations, combined with advanced mitigation strategies and back-up measures for the water supply in the unlikely event of a spill, as further described below, that the current routing option can be constructed and operated in a safe and environmentally neutral manner, protecting the existing Town of Wabush water supply.

Railway Alignment Options Evaluation

The "Railway Alignment Options Evaluation" report (Attachment 1 of Appendix K) presents the original alignment options analysis that was conducted at the Preliminary Economic Assessment (PEA) and Feasibility Study stages of the Project. The report outlines the basis on which the proposed alignment was chosen for inclusion in the PEA of the Kami Mine Project (September 2011), the modifications made to the selected PEA alignment based on further analysis at the Feasibility Study stage and presents the final alignment recommended in the Kami Feasibility Study report (December 2012).

It is noted in Information Request comments by both WRMD and the Town of Wabush that Option 2 would be preferred to Option 3A. Specific to this comment, Alderon's assessment of Option 2 is detailed at the end of this section.

It is important to note that through ongoing consultation with the Town of Wabush and the public during the Environmental Assessment process, Alderon has responded to previously raised concerns with the proposed rail route. The issues of aesthetics, noise, and safety were addressed in several iterations of the route design provided in the EIS. In addition, during the Feasibility Study, Alderon completed a second review o the rail routing alternatives at the request of the Town. This exercise led to the same conclusion that the routing of Option 3A was the only feasible option.

During the Feasibility Study the engineering team applied LIDAR survey data, topographical data and surface geology to revise the alignment of Option 3A to produce a technically feasible and appropriate routing identified as Option 5 in Figure 2.21 of the EIS, Volume 1. The significant changes to the prior Option 3A alignment include the adjustment of the routing of the

rail line over the ridge west of Wahnahnish Lake and the revised layout of the loading loop at the mine.

Assessment of Option 2

Option 2, as shown on EIS Figure 2.21, Volume 1, would require 9.5 km of rail infrastructure from the proposed loop loading track to the existing Wabush Lake Railway (WLR) and would require trains to travel on the WLR approximately 1 km to the junction with the QNS&L near Labrador City. This route was considered not feasible for the following technical, operating and economic reasons:

- The rail line would require a descent in excess of 1 percent from the Alderon mine loadout to a point near the Wabush Mines rail loop. A grade of this steepness is not ideal for the heavy train operation departing the loadout and would present difficulties for empty trains ascending in severe winter conditions.
- The route requires avoidance or removal of waste rock piles between the Alderon mine site and Wabush Mines.
- The route would impact existing industrial buildings and property in the Wabush Industrial Park.
- There is no viable location to build an interchange yard near the QNS&L due to the proximity of the WLR immediately to the west and industrial park properties immediately to the west.
- This alignment would intersect with the main entrance road leading to Wabush Mines.
- Rail operational complexity is high due to required interaction with Wabush Mines Railway and personnel.

Any one of the above restrictions could alone make Option 2 unfeasible during detailed design, but a combination of these restrictions led to the conclusion that this route is unfeasible and this route was eliminated as an option for the Kami Project.

Selected Routing

The selected rail route is identified in Figure 2.7.1 (Wabush Protected Water Supply Area Plan) below and the sections of the rail alignment which traverse the PWSA are further presented in Figure 2.7.28 (Rail Alignment through PWSA). The selected rail alignment has a minimum 50 m offset from Wahnahnish Lake.

The remainder of the discussion in this document refers to the selected routing.

Figure 2.7.1 Wabush Protected Water Supply Area Plan

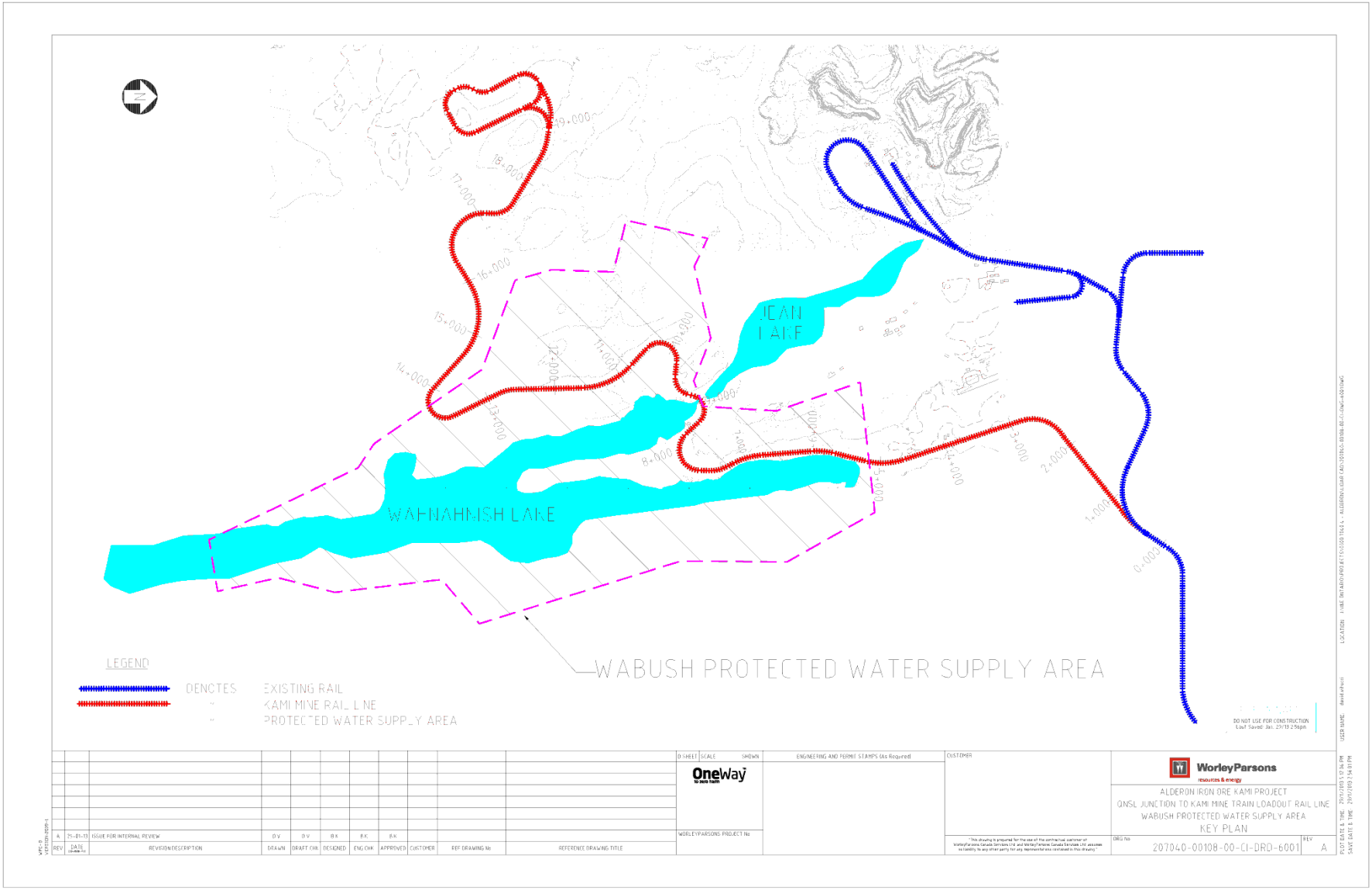
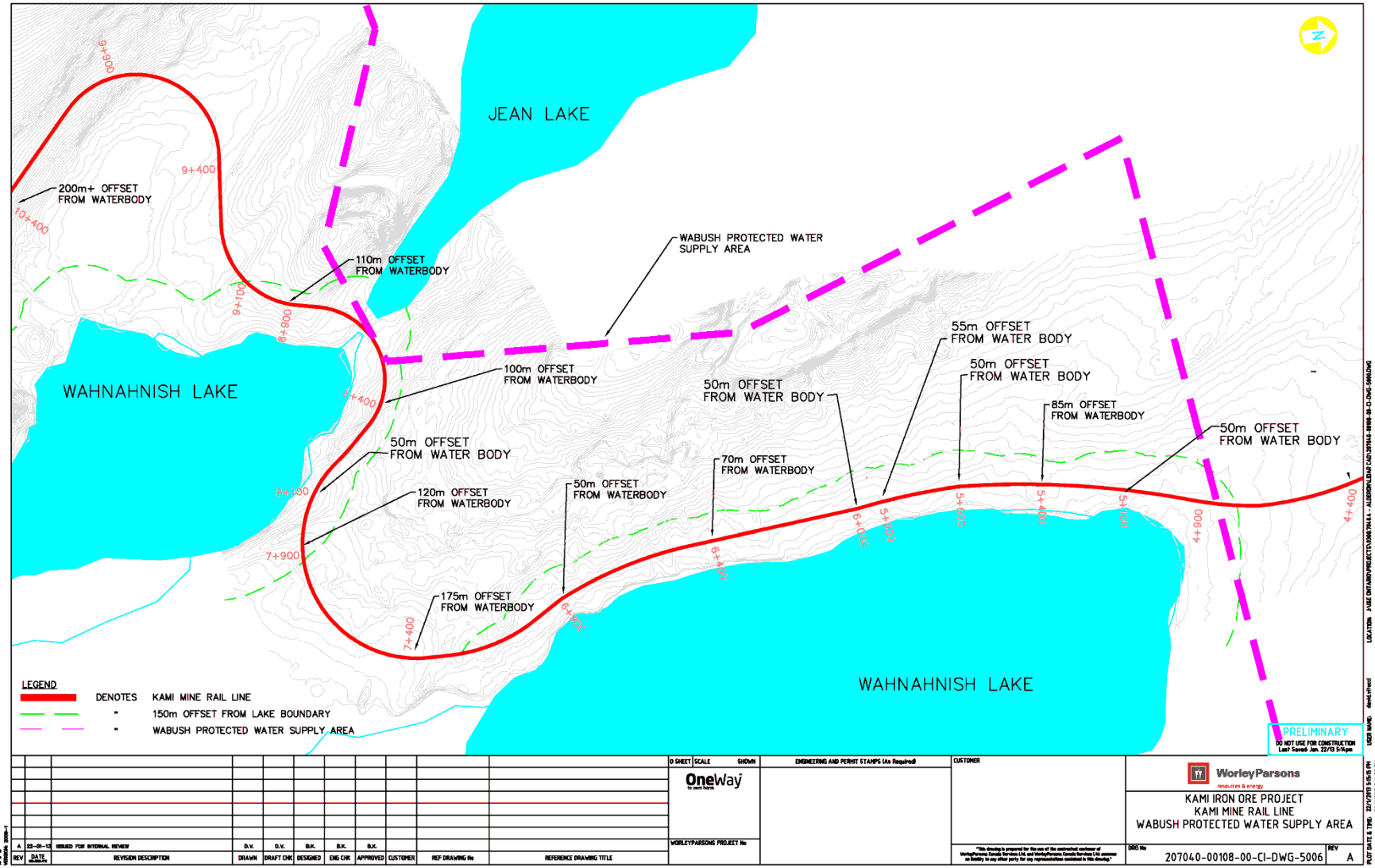


Figure 2.7.2 Rail Alignment through PWSA



Rail Transportation Safety

As noted in the Information Request comments provided by WRMD and the Town of Wabush, the risk of a fuel spill has the highest potential impact on the PWSA. A malfunction/accident analysis is presented in Section 4.5 of the EIS, however additional statistical data is presented below and in Section 6 of the "Kami Rail Line – Fuel Delivery" report, located in Attachment 2 of Appendix K to provide context to the risk of a fuel spill due to a rail transportation incident.

- North American rail systems carry in excess of 1 million shipments containing over 100 million tons of hazardous material in tank cars annually. 99.996 percent of hazardous materials arrive at their destination without a release caused by an accident.
- According to the Railway Association of Canada, rail transportation is considered to be the safest means of ground transportation in Canada and Canada's railways have the best safety record in North America.
- Historical safety performance of the federally-regulated railways in Labrador indicates that leaks of dangerous commodities from tank cars are an uncommon event on these operations. The Transportation Safety Board 2010 Statistical Summary indicates that for the years 2001-2010, there were no reported leaks of dangerous commodities, regardless of car type, on federally-regulated railways in Newfoundland and Labrador.
- Based on the quantities and frequency of tank car movements on the Kami rail line and current freight train safety statistics, the probability of a reportable accident involving a fuel train in transit on the Kami Rail Line is 1 in 311,370 shipments or once every 5,987 years.

In order to keep the risk of a fuel spill as low as possible, advanced rail construction and operations strategies are proposed for the Kami Rail Line as further described in the following section.

Rail Construction and Operation Strategy

In consideration to proceeding with the selected rail route option, Alderon is committed to developing a safe approach to moving fuel and consumables through the PWSA. Through the detailed engineering phase of the Project and in consultation with WRMD and the Town of Wabush, Alderon is developing detailed designs and operational strategies to minimize the risk of a spill and in the unlikely event of a spill, provide mitigation to prevent the spill from impacting the supply of potable water to the Town of Wabush as summarized below and detailed in the following subsections.

- Construction activities will be planned and executed in a manner to protect the PWSA. An Environmental Protection Plan (EPP) for construction within the PWSA will be developed as part of the overall Environmental Management System and Sustainability Management Framework for the Project.

- The rail line will be operated as safely as possible to reduce the risk of a derailment by transporting fuel and consumables separately from the main iron ore cars, reducing the speed of the shipment, only moving fuel and consumable railcars by daylight and sending an inspection vehicle (hi-rail pick-up truck) ahead of the fuel cars to inspect the line for damage and obstructions so that the train can be stopped well in advance of any problems on the route. In addition, the movement of fuel to the site will employ new, double-jacketed tank cars that are designed to withstand certain types of roll-overs and not spill.
- To address the unlikely event that there is a spill, the rail and road corridor through the PWSA will be designed as a spill containment area with lined ditches and berms along both sides of the corridor to capture spills, oil / water separators (OWS) will be installed that will capture fuels so that they do not enter Wahnahnish Lake, and sluice gates will be installed that will be shut before the fuel train moves through the PWSA to stop flow in the event of a spill.
- Emergency response plans will be established to provide protocols to quickly react to any spills in order to protect the water supply. The operators of the hi-rail inspection vehicle that travels in front of the fuel train will be trained members of the emergency response team and will be in constant communication with the locomotive and mine operations to provide rapid response in the event of a spill.
- Alderon commits to studying and implementing options to ensure the continued supply of water to the Town of Wabush in the unlikely event of a spill. Alderon will also consult and work with the WRMD and the Town of Wabush with the objective of identifying an alternative water supply location that can be used for emergencies and also as a back-up for maintenance and operational issues with the existing water supply system.

Construction Activities

Any work performed within the PWSA will be subject to an approved Permit for a Development in a Protected Public Water Supply Area, which will provide guidance and procedures for the protection of the PWSA during construction activities.

An Environmental Protection Plan (EPP) for any construction within the PWSA will be developed as part of the overall Environmental Management System and Sustainability Management Framework for the Project.

The EPP will include mitigation measures to protect Wahnahnish Lake from impacts from construction activities including silt fences to control dust and sediment from entering the lake, storm water management at drainage locations to minimize flow disruptions caused by construction, and spill prevention protocols that will include inspecting vehicles and hydraulics on a daily basis for leak or damage that could cause minor spills and rapid spill response to contain any minor spills so they cannot impact the lake. Machinery on site will be limited to the quantity necessary to perform the work and after hours storage of machines and equipment will be limited to controlled areas where containment of spills can be provided.

Concrete, steel or plastic composite ties will be used instead of creosote ties in the sections of the rail route within the PWSA.

Kami Rail Line Operations & Maintenance

The "Kami Rail Line – Fuel Delivery" report (Attachment 1 of Appendix K) outlines the safety of fuel delivery along the Kami Rail Line within the watershed area.

It is projected that operation of the Alderon Kami mine will require approximately 180,000 gallons of diesel fuel and fuel oil per week for operations. The demand for 180,000 gallons of diesel and fuel oil would equate to the ownership and operation of 12 to 18 rail tank cars operating from the Kami mine site to the Port of Sept-Îles. These railcars will operate in two separate blocks of 6 to 9 tank cars. The variation in the number of cars is dependent on the type and capacity of tank car that is selected for mine operations.

Based upon the current railway design and the proximity to the PWSA, the following railway operating procedures are proposed for the safe movement of diesel fuel and fuel oil to the Kami mine site:

- Tank cars destined to or from the Kami mine site will be run in a dedicated train service where loaded fuel tank cars would depart the QNS&L yard at Labrador City with only the minimum number of iron ore cars that are required to meet safety guidelines (5 at the front of the train). The fuel tank cars will be dedicated to the Kami mine and will be new, double-jacketed tank cars that are designed to withstand certain types of roll-overs and not spill.
- To reduce the risk of derailment the speed of the fuel car movement through the PWSA will be reduced to "restricted speed". Restricted speed is defined as the speed at which you are able to safely stop the train within one half the range of vision of equipment, at no time exceeding 15 mph. This speed restriction would minimize the risk of a potential derailment and/or release of diesel fuel or fuel oil into the watershed area. Fuel trains will only move through the PWSA during daylight hours so that any track issues can be identified and potential spill response completed effectively.
- When the fuel train arrives at the Kami rail line it will be met by a hi-rail vehicle which will lead the fuel train at a specified distance in advance to inspect the rail prior to the train travelling through the PWSA. The rail will be inspected for broken rails, damage, obstructions, wash-outs, ice/snow buildup and any other derailment potential. Communication between the hi-rail vehicle and the dedicated fuel train will be via radio, train dispatcher and/or cellular phone.
- Empty tank cars from the Kami mine site would operate in the reverse manner of the loaded tank cars inbound to the mine site.

A track maintenance plan will be prepared and implemented to reduce the frequency and magnitude of incidents and maximize the safe handling of all commodities. The most frequent of

these required track activities will be track inspections. Track inspection requirements are prescribed by Transport Canada Rules Respecting Track Safety (TC E-54). This document is located in Attachment 2 of Appendix K "Kami Rail Line – Fuel Delivery" report, Appendix 4 – Track Inspection Requirements. The Kami rail line is considered Class 2 track with a maximum speed of 25 mph. As described earlier, speeds will be restricted within the PWSA.

Alderon will procure and utilize fuel tank cars that meet or exceed standards set by the Railway Association of Canada, Association of American Railroads and Transport Canada. A typical tank car structure and associated components proposed for the Project is included in Attachment 2 of Appendix K "Kami Rail Line – Fuel Delivery" report, Appendix 3 – Tank Car Drawings and Specifications.

Rail engineering, design, simulation and modelling indicate that tank cars with an internal capacity of approximately 29,000 gallons can be used. Typical tank car bodies are generally constructed with double walled steel construction with a layer of insulation between the walls. Steel thickness can vary from 25-50 mm, depending on the car type and manufacturer. The ends of the tank are generally reinforced to prevent potential rupture from normal train movements and switching. Emergency shutoff valves are installed as a safety device in fluid lines and are designed to close when the normal flow rate of the line is exceeded due to breakage or damage. These valves will also protect the integrity of the tanks if lines are damaged due to derailment.

Maintenance inspections for motive power and railcars are required on a quarterly and annual basis. Inspections are also required after loading and unloading. Alderon will add an additional inspection of motive power and empty tank cars prior to departure from the mine fuel facility and an inspection of loaded tank cars upon arrival at the Kami Railway Line junction prior to departing for the mine fuel facility. The requirements and objectives of the inspection process are set out in the Railway Freight Car Inspection and Safety Rules, Transport Canada document TC O-06-1, included in Attachment 2 of Appendix K "Kami Rail Line – Fuel Delivery" report, Appendix 5 – Railway Freight Car Inspection Rules.

Spill Containment Design

The portion of the rail corridor that traverses the PWSA will be designed as a spill containment area with the following features:

- An up-hill berm to direct storm water away from and under the transportation corridor to minimize the potential for storm water to carry spills to Wahnahnish Lake
- Lined ditches and berms along both sides of the corridor to capture storm water and spills within the transportation corridor
- Oil and solids separator systems that will capture hydrocarbons and total suspended solids from storm water to prevent them from entering Wahnahnish Lake.

- The oil / water separators (OWS) will be equipped with sluice gates that will be shut before the fuel train moves through the PWSA to stop flow in the event of a spill. Once the fuel train has moved through the PWSA, the sluice gates will be re-opened to allow storm water and runoff to flow through the OWS.
- A regular maintenance program will be established to clean out the separators and ensure they are ready to capture any spills.

A typical plan and cross-section of the proposed spill containment is located in Attachment 2 of Appendix K "Kami Rail Line – Fuel Delivery" report, Appendix 2 – Spill Containment System.

Emergency Response Plans

Alderon's preliminary "Transportation Spill Response Plan" located in Attachment 3 of Appendix K outlines procedures and measures to prevent, minimize, mitigate and remediate any effects to the environment in the unlikely event of a spill during transport of materials by rail or truck to and from the Project site.

To provide rapid spill response, the hi-rail vehicle that will lead the fuel cars to the mine site will be staffed with emergency response personnel and will contain a spill kit to facilitate immediate first response in the event of a spill due to derailment or tank car leak. Spill kits will also be installed along the rail route at regular intervals to facilitate rapid spill response. The spill kits will contain the appropriate type, size and quantity of equipment for the volume and type of product being transported. In addition to the spill response material, various hand-held tools including shovels and a variety of mobile heavy equipment including excavators, front-end loaders, bull-dozers, haul trucks and a vacuum truck will be available and can be quickly mobilized from the mine site to aid in spill response as required.

A team of two trained emergency responders operating the hi-rail vehicle will be responsible for checking the track for any hazards ahead of the rail cars during transportation of fuel to the mine site. In the event of a derailment, the rail locomotive will immediately notify the team of first responders in the hi-rail vehicle and the team will:

- Ensure site and personnel safety;
- Assess the preliminary severity and source of the spill;
- Identify and contain the spill;
- Immediately report to mine dispatch and to the Town of Wabush;
- Control road traffic if required to maintain a safe environment; and
- Participate in spill response as a member of the cleanup crew.

Alternative Water Supply

In order to prepare for the unlikely event of a spill that is not contained by the emergency response crews, Alderon will provide the Town of Wabush with an alternative water supply location that can be used for emergencies and also as a back-up for maintenance and operational issues with the existing water supply system. The exact location of the alternative water supply will be discussed and developed in consultation with the Town of Wabush and WRMD.

Further protection can be provided by installing a Granular Activated Carbon (GAC) filtration system at the existing water supply location that can be used in the event of a spill to remove any hydrocarbons that are present in lake water prior to chlorination and distribution to the Town.

New Protected Water Supply Area

If the proposed mitigations/strategies outlined above are deemed insufficient, Alderon will seek the approval of the Town of Wabush to identify and develop a new water supply. Subject to receiving approval from the Town, Alderon will commit to working with WRMD and the Town to permanently relocate the water supply and redefine the PWSA.

A selection and design process will be initiated to establish potential alternative water supply locations with the following general constraints and objectives:

- Water Quality – The new water source will need to provide the Town of Wabush with high quality, clean water similar to the current water supply.
- Water Volume – The water source must have sufficient volume and recharge to provide for the Town's water requirements now and in the future.
- Accessibility – The new water supply must be easily accessible for operations and maintenance activities including year-round road access and power availability.
- Ownership/Permission – The Town of Wabush must be able to acquire access rights to the water.
- Watershed Protection – The new supply must be able to be protected without major concerns raised by industrial operations or recreational users.
- Distance – The supply must be located within a reasonable pumping distance so operations and pipe maintenance costs are reasonable.

Alderon will complete an initial review of possible water supplies in the area and narrow down the potential list based on the constraints and objectives listed above. For the selected alternatives a pre-feasibility design will be completed to review possible intake and piping locations, access and maintenance requirements, power requirements, preliminary cost estimate and potential environmental and/or social issues that will need to be managed.

Consultation with the Town of Wabush will be an important part of developing the pre-feasibility design review to understand how the Town currently manages the water supply and how any changes would impact on the Town's operations and budget requirements.

Stakeholder Consultation

Alderon is committed to consulting with the Town of Wabush and WRMD to address the concerns regarding the potential impacts to the PWSA resulting from the construction and operation of the proposed rail line.

Alderon will establish and lead a working committee with WRMD and the Town of Wabush to involve both parties in the design process with respect to the rail routing and selection of an alternative back-up water supply or relocation of the existing PWSA. This has been discussed with both WRMD and the Town of Wabush and all parties are in agreement with the development of this committee.

4.7.3 PC 07-3

Also, under the current Town of Wabush Municipal Plan and Development Regulations, Section 4.4.10 Rural Zone, the Kami Iron Ore Project falls within the Rural/Cottage Use Zone. The Kami project would be a discretionary use to Council. In order for this Kami Iron Ore Project to be allowed as a permitted use in the Town's boundaries, the Town has to move forward with an amendment process to allow for a mine site (you will find attached the Rural Zone from the Town's Plan). Also attached is the Mineral Workings Zone which would allow a permitted use for mining companies in the near future, once and if the amendment process is approved by the provincial Municipal Affairs department. (Please see Appendix " 0"). Alderon has been informed regarding this matter. In addition to the location of the Kami Iron Ore Project, the Town of Wabush will be losing a Cottage Use zone that runs along the Long (Duley) Lake boundary. The Town currently has five (5) cottage use zones within the Planning Boundaries. Once this project commences the Town will lose one (l) maybe two (2) and will have to explore new zones. Due to all the mineral exploration in the Labrador West area, it's becoming harder for the Town to expand its Cottage Use Zones as some areas previously identified have had high mineral possibilities.

Thank you for your attention in this matter.

Any questions on this issue please contact the undersigned.

Sincerely,

Town of Wabush

co-exist in the Rural zone. However, the Town of Wabush wishes to rezone the land where the Kami facilitates would be located, along with other lands, to Mineral Working (MW) to accommodate potential future mining activities.

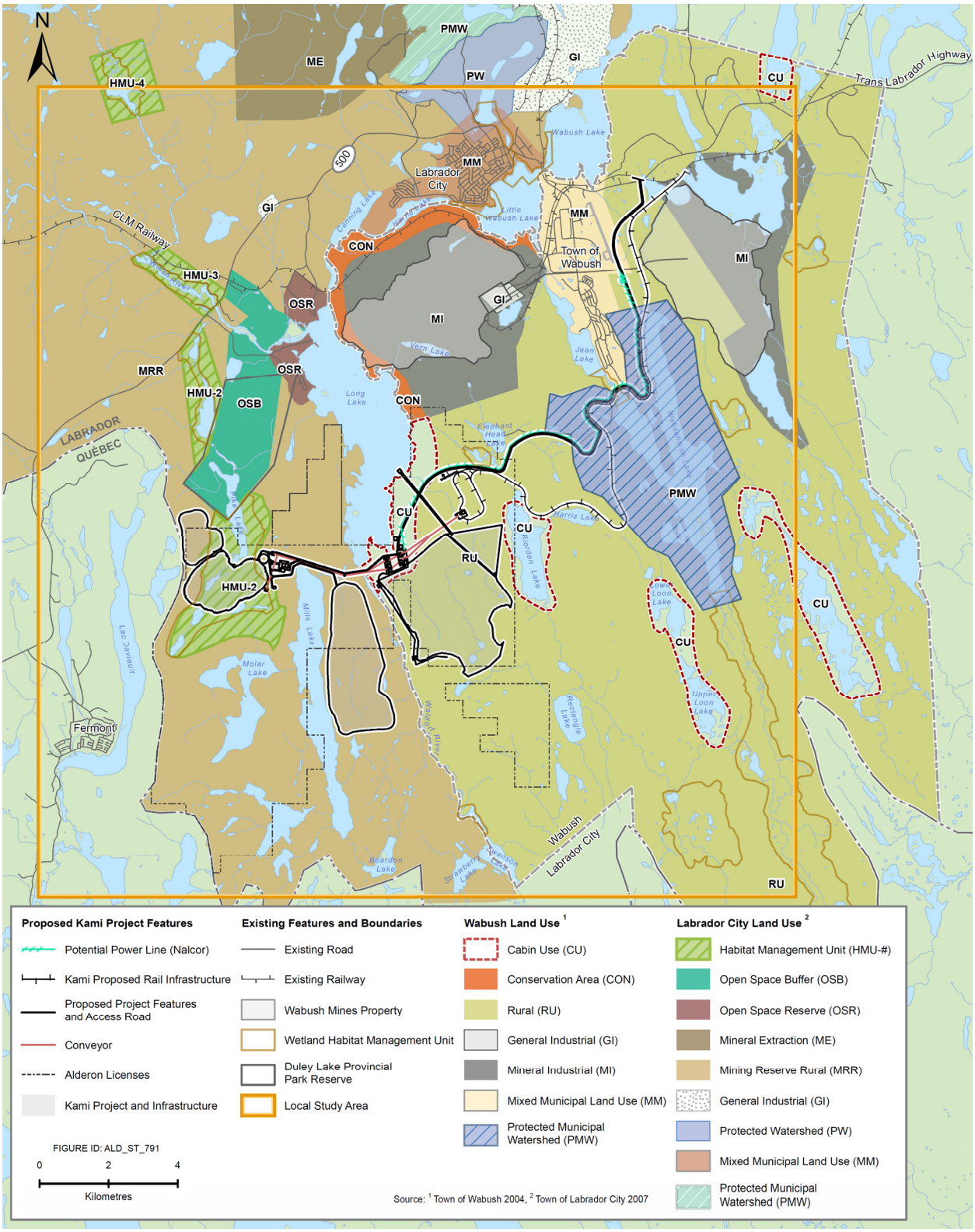
In Schedule B of the Municipal Plan, examples of mineral working and exploration include pits and mines. The Development Regulations (Schedule C) state that conditions and requirements for mineral workings are the same whether they occur in the Rural zone and the Mineral Working zone. These include the requirement that mineral workings be 300 m from any existing or proposed residential development and 150 m from any other type of developed area, or area likely to be developed, during the life of pit or quarry working. Buffers are also required around waterways: 15 m from the high water mark of rivers or streams and 30 m from the shoreline of ponds and this may also relate to areas where cabins exist.

It is Alderon's position that there is no requirement to rezone the property on which the Project lies within the Wabush Municipal Planning Area through an amendment process. The hown has the right to exercise its discretionary authority in allowing the Project to operate as a discretionary use under the current Development Regulations. Alderon's concern is that the rezoning process is lengthy and may cause Project delays. The public would still have an opportunity to comment on the application for a discretionary use as it would for an amendment.

In addition to the Town of Wabush, Alderon is addressing the issue of proximity of cabins and mining activities by communicating with the Newfoundland and Labrador Department of Environment and Conservation – Crown Lands Division, recreational interest groups and individual cabin owners. Together, these groups and individuals are working on appropriate measures to accommodate the Project and to minimize its effects on the community and recreational activities.

Alderon is prepared to collaborate with the Towns of Labrador City and Wabush to engage NLDOEC's Crown Lands Division on this issue. The objective would be for Crown Lands Division to earmark new areas for cabin development in western Labrador. While this would serve all residents in the region it would be of particular value to those cabin owners whose properties are scheduled to be purchased by Alderon and wish to rebuild in another location.

Figure 4.7.3 Municipal Land Use Zoning, Labrador City and Wabush



4.8 Fermont Citizens' Movement (PC 08)

4.8.1 PC 08-1

Introduction

The involvement of the Fermont Citizens' Movement in the Alderon file dates back to March 2011. The following excerpt from the brief we gave at the public consultation held prior to the release of the initial guidelines explains why our group was formed.

Interest in Alderon's Kami iron ore project arose when the community became aware of the existence of the development project, which is located partly within the boundaries of the town of Fermont. The citizens' group, which is familiar with the realities of the mining industry, feels that Alderon acted without taking the interests of the residents of Fermont into account. Given the proximity of the proposed mine, the potential adverse impacts would be felt by the residents of Fermont, and it appears that no initiatives have been taken to promote sustainable, social development of the community. Moreover, the Kami project straddles two provinces, but because it is located primarily in Newfoundland and Labrador, the residents of Fermont feel they have no say in the development of the project. The support of the Québec government is therefore critical to asserting the province's stake in the project and to ensuring that the rights of the residents of Fermont are respected.

Following the release of the EIS guidelines, Alderon developed its proposal, which it submitted this summer. According to the guidelines,[1] the proponent is required to prepare a summary of the EIS in both French and English. However, there is no such requirement with respect to the complete document. Alderon translated the part I of its EIS, but part II will not be translated. During their visit on October 25, representatives of the company informed us that it would take too long to translate part II. The Fermont Citizens' Movement feels it is critical that part II be translated because it covers all of the environmental effects of the project relating to air, water, noise and light. Given that part II is very technical, we should at least be able to read it in our native language, i.e., French. We feel it shows a complete lack of transparency on the part of the company towards the Francophones most affected by the project, the residents of Fermont, a primarily Francophone population.]

[1] Environmental Impact Statement Guidelines for the Kami Iron Ore Project, p. 23

Alderon Response to PC 08-1

Alderon is committed to transparent engagement with all stakeholders, including the citizens of Fermont.

As stated in the EIS Guidelines, Alderon was required to prepare a Plain Language Summary of the EIS in both English and French. Alderon exceeded this requirement by also producing Part I of Volume 1 of the EIS in French. Part I of Volume 1 directly addressed potential effects on

residents of Fermont, because it pertained to Alderon's proposed operations in Labrador. Volume 2 addressed Alderon's operations in the Port of Sept-Îles. Part I of Volume 2 was also presented in French. Alderon made the offer to provide detailed technical workshops in French as requested. Upon request, one workshop was provided to the Regroupement pour la Sauvegarde de la grande Baie de Sept-Îles and the Comité de défense de l'air et de l'eau in Sept- Îles on November 2, 2012. To date, Alderon has not received any requests for technical workshops from any stakeholders in Fermont.

4.8.2 PC 08-2

Important factors to be considered

Fermont is the sector in which residents will be most affected by the construction and operation of Alderon's Kami iron ore mine. The proximity of the mine to Fermont will have significant impacts on various components of the environment and on the quality of life of the residents of Fermont.

Alderon Response to PC 08-2

Alderon disagrees with the assertion that Fermont will experience significant adverse effects as a result of the Project. Based on the effects assessment provided in Volume 1 of the EIS, Chapters 14 to 26, no significant adverse effects are anticipated for the Town of Fermont and the Fermont area.

4.8.3 PC 08-3

Description of the project location

The proposed site for the future Kami iron ore mine is not located entirely within Labrador; part of it is located in the province of Québec. The project is adjacent to the town of Fermont and will have more impacts on the community of Fermont than on the residents of Labrador.

Alderon Iron Ore Corp and the Canadian Environmental Assessment Agency have informed us that the physical components of the project will be located wholly within Labrador, but that is not quite accurate. While it is true that most components are located in Labrador, some are in fact located within the boundaries of the town of Fermont.

The following are a number of project components that the Agency should require the proponent to include and associate with Québec, because they are physically located within the boundaries of Fermont:

1 Open-pit

Not all of the proposed mine facilities will be located in Labrador; some will be located in Québec, in the town of Fermont. There is a buffer zone around Rose Pit. At the public

consultation of October 25, 2012, Bernard Potvin indicated that a 1-km perimeter will be required around the pit, which involves the physical presence of the company on Québec soil, in Fermont.

In addition, the company states that the open pit mine is located south of the towns of Labrador City and Wabush.[2] However, this statement ignores the fact that the open pit mine is closer to Fermont than to those two towns. Anyone who is unfamiliar with the geographic location would get the impression from that statement that the town of Fermont is not affected.

[2] Kami Iron Ore Project Environmental Impact Statement Plain Language Summary, p.6

Alderon Response to PC 08-3

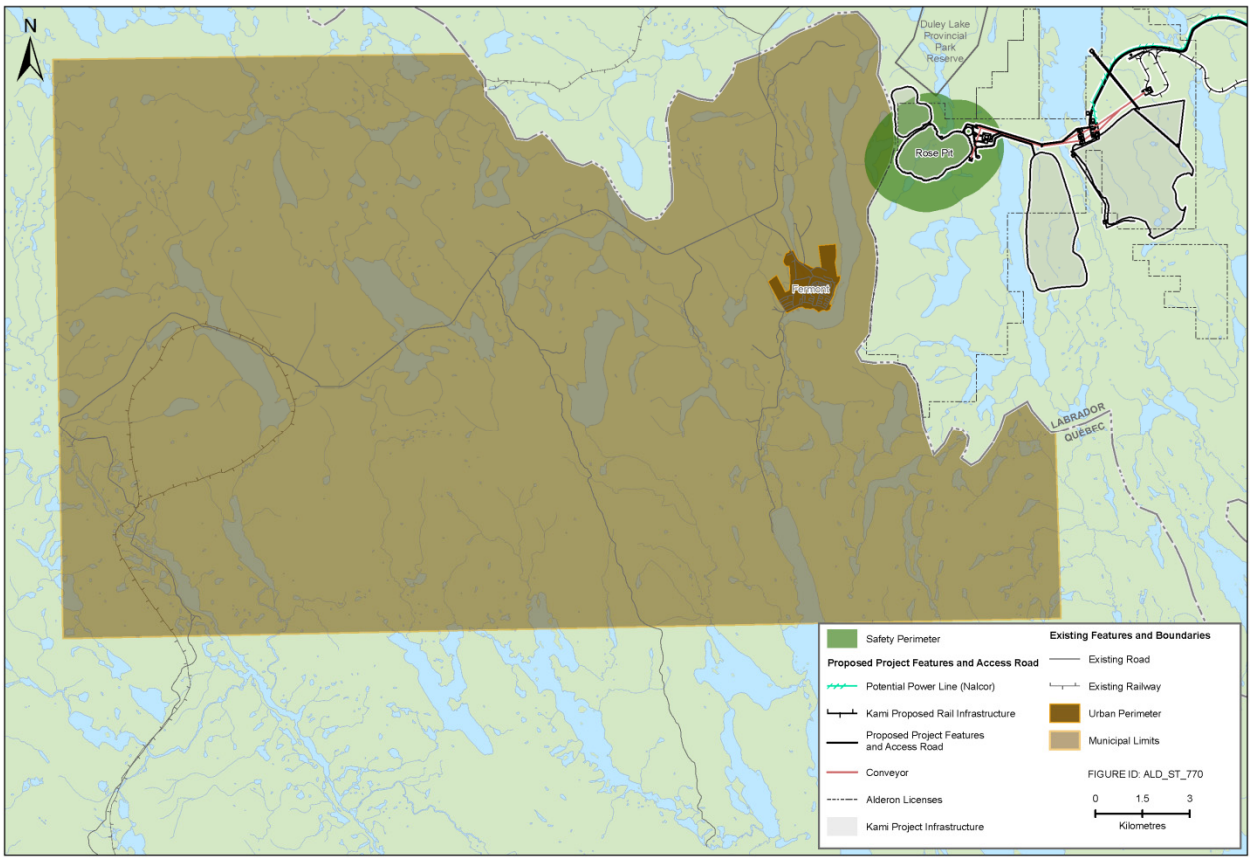
The Project is located entirely within Labrador; it is adjacent to Québec, in the vicinity of the towns of Fermont, Labrador City and Wabush. The environmental effects of the Project have been assessed for the surrounding environment, including the town of Fermont. As a result of concerns raised by residents of Fermont regarding a potential increase in dust and noise, and a change in viewscape, Alderon redesigned the Project and moved the Rose South Waste Rock Disposal Area approximately 5 km east.

The referenced buffer zone is the blasting safety perimeter. The size of the perimeter will be determined by the blasting charges and timing between detonating each blast hole, to be finalized in the blasting plan currently in preparation. During the Fermont consultation meeting of October 25, Mr. Potvin mentioned as an example a typical 1-km zone for a blasting safety perimeter. The actual size will be finalized in the Project Blasting Plan, but is not expected to be larger than 1 km. Blasting will occur approximately once per week. The safety perimeter zone will be activated during blasting activities only, for approximately one hour prior to the blast and 0.5 hour after the blast. During this period, access along established roads and trails will be restricted through the use of vehicles, fences, tapes or other practical means. Alderon will issue notification of planned blasts to various agencies and the media prior to each blast.

The safety perimeter zone is largely located in Labrador. At a maximum, less than 20 percent of the safety perimeter zone will be located in Québec. Although the safety perimeter zone will extend into the municipal limits of Fermont, it is approximately 2 km away from the designated Urban Perimeter, where the homes and infrastructure of Fermont are located (Figure 4.8.1). There are no known roads or trails located within the safety perimeter zone where it extends into Québec. Access to this area will be restricted approximately once a week for a period of 1.5 hours, during the operations phase.

The purpose of the blasting safety perimeter is to protect the safety of persons on and near the Project site.

Figure 4.8.1 Safety Perimeter Zone



4.8.4 PC 08-4

2 Rose North waste rock disposal area

The disposal area will have aesthetic effects on the landscape of Fermont. It will be visible from several locations in the town and, for that reason, will have viewshed effects.]

Alderon Response to PC 08-4

The placement of Project features has been designed so that they are only minimally visible from surrounding communities, including Fermont. The Rose South Waste Rock Disposal Area was relocated approximately 5 km to the east to minimize effects to Fermont. As a result, it will no longer be visible from the Town of Fermont. A detailed viewshed analysis, including a viewshed model, was conducted to predict the effects of the Project on viewscapes in nearby communities, parks, and recreational areas. Viewshed maps indicating the likely visibility of Project features from surrounding areas, including Fermont, are provided throughout pages 23-101 to 23-106 (Other Current Use of Lands and Resources) of Volume 1 of the EIS.

As a part of viewshed analysis, site-specific photosimulations were created to provide a comparison of the "no Project" and "with Project" environments. The following photosimulations are provided for locations in the Fermont area:

- Fermont, Shore of Lac Daviault (1), page 23-108, Volume 1;
- Western shore of Lac Daviault, page 23-132, Volume 1;
- Northern Fermont (1), page 23-133, Volume 1;
- South of Fermont, page 23-134, Volume 1;
- Northern Fermont (2), page 23-135, Volume 1;
- Fermont Hiking Trail Peak, page 23-136, Volume 1;
- Fermont Hiking Trail Peak, page 23-137, Volume 1; and,
- Fermont, Shore of Lac Daviault (2), page 23-138, Volume 1.

4.8.5 PC 08-5

The company was unable to provide complete details on the management of the site. We were given contradictory information. At the October meeting, we were told that the Rose North waste rock disposal area would be used for two purposes, i.e., storage of overburden from Rose Pit and storage of waste rock from the same pit. However, the overburden was to be used for revegetation in 2019.

The Rose North waste rock disposal area will alter the topography of the site. As a result, surface water flow will be altered, shifting towards the town of Fermont and Daviault Lake, which is located in Fermont. The lake is heavily used by local residents for many activities.

Alderon Response to PC 08-5

Surface water from the development of the open pit will either drain into the pit and be managed by pit dewatering to a sedimentation pond facility or external drainage routing toward the pit will be collected in pit perimeter drainage ditches which will convey external drainage around the pit toward existing watercourses. The Rose North Waste Rock Disposal Area will similarly be designed with perimeter ditches to divert non-contact external drainage around the area as well as a sedimentation pond to provide sedimentation to waste rock disposal area runoff. In both cases, the open pit and Rose North Waste Rock Disposal Area, the surface water runoff is sourced from Labrador, with no surface water drainage toward Québec.

As indicated above, drainage from the Rose North Waste Rock Disposal Area will be directed to a sedimentation pond. External drainage toward the disposal area will be routed around the disposal area via perimeter drainage channels. Both the disposal area and perimeter drainage channels will be located in Labrador and will not drain toward Québec. Please refer to

Figure 16.35 in Volume 1 of the EIS for the Rose North Waste Rock Disposal Area water management plan.

As indicated above, drainage within the Rose Pit will be collected via the pit dewatering system and routed to a sedimentation pond. External drainage toward the pit will be collected in a series of perimeter drainage ditches which will convey runoff around the pit. Please refer to Figure 16.32 in Volume 1 of the EIS for the Rose Pit water management plan.

Neither the Rose Pit water management plan nor Rose North Waste Rock Disposal Area water management plan divert or take surface water from or to Québec. Project runoff drains toward the Labrador Sea, whereas drainage to Lac Perchard and Lac Daviault drains south to the Gulf of St. Lawrence.

4.8.6 PC 08-6

3. Rail component

An environmental process is currently under way regarding the construction of a new rail line that will necessarily run through the province of Québec. Several of the options selected for the rail line are located either in Fermont or in the proposed reserve in the Moisie River, an important salmon river on the North Shore.

Alderon Response to PC 08-6

There is no part of the Project rail infrastructure planned within Fermont, or in Québec. The rail loop in Sept-Îles is located within a designated commercial or industrial area. Please refer to Figure 4.8.2 in Volume 1 of the EIS, which shows the location of the rail infrastructure in Labrador.

4.8.7 PC 08-7

In addition, because the concentrate storage and load-out facility will be located at Sept-Iles, Québec, the guidelines states that the proponent will have to obtain a lease or other form of access.[3] However, there is no guarantee that the proponent has done so.'

[3] Environmental Impact Statement Guidelines for the Kami Iron Ore Project, p. 7

Alderon Response to PC 08-7

Alderon is aware of the requirement to secure access to the load-out facility. As part of its overall permitting program, this requirement will be met. Discussions with the Sept-Îles Port Authority have been ongoing.

4.8.8 PC 08-8

4. Failure to meet the guidelines

The EIS guidelines[4] state that the proponent must identify, predict and evaluate the potential environmental effects of projects before decisions are made. We have serious doubts that Alderon is taking these guidelines into consideration, since in a news release,[5] the company announced that it was moving ahead with WorleyParsons Canada Services Ltd. on engineering, procurement and construction management. There have been other similar instances of failure to meet the guidelines in recent months, specifically with respect to the Chinese firm Hebei[6] and the construction of a multi-purpose wharf at Sept-Iles.[7] The Alderon project is at the early stages and we find such a blatant failure to comply with the guidelines significant. We are justified in doubting the company's good faith when it comes to discussing the adverse effects of its project on the community of Fermont.

4 Environmental Impact Statement Guidelines for the Kami Iron Ore Project, p. 4
5 http://www.alderonironore.com/_resources/news/ADVNR20121108.pdf, November 8, 2012
6 http://tvanouvelles.ca/lcn/infos/regional/autresregions/archives/2012/05/20120517-140151.html, May 17, 2012
7 http://www.hebdosregionaux.ca/bas-st-laurent/2012/07/20/deux-autres-minieres-injectent-33-millions--dans-le-futur-quai-multi-usagers, July 20, 2012

Alderon Response to PC 08-8

The Project has been planned and will be designed to be compliant with legislative requirements, including the environmental assessment process. As required by the Guidelines, the EIS states conclusions regarding possible significant Project effects for each indicated VEC (Chapter 13, and Chapters 14 to 26, Volume 1 on the EIS). Alderon has incorporated the issues and concerns that have been raised by regulators, Aboriginal organizations, community members and other stakeholders as a part of the environmental assessment process throughout the EIS, particularly in Chapter 10 and the "Issues" sections within Chapters 14 to 26. Alderon acknowledges that the EIS is subject to regulatory approval and that there are risks associated with retaining EPCM services and pursuing other Project development advances at this time. The Project will only proceed upon release from the environmental assessment process, and if released, in compliance with conditions associated with the environmental assessment, and as stipulated by other permits and approvals.

4.8.9 PC 08-9

Significance of residual adverse environmental effects

The Agency has asked that Alderon describe all adverse effects that the project could have on the biophysical and human environment. The EIS states that the company must provide a sufficient level of detail to allow for an understanding of the significance of the residual effects.[8]

In the EIS guidelines, the Agency states that the proponent's conclusions regarding the possible significant adverse effects of the project must be outlined for each VEC.[9]

Alderon has systemically downplayed the impacts on the residents of Fermont. It is deeply concerning that the company is disregarding the Agency's requirements in order to mislead the various stakeholders with respect to the impacts of the mine on the residents of Fermont.

[8] Environmental Impact Statement Guidelines for the Kami Iron Ore Project, p. 36
[9] Environmental Impact Statement Guidelines for the Kami Iron Ore Project, p. 37

Alderon Response to PC 08-9

As a key stakeholder, Fermont has been given careful consideration throughout Volume 1 of the EIS and the Fermont area was addressed by a comprehensive set of environmental surveys and modeling. While the community is addressed within the EIS too frequently to provide an exhaustive list, the importance of Fermont with respect to the environmental effects analyses is evidenced by the following:

- Volume 1, Section 6.3 discusses residential, commercial and industrial land use in Fermont as activities to be considered in cumulative effects assessment throughout all VEC chapters;
- Fermont has been considered in the Study Area design for all VECs, detailed in Chapters 14.0 through 26.0 of Volume 1;
- The Fermont area has been addressed by comprehensive environmental surveys and modeling (e.g., Sections 14.6.1, 14.6.2, 15.6.3, 16.6.2, 18.5, 18.7, 19.6, 20.6.1, 21.7, 22.7.1, 22.7.2, 22.7.3. 23.6, 24.6, 25.6, and 26.4 of Volume 1);
- The location of Fermont is indicated on all reference maps throughout the Volume 1 of the EIS; and,
- Issues raised by residents of Fermont are included with those of other public stakeholders in the "Issues" sub-section of each VEC chapter. Also provided is a summary response to each issue raised and the location in Volume 1 of the EIS for more detailed information.

Therefore, the impacts of the Project on the Town of Fermont and its residents have not been downplayed.

A second round of Public Information Sessions with the Town of Fermont was conducted by Alderon in October 2012, after the EIS was submitted. Alderon will continue to consult with the Town of Fermont, as outlined in Section 10.7 of Volume 1 and detailed in the Public Consultation Action Plan (Appendix N, Volume 1 of the EIS).

4.8.10 PC 08-10

Rose South waste rock disposal area

On the map, Alderon has moved its largest waste rock disposal area (i.e., Rose South) to Labrador. However, we are still worried because the proposed site is not official. In

October, Alderon explained that, because the site is not on the company's property, the site was conditional on the agreement of the owner, who holds the mining rights, and of the Government of Newfoundland.

Alderon Response to PC 08-10

Alderon's South Waste Rock Disposal Area was originally located entirely within the province of Newfoundland and Labrador, albeit immediately along the border with Québec and visible from the Town of Fermont. After consultation with the Town of Fermont, Alderon relocated this waste rock disposal area east of Mills Lake to reduce the aesthetic impact to the Town of Fermont. The mineral rights to this new location are primarily owned by others, however there is a process in Newfoundland and Labrador for Alderon to obtain the Surface Rights and approval to use this area.

As per the NLDNR reference on Acquiring Mineral Rights and Managing Your Mineral Exploration Licence, "In order to develop a mineral resource it is also necessary to obtain title to the surface rights to the area of the mining lease and areas for siting the required infrastructure incidental to the mineral development. The application for a surface lease is to be accompanied by a legal survey; two original copies of the legal survey description and sketch is required. The surveyor's notes must also be submitted. Upon receipt of an application the Minister of Natural Resources in consultation with the Minister appointed to administer the *Lands Act* shall issue a surface lease."

Alderon has had preliminary discussions with NLDNR to review the process for obtaining surface rights. Alderon is presently undertaking the steps that must be completed prior to a surface lease being issued, including completion of the Environmental Assessment, and submission and approval of both a Mining Plan and Newfoundland and Labrador Benefits Plan.

Further to the process described above, Alderon is also obligated to ensure that there is no economical mineral resources being impacted by the proposed development in this area. The following assessment has been provided by Alderon's senior geologist:

- A portion of the surface utilisation for planned civil development of the Project lies over existing mineral licenses held by Shabogamo Mineral & Exploration Ltd (SME). Alderon has been in contact with SME regarding any potential conflicts between mineral values and proposed surface rights that could alienate these values.

- As a part of the civil engineering development, Alderon has conducted an evaluation of the mineral potential under its own mineral licenses as well as researching and field verification the superficial geology of nearby areas that could potentially be affected by the Kami development. In the region around western Labrador and continuing southwest into Québec, the known economic deposits are principally iron oxide deposits. Other mineral potential can arise from development of graphite deposits associated just above the top contact of the iron-bearing Sokoman Formation and from development of dolomite marble sources that can be used in specialised pellet plant concentrates of iron oxides.

- The iron oxide itself is located strictly within the geological boundaries of the Sokoman Formation. No known iron deposit within the entire Labrador Trough from Lac Manicouagan, QC northeast to the Ungava Range in northern Québec lies outside the Sokoman Formation. Thus the presence of the Formation on a given mineral license is necessary prerequisite for a potentially economic iron deposit. The known metamorphosed graphite deposits that could be economically viable all lie in the Menihek Formation immediately above and younger than the Sokoman Formation; two of these are under active development assessment in Québec at present. The third mineral potential lies is the utilisation of the Denault (Duley) Formation dolomitic marble that is older and underlies the Sokoman Formation; the market for this product depends, as most industrial minerals do, on the purity of the product and a proximate market for it. The only user of dolomite marble in the western Labrador region, either in Labrador or in Québec, is IOCC as an additive for its pellet plant in Labrador City, NL. IOCC has its own sources of good quality dolomite marble on its mineral leases and near its plant. Alderon is not proposing to build a pellet plant in the region at this time.

- Alderon's technical work for the condemnation studies on its claims in 2010-2012 included airborne geophysical surveys (magnetics and gravity), diamond drilling of known geophysical anomalies, outcrop mapping both on and off the Alderon mineral licenses, and logging of geotechnical boreholes that encountered bedrock to complete the map information. A report on these studies is in process. The only indication of the Sokoman Formation lies under the west side of Long Lake and the northeast shore of Mills Lake; the southern end of the trend is terminated by a fault. The grades from drill core on Alderon's licenses were sub-economic and narrow around the proposed engineering works of the mill-mine access corridor. The airborne geophysical surveys did not show any anomalies typical of the iron-oxide-rich facies of the Sokoman Formation elsewhere on the Alderon claims east of Mills Lake, including areas reported by SME to have iron boulders. The lack of Sokoman Formation reduces the iron oxide potential to nil. The lack of Sokoman also means the overlying Menihek Formation, which can host graphite, also does not exist on the licenses, and thus the graphite potential likewise is considered nil.

- The areas proposed for surface utilisation is underlain by the pre-Sokoman Formation Denault dolomitic marble, as well as even older Katsao Gneiss. These units extend approximately north-south across the boundary of the Alderon and SME mineral licenses (SME 017882M and 017927M). The abundant outcrops on both license groups show persistent quartz veins which typically raises the contained silica content to levels unusable by pellet plants, since they require the least amount of silica in the final product as possible. Altius Minerals, the predecessor to Alderon on the Kami Property, analysed the Denault Formation marble on the Kami claims in 2008. The data showed that the marble was unsatisfactory for pellet plant utilisation by IOCC criteria due to high silica. Thus, Alderon does not foresee any economic potential in the Denault marble on either its own licenses or any adjacent ones, except perhaps as road material or rail ballast, subject to geotechnical testing; all demand for those products can be met from sources on Alderon's existing licenses.

- SME has also acquired additional small claim blocks around the Kami licenses since 2010. The one that underlies the Rose North Waste Rock Disposal Area (mineral license 018553M) has abundant outcrops of Katsao Gneiss, but none of the Sokoman Formation. This is consistent with known outcrops on the northern side of the proposed Rose open pit toward the SME claim. This formation does not host any known mineral deposits on the Alderon licenses nor in the region, either. SME assessment report for 2012 reported iron oxide as boulders, indicative of glacial transportation from the north-northwest, where known sources of iron oxides were drilled by IOCC in 2011-12; they do not appear to be of local derivation on the license itself.

4.8.11 PC 08-11

Blasting

The company has stated on several occasions that its infrastructure and activities are located wholly in Labrador. It makes projections on the location of buildings and on operations with respect to its various components, but provides no projections with respect to the essential operations phase, namely the mining of the iron ore.

We find it implausible that Alderon has no information on the mining of the pit or on blasting. The management of the pit will have many significant adverse effects. It is inconceivable that the project can be considered socially acceptable or that the assessment of the Kami project can be accurate or complete without detailed information on the impacts of blasting by the company.

In our view, the blasting plan is a critically important VEC and has not been taken into account by the company. The Agency should therefore require the company to produce this document because it is a vital component throughout the entire life of the project. The blasting operations will have cumulative, daily effects on both the biophysical and human environment.

Alderon Response to PC 08-11

The potential effects of blasting have been assessed in Section 14.6 of Volume 1 of the EIS, under the following topics: vibrations, air quality, and noise. Alderon's Blasting Plan, to be developed after Project release from the EA process, will provide detailed information on the blasting techniques, procedures, and monitoring. The Blasting Plan will address technical aspects of mine blasting as well as address the environmental interactions including impacts on wildlife, fish, and fish and the impacts of weather on blasting operations (dust, runoff, etc.). Municipal regulations and federal guidance documents limit the vibrations and airblast over-pressure levels to acceptable limits with respect to potential damage to infrastructure. If required, pre-blast surveys of buildings, towers, and other infrastructure in the area of the mine will be completed.

Alderon has engaged a professional blasting consultant to assist in understanding what air blast and ground vibration levels could be expected at locations around the Rose Pit.

While it may be possible to feel and hear the blasting activity from the Rose Pit, the ground vibrations from the blasting will not be sufficient to impact foundations in Fermont. Vibration levels are highly dependent upon the amount of explosive that is instantaneously detonated and the distance away from the detonation location. It is Alderon's intention to sequence blast events with multiple holes by detonating one hole at a time. Each hole will contain approximately 1,000 kg of explosives. The blasting consultant has analyzed the magnitude of vibrations that would result from 2,000 kg of explosives being detonated instantaneously and has determined that structures within 600 m are not likely to suffer foundation and/or structural damage and predicted air blast levels would be between 120 and 123 dB. Fermont is approximately 3.5 km away from the southwest edge of the pit and at this distance the ground and air vibration levels are well below those that would damage structures. Alderon is committed to blast design and monitoring the air blast and ground vibration levels from blasting activities at the mine and limiting the mass of explosives that are instantaneously initiated so that vibrations are minimized. This is critical not only for the protection of infrastructure in the surrounding communities, but for protection of Alderon's on-site infrastructure and the adjacent environment.

Blast events will be taken during daylight hours and while the specific initiation time has not been determined it is expected that most of the blasts will occur between the hours of 3:00 to 5:00 in the afternoon. At its most active, blasting may occur on a daily basis, however this frequency will likely be reduced as the pit develops. Blasts will range in size from approximately 50,000 to 500,000 tonnes of rock blasted. In the context of mines around the world these are large blasts and this is consistent with practices at other mines in the western Labrador area. Current calculations from experience with this type of rock at other operations in the area suggest that the Project will need to use 0.35 to 0.40 kg of explosives per tonne of rock blasted. Individual blast holes are sequenced so that the explosives do not all blast at the same time and any blast will take a few seconds to be completely detonated.

Alderon will investigate the location of communications towers in the area around Rose Pit and while Alderon does not expect this to be an issue, there may be a need to move a communication tower should it be in close proximity to the pit area. Alderon respects the need for communications and the value that this brings to the local communities.

4.8.12 PC 08-12

Mills Pit, which was located less than 4 km from Fermont's urban core, has disappeared from the company's plans, although it did appear on the plans submitted to the Agency in the first phase of the EIS. We are concerned that the company has removed the pit from the plans. We are not reassured when the company tells us that Mills Pit is no longer part of its project, since it gives no reasons for not mining the pit in the future. This pit will also have major impacts on the population of Fermont.

Alderon Response to PC 08-12

The results of the PEA indicated that the Mills Lake mineralization would require a different processing route versus that of Rose Lake mineralization. Upon review of the PEA results, it

was determined that the development and exploitation of the Mills Lake mineralization was not feasible within the existing technologies, market conditions, and Project impacts. If the Mills Lake mineralization is considered to be feasible in the future, the proposed work would be required to undergo a full environmental impact assessment at that time.

4.8.13 PC 08-13

Given the significant anticipated effects of blasting, we have broken down the impacts as follows: vibrations, air quality related to blasting, noise due to explosions, physical impacts on Fermont and safety surrounding Rose Pit.

1 Vibrations

The impacts of vibrations from blasting activities are not identified. Many questions have been raised about the impacts of blasting from the outset of the environmental impact assessment process, including:

- **What is the impact on the foundations of buildings and other structures in Fermont, and is there a commitment by Alderon to repair the foundations of property owned by businesses and individuals residing in Fermont?**
- **What is the timing and frequency of blasting?**
- **Will they carry out mega blasts? How much and what type of explosive will be used?**
- **There will likely be impacts on communication towers due to vibrations.**

We have received no relevant information on vibrations caused by the operation of Rose Pit. According to the company, we will not be seriously affected by the blasting, even though the pit will be less than 3.5 km from Fermont's urban core. The following sentences from the company's document support our claim: "The vibration related to drilling and blasting has been evaluated for the Project. Due to the distance from the Project site to the nearest receptors, vibration from the operation of heavy construction equipment will generally not be of concern."[10] This information can be easily disputed since we can feel blasting at two other mines—owned by ArcelorMittal Mines Canada and Cliffs Natural Resources—which are 17 and 10 km, respectively, from the urban core of Fermont.

[10] Kami Iron Ore Project Environmental Impact Statement Plain Language Summary, p.33

Alderon Response to PC 08-13

The potential effects of blasting have been assessed in Section 14.6 of Volume 1 of the EIS, under the following topics: vibrations, air quality, and noise. In addition, Alderon has engaged a professional blasting consultant to assist in understanding what air blast and ground vibration levels could be expected at locations around the Rose Pit.

While it will be possible to feel and hear the blasting activity from the Rose Pit, the ground vibrations from the blasting will not be sufficient to impact foundations in Fermont. Vibration levels are highly dependent upon the amount of explosive that is instantaneously detonated and the distance away from the detonation location. It is Alderon's intention to sequence blast events with multiple holes by detonating one hole at a time. Each hole will contain approximately 1,000 kg of explosives. The blasting consultant has analyzed the magnitude of vibrations that would result from 2,000 kg of explosives being detonated instantaneously and has determined that structures within 600 meters are not likely to suffer foundation and/or structural damage and predicted air blast levels would be between 120 and 123 dB. Fermont is approximately 3.5 km away from the southwest edge of the pit and at this distance, the ground and air vibration levels are well below those that would damage structures. Alderon is committed to blast design and monitoring the air blast and ground vibration levels from blasting activities at the mine and limiting the mass of explosives that are instantaneously initiated so that vibrations are minimized. This is critical not only for the protection of infrastructure in the surrounding communities, but for protection of Alderon's on-site infrastructure and the adjacent environment.

Blast events will be taken during daylight hours and while the specific initiation time has not been determined it is expected that most of the blasts will occur between the hours of 3:00 to 5:00 in the afternoon. At its most active, blasting may occur on a daily basis, however this frequency will likely be reduced as the pit develops. Blasts will range in size from approximately 50,000 to 500,000 tonnes of rock blasted. In the context of mines around the world these are large blasts and this is consistent with practices at other mines in the western Labrador area. Current calculations from experience with this type of rock at other operations in the area suggest that the Project will need to use 0.35 to 0.40 kg of explosives per tonne of rock blasted. Individual blast holes are sequenced so that the explosives do not all blast at the same time and any blast will take a few seconds to be completely detonated.

4.8.14 PC 08-14

2 Air quality

Each blast in an open pit mine produces a toxic cloud of nitrogen dioxide, which poses a major public health issue because such clouds are extremely hazardous to human health. Air quality will be directly affected by the regular blasting that will be carried out by Alderon to mine Rose Pit, which borders the residential sector of Fermont. Essential questions have been raised since the start of the environmental impact assessment process by the Agency.

- **The company was unable to answer questions regarding the management of nitrogen dioxide emissions generated by blasting.**
- **The company has only addressed the fact that 5% of the winds come from the east, according to data gathered on wind direction. This does not explain how the company will manage toxic clouds of nitrogen dioxide.**

- **No plans have been developed to prohibit blasting when winds are blowing in the direction of Fermont and its residents.**
- **We know that Québec companies evacuate blasting sites until there are no longer any toxic clouds present at the site. We are deeply concerned about the company's management of blasting operations, knowing the risk of the cloud being carried by the wind towards the town of Fermont. No emergency response plans have been prepared by the company for this type of situation, which may be very harmful to the residents of Fermont.**

Alderon Response to PC 08-14

The potential effects of blasting have been assessed in Section 14.6 of Volume 1 of the EIS, under the following topics: vibrations, air quality, and noise. Blasting is carried out through a design process that is executed by professional blast specialists. A complete Blasting Plan will be developed upon the final design of the Project, and will include careful monitoring procedures, and design features to meet regulatory standards for nitrogen dioxide at the site boundary. Example procedures can be found in the Queensland Guidance Note QGN 20 v3 available at http://mines.industry.qld.gov.au/assets/general-pdf/QGN-mgmt-oxides-nitrogen.pdf. The blast plan will also include industry best practices on blasting during times of high winds, precipitation, and other meteorological conditions which could influence noise and air emissions from blasting so that all applicable limits are met. Evacuation procedures associated with blasting are designed for human safety in relation to rock throw, and generally call for evacuations on the order of 1.5 km from the blast, which is a greater distance than required to avoid potential harm from NO_2 released from a blast. The risk of offsite gas migration during normal operations of the mine is low.

4.8.15 PC 08-15

3 Noise

Blasting in Rose Pit will result in very high noise levels (decibels). In summer, the residents of Fermont occasionally set off fireworks on the shores of Daviault Lake. We can hear the echoes of the exploding fireworks reverberating off nearby mountains. We're not talking about major explosions and yet the sound can be heard perfectly well throughout the town of Fermont. This creates stress for both humans and wildlife. We are extremely concerned about the level of noise produced by the blasting at Rose Pit.

- **The noise level (decibels) produced by the blasting activities will have major impacts on the peace and quiet enjoyed by the residents of Fermont.]**

Alderon Response to PC 08-15

The potential effects of blasting have been assessed in Section 14.6 of Volume 1 of the EIS, under the following topics: vibrations, air quality, and noise. According to guidelines on ambient noise levels issued by the Province of Québec (http://www.rqcb.ca/fr/doc/NOTE_INSTRUCTION

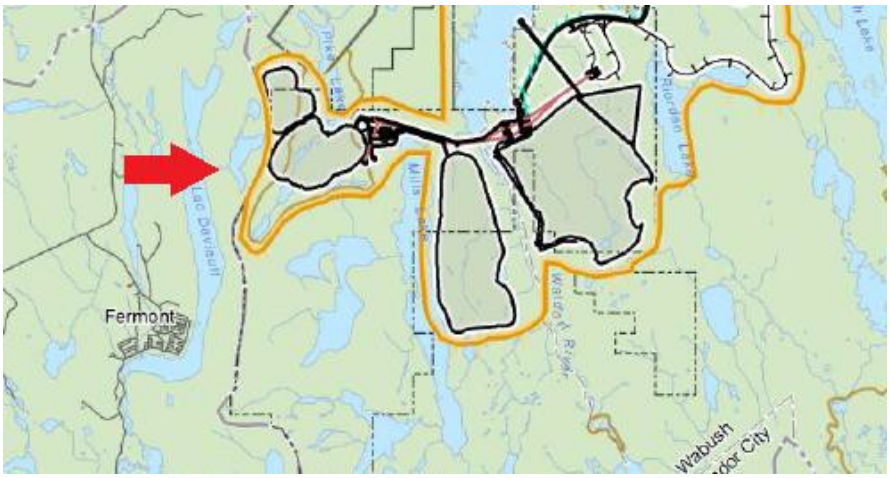
_98-01.pdf), the Town of Fermont is considered to be a Zone II, requiring noise levels to not exceed 50 dBA during the day and 45 dBA at night. Acoustics modeling of the proposed Kami mine shows that noise levels will not exceed 45 dBA in the Town of Fermont (Figure 14-10, Volume 1 of the EIS).

The World Health Organization (WHO) guideline of 30 dBA pertains to indoor noise (as found in the WHO guidance document at http://www.euro.who.int/__data/assets/pdf_file/0017/43316/E92845.pdf), as noted in Section 14.2.3 (page 14-12), in Volume 1 of the EIS. Typically, a home with partially opened windows will have a noise level indoors that is at least 15 dB lower than that outdoors; therefore, the WHO guideline will be met in normal circumstances. Alderon reiterates its intent to comply with all provincial guidelines regarding acoustic emissions from the Kami mine.

4.8.16 PC 08-16

4 Physical impacts on the territory of Fermont

The project will have many significant physical impacts on the territory of Fermont. Near Rose Pit, on the Québec side, recreation and vacation activities are carried out. There is also a small unnamed lake that is very important because it is a head lake of Daviault Lake. According to Alderon, the operation of the Kami mine should not have any impacts beyond the Newfoundland border.



Unnamed lake adjacent to Rose Pit (from Kami Iron Ore Environmental Impact Statement, Volume 1, p.128)

A number of issues were raised at the public consultation held on October 25, 2012, including the following:

- **Soil fracturing during the operation of the pit, which will be 450 m deep, will have a major impact on this small lake. One resident raised concerns about the future of this small Québec lake, given the strong possibility of its drainage into Rose Pit.]**

Alderon Response to PC 08-16

A detailed response to the information requested above is provided in Appendix Q.

Soil fractures may occur due to blasting, settlement, and/or relaxation of the soil mass around the perimeter of the open pit. The variation in the impact to the soil horizon around the circumference of the pit will generally depend on the soil thickness and the characteristics of the soils at any given point or area. Transmission or infiltration of groundwater impacted by the open pit mine are not anticipated not interact with the surface or groundwater in Québec for the following reasons:

- The natural hydraulic gradient, or groundwater flow, around the open pit drains to the east into Labrador, not Québec.
- The watershed divide between the Project and Québec is bedrock controlled and only thin layers of overburden soils exist along the ridges that divide these watersheds. These thin layers of soil are elevated well above the perimeter of the pit, and even if the soil and fractured, surficial bedrock were considered permeable, or became more permeable due to blasting, the groundwater would have to transmit through the soils up-gradient, or uphill in order to discharge to Québec.
- During operations, due to the development and dewatering of the open pit, the groundwater surrounding the pit will be drawn down and the hydraulic gradient will be concentric around the pit, towards the pit, and the water collected in the base of the pit (groundwater and surface water) will be pumped to a sedimentation pond prior to release as surface water to Pike Lake, NL.
- Upon closure, as the open pit fills with water to approximately the original water levels within the existing small lakes the natural groundwater gradients are expected to re-develop, flowing east into Labrador.

Further to the physical reasons described above, the chemical impacts to surface water and groundwater around the open pit are expected to be minimal. The main substance of issue within water contacting the mine open pit workings will be sediment. Some residual chemicals will be present in the water collected in the base of the pit, however the expected natural groundwater and surface water flows into the pit are relatively high which will mean any residual chemical concentrations in the collected pit water will be quite low. Acid Rock Drainage is also not anticipated to be an issue in the open pit, additional test work is being conducted in consultation with federal and provincial regulators to ensure this assumption is correct. Therefore, even if there is some release of water from the open pit workings to the natural groundwater flows around the open pit, it is not expected to impact water quality.

4.8.17 PC 08-17

Modification of the soil by blasting can create cracks and fissures, which will lead to infiltration of contaminated water into Québec streams and groundwater. Daviault Lake,

which is a very important lake for recreational activities at several levels, may be affected.

Alderon Response to PC 08-17

Additional information about the hydrogeology of the site is presented in Appendix Q.

The groundwater divide will be a subdued reflection of the surface water divide between Québec and Labrador. Groundwater will continue to follow natural hydraulic gradients and flow both toward Québec and Labrador (Figure 4.8.2).

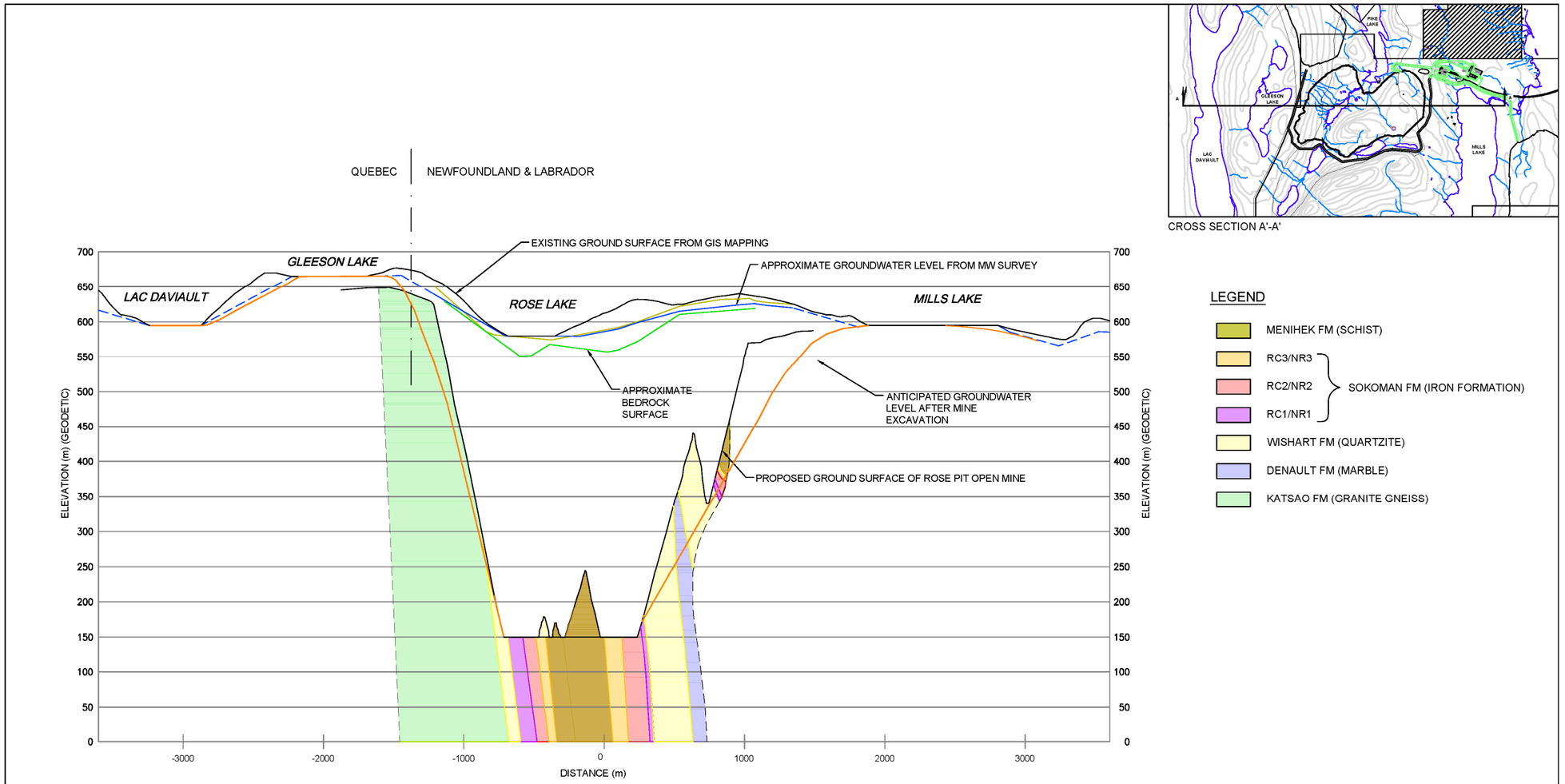
The creation of the open pit will only emphasize the natural hydraulic gradients toward the Rose Lake area. Therefore, there should be no infiltration of contaminated water into Québec streams and groundwater.

Based on Alderon's assessment of the area, Gleeson Lake should provide a hydraulic boundary condition that will maintain groundwater levels in this area. Upland lakes in predominantly bedrock dominated topography are expected to have very low bottom sediment permeability; otherwise the lake would not persist in the dry season.

As addressed in Section 23.6, Volume 1 of the EIS, the Project is not expected to affect recreational activities in Québec including the current use of Lac Daviault for boating or camping. Project-specific mitigation includes installation of navigation signage around Project features that are present in waterbodies, including bridges and other watercourse crossings, working with local snowmobile and cross country ski organizations to address Project effects, and installation of hazard warning signs around the open pit after decommissioning as public safety measure.

Based on viewshed analysis only some waste rock areas will be visible from the western shores of Lac Daviault. Although blasting may be audible, vibrations will not be felt on the western shore of Lac Daviault. Modeling of noise levels resulting from the Project will not exceed Health Canada guidelines in this area. Modeling of dust dispersion indicates that dust levels at Lac Daviault will not be elevated as a result of the Project. See Sections 23.6.2, 23.6.4 and Chapter 14 (Atmospheric Environment), in Volume 1 of the EIS.

Figure 4.8.2 Revised Cross Sectional Drawing



NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

CLIENT: ALDERON IRON ORE		SCALE: AS SHOWN	DATE: JAN. 7, 2013
PROJECT TITLE: PROJECT DEVELOPMENT DESIGN KAMI MINE SITE		DRAWN BY: R.L.	CHECKED BY: R.M.
DRAWING TITLE: CROSS-SECTION SHOWING APPROXIMATE REGIONAL GROUNDWATER LEVEL		EDITED BY: -	REV No.: 1
		DRAWING No.: 121614000-306-GE-06	
		CAD FILE: 121614000-306-GE-06.dwg	

Following the environmental assessment approval, a Blasting Plan will be developed and implemented in compliance with all applicable laws, regulations and industry best practices, and with consideration of safety, environmental and social issues as identified throughout the EIS. See Section 2.6.2, Volume 1 of the EIS, for more information. Effects of the Project on the atmospheric environment, including air quality, noise, vibration and dust have been assessed and mitigation measures identified. During Project activities, blast noise and vibration will be monitored and will comply with regulatory standards. See Section 23.5.2.1, 23.6.3 and Chapter 14 (Atmospheric Environment), in Volume 1 of the EIS for more information.

4.8.18 PC 08-18

A snowmobile trail along the Québec-Labrador border will be affected, despite the fact that it is in Québec.

There will be major impacts on vacation activity in the immediate vicinity of Rose Pit, including accessibility and impacts related to the mine: noise, dust, safety, etc. In fact, there is a cottage less than 1 km from Rose Pit, on the Québec side.

Floatplanes, which have unlimited access to Daviault Lake, will no longer be able to take off and land on Daviault Lake because blasting will be carried out at Rose Pit.

Recreational activities in both summer and winter will be disrupted by the blasting. Alderon has even stated that our activities will be disrupted by their activities. Alderon makes the banal suggestion that we engage in our activities elsewhere, which tells us that it is fully aware that it will have impacts within Québec territory.

Alderon Response to PC 08-18

An assessment and evaluation of the likely environmental and socioeconomic effects and benefits of the Project is provided in the EIS. This includes information on recreational land use such as snowmobiling, boating and use of water planes (Chapter 23 in Volume 1 of the EIS).

Residents use snowmobiles for riding on trails and on frozen ponds and lakes. They use these vehicles to access remote areas and participate in activities such as hunting, ice-fishing, trapping, travelling to cabins and collecting firewood. A network of local and long distance groomed trails ranges from west of Fermont to Churchill Falls. Some of these trails intersect with Project features near Wabush (Section 23.5.4, Volume 1 of the EIS). For public safety reasons, access will be limited in restricted zones for the life of the Project (Section 23.6.1, Volume 1). Signs will be posted to alert users of areas to be avoided. Progressive rehabilitation will be used so that restricted areas become available as soon as possible.

As addressed in Volume 1, Section 23.6 of the EIS, the Project is not expected to affect current land uses activities in Fermont including the current use of Lac Daviault for boating or camping. However, based on viewshed analysis only some waste rock areas will be visible from some locations along the western shores of Lac Daviault. Although blasting may be audible, vibrations will not be felt on the western shore of Lac Daviault. Modeling of noise levels resulting from the

Project will not exceed Health Canada guidelines in this area. Modeling of dust dispersion indicates that dust levels at Lac Daviault will not be elevated as a result of the Project. See Sections 23.6.2, 23.6.4 and Chapter 14 (Atmospheric Environment) in Volume 1 of the EIS. Water planes will still be able to use the existing marinas in both western Labrador and Fermont. See Section 23.5 in Volume 1 of the EIS for more information.

Following the environmental assessment approval, a Blasting Plan will be developed and implemented in compliance with all applicable laws, regulations and industry best practices, and with consideration of safety, environmental and social issues as identified throughout the EIS. See Section 2.6.2 in Volume 1 of the EIS for more information.

Effects of the Project on the atmospheric environment, including air quality, noise, vibration and dust have been assessed and mitigation measures identified. During Project activities, blast noise and vibration will be monitored and will comply with regulatory standards. See Sections 23.5.2.1, 23.6.3 and Chapter 14 (Atmospheric Environment) in Volume 1 of the EIS for more information.

Alderon has conducted a number of environmental studies to gain a thorough understanding of the potential effects of noise, dust, and other Project sources on cabin owners and other recreational users within the PDA. Alderon has adopted a number of mitigation measures aimed at minimizing the potential effects on the recreational activities of community members, including the purchase of a number of cabins in the PDA. In this regard, contact has been made with the owner of the cabin located inside Québec that is less than 1 km from the mine.

In reference to the potential impact the Project may have on some cabin owners accessing their properties, Alderon has been in written contact with these individuals. Alderon has indicated that a meeting will be arranged with a view to soliciting their input concerning the identification of an alternate route(s) to access their properties.

4.8.19 PC 08-19

5. Safety around Rose Pit

At the consultation on October 25, Bernard Potvin, Alderon's Vice-President of Project Management, confirmed that a 1-km safety perimeter should be set up around Rose Pit. This means the company will be physically present within the boundaries of the town of Fermont, because the safety perimeter is largely located in Québec, as shown by Mr. Potvin on a map of Québec. Alderon has no mining claims at this location; the owner of the land is Newfoundland & Labrador Inc. Various recreational activities and vacation areas are located within the safety perimeter.

Because Alderon does not own mineral rights in this area, it does not have the right to expropriate property or occupy the land in any way. Moreover, if it were to occupy Québec land, it should pay municipal taxes to the town of Fermont as well as mining royalties for the loss of the area. It should also be subject to all Québec legislation and to the environmental review processes of MDDEP and BAPE.

In our opinion, given that Alderon is supposed to be wholly within the province of Labrador, under no circumstances should we be limited in our activities or in any danger when we are on Québec soil, even along the border of our territory. We can therefore conclude that Alderon should establish the safety perimeter entirely within the boundaries of the province of Newfoundland and Labrador.

Alderon Response to PC 08-19

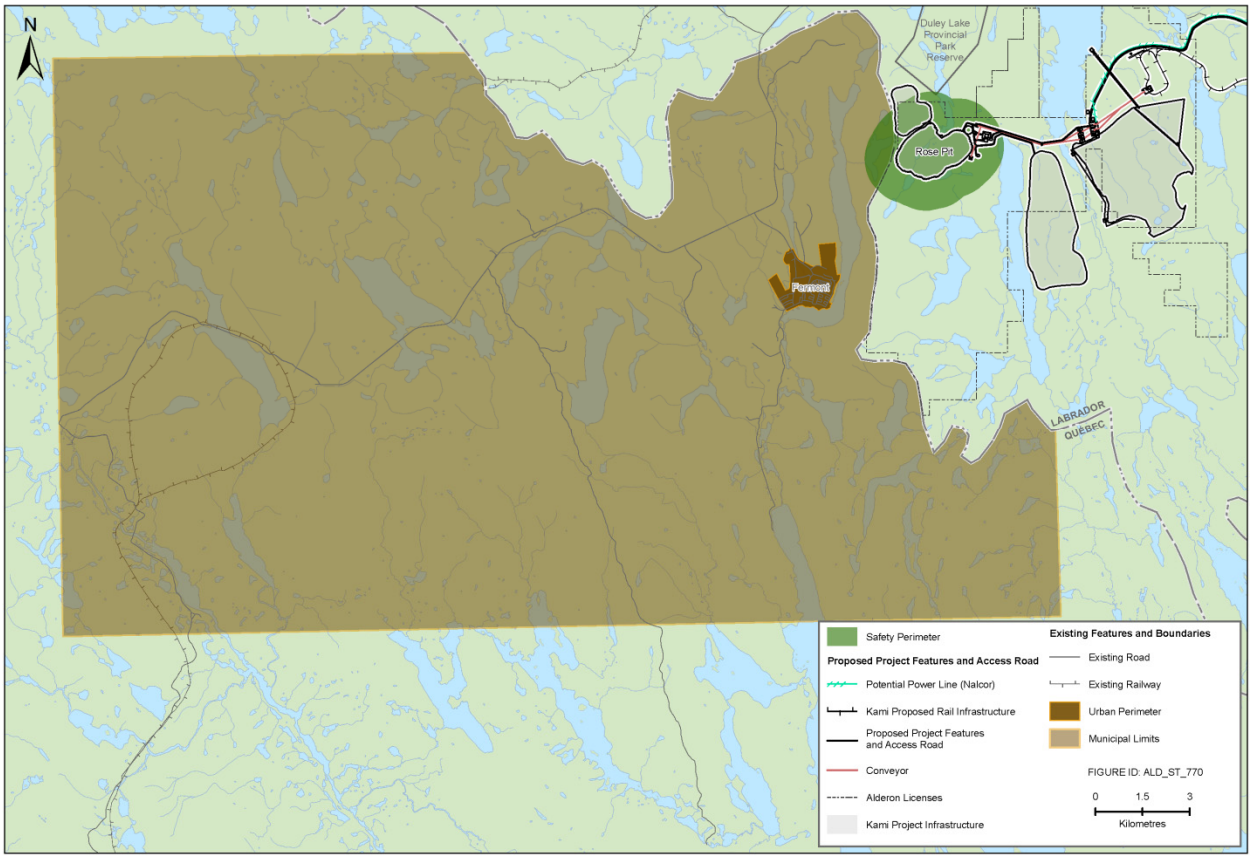
The Project is located entirely within Labrador; it is adjacent to Québec, in the vicinity of the towns of Fermont, Labrador City and Wabush. The environmental effects of the Project have been assessed for the surrounding environment, including the town of Fermont. As a result of concerns raised by residents of Fermont regarding a potential increase in dust and noise, and a change in viewscape, Alderon redesigned the Project and moved the Rose South Waste Rock Disposal Area approximately 5 km east.

The referenced buffer zone is the blasting safety perimeter. The size of the perimeter will be determined by the blasting charges and timing between detonating each blast hole, to be finalized in the blasting plan currently in preparation. During the Fermont consultation meeting of October 25, Alderon mentioned as an example a typical 1-km zone for a blasting safety perimeter. The actual size will be finalized in the Project Blasting Plan, but is not expected to be larger than 1 km. Blasting will occur approximately once per week. The safety perimeter zone will be activated during blasting activities only, for approximately one hour prior to the blast and 0.5 hour after the blast. During this period, access along established roads and trails will be restricted through the use of vehicles, fences, tapes or other practical means. Alderon will issue notification of planned blasts to various agencies and the media prior to each blast.

The safety perimeter zone is largely located in Labrador. At a maximum, less than 20 percent of the safety perimeter zone will be located in Québec. Although the safety perimeter zone will extend into the municipal limits of Fermont, it is approximately 2 km away from the designated Urban Perimeter, where the homes and infrastructure of Fermont are located (Figure 4.8.3). There are no known roads or trails located within the safety perimeter zone where it extends into Québec. Access to this area will be restricted approximately once a week for a period of 1.5 hours, during the operations phase.

The purpose of the blasting safety perimeter is to protect the safety of persons on and near the Project site.

Figure 4.8.3 Safety Perimeter Zone



4.8.20 PC 08-20

Summary

To summarize, blasting at Rose Pit will have major impacts on the community of Fermont. Alderon has maintained from the outset that the effects of the activities of its open pit mine will be felt only in Labrador and that Québec will not be affected. We are convinced that the company is wrong and that it is understating the adverse impacts of its project in order to mislead the public about the true impacts on the residents of Fermont.

With the creation of a 1-km safety perimeter around Rose Pit, the company will be physically present in Québec. We are completely against the transfer of land by the province of Québec to a company. The company has no legal right to occupy Québec territory without compensating the town of Fermont for the major nuisance effects that its project will have on the community.

Alderon Response to PC 08-20

There are no plans, nor will there be a requirement, for any lands located near the community of Fermont in Québec to be transferred to Alderon. In compliance municipal regulations and federal guidance documents pertaining to blasting, Alderon will prepare a Blasting Plan to ensure that blasting activities occur safely are in the best interests of local communities in Labrador and Québec. As part of this Plan, Alderon has determined that it is necessary to establish an appropriate safety zone around the Rose Pit to ensure that no residents in this area are adversely affected.

As the Kami Mine is located entirely in Labrador, there is no need for Alderon to purchase and retain any lands in the province of Québec. While there may be a requirement to purchase one cabin in Québec that is in close proximity to Rose Pit, once this transaction is completed and the cabin is removed, the land would be transferred back to the appropriate Québec government department.

4.8.21 PC 08-21

Atmospheric environment

In our view, the atmospheric environment is very important to the community's quality of life and public health. The Kami project is adjacent to Fermont's urban core, something that is of great concern to us given its proximity. At the public consultation, the company understated the impacts of its project on air quality, stating that the prevailing winds are from the west and that we would not be affected by dust from the mine once in operation. The information gathered by Alderon regarding winds comes from data from the Wabush Airport, which is located more than 30 km from Fermont.[11] Can these data really be representative of the conditions in Fermont? Do they take account of local microclimates? Would it not be preferable to use available data produced at Fermont?

[11] Kami Iron Ore Environmental Impact Statement Volume 1, p.14-57, Figure 14.8

Alderon Response to PC 08-21

Alderon is committed to developing an Environmental Management System (EMS) as part of their larger Sustainability Management Framework (Appendix J). In collaboration with NLDOEC, the EMS will include an addition to NLDOECs existing ambient air quality monitoring network in order to properly characterize emissions during the operational phase of the Project, and will include installing monitoring stations at various locations surrounding the Project site, including the Town of Fermont. Final locations of the monitoring stations will be established after considering such factors as local sources of particulate matter that might produce misleading results, security of equipment, access for maintenance, and compliance with local jurisdictions regarding environmental regulations. Alderon will establish a monitoring program that is responsive to these requirements, and is fully open to the scrutiny of the local community.

The dispersion modeling conducted for the Project incorporated gridded wind data provided by Environment Canada throughout the Labrador region which would account for topographical effects including microclimates.

4.8.22 PC 08-22

The results of the dispersion modeling in the EIS (pg. 14-52 – 14.58) show that the effects of the proposed mine on air quality will be not significant. Ambient air quality in Fermont will not exceed applicable regulatory standards as a result of the proposed mining operations.

Although the prevailing winds are from the west, there are also easterly and northeasterly winds year round. Alderon downplays the fact that there will be dust in the town of Fermont. According to information provided by the company, we should not be affected by particulates of less than $PM_{2.5}$.[12] However, we are familiar with the mining industry and we know that even if the particulates are smaller, they will adversely affect our quality of life. Will we still be able to open our windows in the summer without having to clean the entire house? Will we be able to hang our laundry out on the line or will be limited in such basic activities?

[12] Kami Iron Ore Environmental Impact Statement Volume 1, p.14-57, Figure 14.8

Alderon Response to PC 08-22

The dispersion modeling incorporated gridded wind data provided by Environment Canada throughout the Labrador region which would account for topographical effects including microclimates. Dispersion modeling was therefore not solely reliant on weather station data, which indeed would not be entirely representative of conditions at Fermont.

The results of the dispersion modeling in the EIS (pages 14-52 through 14.58 of Volume 1) show that the effects of the proposed mine on air quality will be not significant. Ambient air quality in Fermont will not exceed applicable regulatory standards as a result of the proposed mining operations. As discussed in Volume 1 of the EIS (Chapter 25: Health and Community Health), there are no anticipated significant adverse effects on community health, including quality of life, as a result of the Project. This assessment considerd the detailed modeling an analysis of potential air emissions provided by Chapter 14 in Volume 1 of the EIS. As stated in Section 25.6.3:

> *"Effects analysis and modeling for possible Project-related emissions and disturbances (such as noise, air emissions, vibrations, visual intrusions) have indicated that these will have a limited geographic zone of influence, which in most cases will not extend to the adjacent communities themselves. The various environmental effects mitigation measures outlined in this and other VEC chapters will further serve to avoid or reduce any Project-related disturbances that could potentially have implications for community health in the region." (Page 25-74)*

As part of its Sustainability Management Framework (Appendix J), Alderon is committed to enhancing NLDOEC's current ambient air quality framework with new ambient air quality monitoring stations. Should ambient TSP (and associated fractions of particulates smaller than 10 um or 2.5 um in diameter) increase beyond acceptable standards due to mining operations

(including blasting), procedures in Alderon's EMS will outline additional mitigation measures, such as water spraying and reduced blasting during meteorological conditions of concern, to reduce ambient particulate concentrations below acceptable standards. In collaboration with NLDOEC, the EMS will include an addition to NLDOECs existing ambient air quality monitoring network in order to properly characterize emissions during the operational phase of the Project, and will include installing monitoring stations at various locations surrounding the Project site, including the Town of Fermont.

4.8.23 PC 08-23

The results of the dispersion modeling in the EIS (pg. 14-52 – 14.58) show that the effects of the proposed mine on air quality will be not significant. Ambient air quality in Fermont will not exceed applicable regulatory standards as a result of the proposed mining operations. [The Fermont Citizens' Movement met with the representatives of Alderon prior to the information session of October 25, 2012. They mentioned that the atmospheric sensor located at Fermont may not be used to quantify emissions during mine operations. It is critical that the sensor be active during the operation of the mine and that the data be made public. It will also be necessary to review the location of the sensor and possibly to provide for the use of additional sensors.

Alderon Response to PC 08-23

Alderon is committed to developing an EMS as part of their larger Sustainability Management Framework (Appendix J). In collaboration with the NLDOEC, the EMS will include an addition to NLDOEC's existing ambient air quality monitoring network in order to properly characterize emissions during the operational phase of the Project, and will include installing monitoring stations at various locations surrounding the Project site, including the Town of Fermont. Final locations of the monitoring stations will be established after considering such factors as local sources of particulate matter that might produce misleading results, security of equipment, access for maintenance, and compliance with local jurisdiction regarding environmental regulations. Alderon will establish a monitoring program that is responsive to these requirements, and is fully open to the scrutiny of the local community.

4.8.24 PC 08-24

At the October meeting, Alderon spoke about the revegetation of the waste rock and tailings disposal sites. However, they mentioned that this would be carried out only once the site reached 250 feet in height, which would not occur before 2019. So what happens from 2014 to 2019? They make no provisions for controlling dust at these sites for those five years, despite the fact that the residents of Fermont will be present in the area during that period.

We know that some mines use more advanced processes to limit dust. Given the proximity of the Alderon site, could the company not use more advanced processes than those typically used?

Alderon Response to PC 08-24

Alderon will use best practice design and progressive rehabilitation techniques to limit dust generation from the waste rock disposal areas. Proper construction and progressive rehabilitation of waste rock disposal areas are effective at minimizing dust release by limiting active, exposed areas of waste rock. The following is a summary of the progressive rehabilitation measures currently planned for the waste rock disposal areas at the Kami site. Air quality (including dust) monitoring, as will be required as part of the Project regulatory approval permits and will identify any areas or conditions of the Project, which may be problematic in terms of dust generation. As per the commitments outlined in Volume 1 of the EIS (Section 27), Alderon will address any air quality issues as part of the monitoring, reporting, and mitigation components of the Environmental Management System within the Sustainability Management Framework (see Appendix J).

Progressive Rehabilitation of Waste Rock Disposal Areas

Objectives

The main objectives for rehabilitation and closure of the waste rock disposal areas are as follows:

- permanent and secure containment of all solid waste material within an engineered waste rock disposal areas;
- limit the dust generation from the waste rock disposal areas footprint to comply with the environmental regulatory levels;
- implement adequate water management to collect run off and any seepage from the waste rock disposal areas;
- establish adequate water treatment (settling ponds) prior to release to comply with environmental regulations and to limit the effect of red water in the surrounding waterbodies;
- contain any potential Acid Rock Drainage (ARD) generation and Metal Leachate (ML); and
- achieve progressive rehabilitation of the disposal area stages.

Waste Rock Disposal Areas Configuration

The location, configuration and anticipated waste rock volume to be stored have been determined in the Feasibility Study. A review of the foundation and waste rock disposal area stability will be completed as part of the detailed design to support the final waste rock disposal areas configuration.

Progressive Rehabilitation and Preliminary Closure Plan

The closure plan will be developed to provide long term, secure and stable storage of the waste material. The closure works will ensure that the stored materials are not transported from the facility by wind, or eroded by surface flows.

The Progressive Rehabilitation and Preliminary Closure Plan of the waste rock disposal area will be designed on the basis of the following:

- topography;
- aesthetics (i.e. visual impact from neighboring communities);
- potential recreational use after mine closure;
- continuous containment of potential ARD and ML generation;
- assessment of potential for groundwater contamination originating from the waste rock; and
- assessment of the short and long term performance of proposed seepage controls and the impact of potential seepage to the groundwater.

The Mine Waste Rock Disposal Areas will be developed in phases. Following foundation preparation activities, the waste material will be placed initially in the upper elevations within the designated waste rock disposal area to facilitate runoff management. Once the initial Waste Disposal Area phase reaches the design elevation, the surface will be capped, the perimeter slope regraded as appropriate for supporting vegetation and for long term waste rock disposal area stability. Waste placement will then proceed in an adjacent section or in a subsequent lift within the waste rock disposal area site bounds. A strategy will be prepared with the mine planner to address containment of Potential ARD and ML generation on a continuous basis during the life of the mine.

The waste rock will be capped with a loose layer of sand cap over the waste material including the slopes of the Disposal Area, overlain by overburden soils and topsoil as a cover layer to prevent wind or water erosion, and as a growth medium for the establishment of native vegetation. The overburden material will include surface soils collected and stored during site preparation work.

A monitoring plan will be developed to address potential deformations in the foundation materials, excessive settlements of the waste rock disposal areas, seepage, groundwater conditions at closure, and to ensure successful re-vegetation of the capped surfaces.

4.8.25 PC 08-25

Water resources

Water is a vital resource and is very abundant in our region. Surface water (i.e., lakes, rivers, marshes) and groundwater resources are important to the community of Fermont and to the fragile equilibrium of our northern biodiversity.

Alderon tells us that there is no risk of water contamination and assures us that, in the hypothetical case that contamination did occur, it would easily be able to carry out full decontamination. In actual fact, water contamination could have serious impacts, at various levels, on drinking water, on the Fermont marina swimming area and on the biodiversity health of our lakes and groundwater. Industrial accidents are usually large scale.

The company does not take all surface water and groundwater resources into account in its assessment, specifically with respect to the town of Fermont. We wish to inform the Agency that the town of Fermont is closer to the proposed Kami mine than the towns of Wabush or Labrador City and that the company has systematically ignored Fermont in its analysis. Wabush and Labrador City are largely taken into account by the company in its document. It is very regrettable that the company is not more transparent and willing to admit that there is a possibility that water contamination will occur. When an open pit mine is developed in a given sector, the risk of accidents is high and must be taken into account.

Alderon Response to PC 08-25

Surface water from the development of the open pit will either drain into the pit and be managed by pit dewatering to a sedimentation pond facility or external drainage routing toward the pit will be collected in pit perimeter drainage ditches which will convey external drainage around the pit toward existing watercourses. The Rose North Waste Rock Disposal Area will similarly be designed with perimeter ditches to divert non-contact external drainage around the area as well as a sedimentation pond to provide sedimentation to waste rock area runoff. In both cases, the open pit and Rose North Waste Rock Disposal Area, the surface water runoff is sourced from Labrador, with no surface water drainage toward Québec, as described in the preliminary Water Management Plan in Volume 1 of the EIS, on pages 16-136 through 16-147.

4.8.26 PC 08-26

We divided water resources into various categories: relief, wetlands, drinking water and groundwater.

1. Relief

Water flow is influenced and directed by the relief of the area. The construction of Rose Pit and the 250-foot-high Rose North waste rock disposal area northwest of Fermont's

urban core will transform the sector. It will alter the topography of the sector, and will therefore certainly alter the course of runoff towards Québec and towards Rose Pit. In both cases, the water resources of the province of Québec will be affected. Runoff from Rose North will be partially directed towards Daviault Lake in the province of Québec. There is a strong possibility of the two small head lakes of Daviault Lake draining, either partly or entirely, into Rose Pit, given its close proximity.

Alderon Response to PC 08-26

Surface water from the development of the open pit will either drain into the pit and be managed by pit dewatering to a sedimentation pond facility or external drainage routing toward the pit will be collected in pit perimeter drainage ditches which will convey external drainage around the pit toward existing watercourses. The Rose North Waste Rock Disposal Area will similarly be designed with perimeter ditches to divert non-contact external drainage around the area as well as a sedimentation pond to provide sedimentation to waste rock disposal area runoff. In both cases, the open pit and Rose North Waste Rock Disposal Area, the surface water runoff is sourced from Labrador, with no surface water drainage toward Québec.

As indicated above, drainage from the Rose North Waste Rock Disposal Area will be directed to a sedimentation pond. External drainage toward the disposal area will be routed around the disposal area via perimeter drainage channels. Both the disposal area and perimeter drainage channels will be located in Labrador and will not drain toward Québec. Please refer to Figure 16.35 in Volume 1 of the EIS for the Rose North Waste Rock Disposal Area water management plan.

As indicated above, drainage within the Rose Pit will be collected via the pit dewatering system and routed to a sedimentation pond. External drainage toward the pit will be collected in a series of perimeter drainage ditches which will convey runoff around the pit. Please refer to Figure 16.32 in Volume 1 of the EIS for the Rose Pit water management plan.

Neither the Rose Pit water management plan nor Rose North Waste Rock Disposal Area water management plan divert or take surface water from or to Québec. Project runoff drains toward the Labrador Sea, whereas drainage to Lac Perchard and Lac Daviault drains south to the Gulf of St. Lawrence.

4.8.27 PC 08-27

We have serious concerns about the possibility of future surface water contamination in this sector, since Daviault Lake is a sensitive area to varying degrees, both as a potential source of drinking water and for recreation and local wildlife.

Alderon Response

Surface water from the development of the open pit will either drain into the pit and be managed by pit dewatering to a sedimentation pond facility or external drainage routing toward the pit will be collected in pit perimeter drainage ditches which will convey external drainage around the pit

toward existing watercourses. The Rose North Waste Rock Disposal Area will similarly be designed with perimeter ditches to divert non-contact external drainage around the area as well as a sedimentation pond to provide sedimentation to waste rock area runoff. In both cases, the open pit and Rose North Waste Rock Disposal Area, the surface water runoff is sourced from Labrador, with no surface water drainage toward Québec.

4.8.28 PC 08-28

2. Wetlands

The wetlands of the town of Fermont were in no way taken into account by Alderon and are not identified on the map produced by the company.

Some of the wetlands of the town of Fermont will be affected by the project. The entire sector near Rose Pit and the areas near the Rose North waste rock disposal area are highly vulnerable due to their proximity. The forest in the region is very humid—the soil is a veritable sponge—both in Québec and Labrador. It is our opinion that the company has acted in bad faith because it has identified only the sector on the Labrador side on the maps, while for the town Fermont, it followed the Québec border, thereby excluding it from its environmental assessment.

Alderon Response to PC 08-28

The spatial boundary of assessment was defined by the distribution of the wetlands themselves, giving consideration to wetland connectivity, distribution, and local to regional hydrology within the Project area. The Regional Study Area (RSA) for Wetlands provided the comparison area (relative to the PDA and LSA) for evaluating the potential significance of Project effects on wetlands and elements of wetland function deemed ecologically relevant for the topics being examined. The identification of the Wetland RSA was based on the extent of existing watershed boundaries and stream layers from digital datasets in GIS format, and is consistent with the objectives of the Study, the expectations of Enivronment Canada, and is compatible with the other recently completed environmental assessments.

Watershed boundaries are typically defined by topographic divides and delineate areas where surface water runoff drains into surface waterbodies, including lake, ponds, rivers, streams and wetlands. Surface water from the development of the Kami mine site (Rose Pit) will either drain into the pit and be managed by pit dewatering to a sedimentation pond facility or external drainage routing toward the pit will be collected in pit perimeter drainage ditches which will convey external drainage around the pit toward existing watercourses. The Rose North Waste Rock Disposal Area will similarly be designed with perimeter ditches to divert non-contact external drainage around the area as well as a sedimentation pond to provide sedimentation to waste rock area runoff. In both cases, the open pit and Rose North Waste Rock Disposal Area, the surface water runoff is sourced from Labrador, with no surface water drainage toward Québec. This is also the case for the Rose South Waste Rock Disposal Area and Tailings Management Facility.

The Québec-Labrador border is defined by the existing watershed boundaries between the two provinces. Effects on topography, local hydrology, and surface water (including wetlands) associated with Rose Pit and the Rose North Waste Rock Pile are located east of this topographic divide and therefore primarily restricted to Newfoundland and Labrador. Neither the Rose Pit water management plan nor Rose North waste rock disposal area water management plan divert or take surface water from or to Québec. Project runoff drains toward the Labrador Sea, whereas drainage in Québec, in the area of Fermont and Lacs Perchard and Daviault drains south to the Gulf of St. Lawrence.

As such, adverse effects on wetlands in the area of Lac Daviault, Fermont, and beyond are not anticipated.

4.8.29 PC 08-29

3. Drinking water

Perchard Lake was not included in the company's assessment. However, it could be contaminated by the project, via groundwater and airborne particulates generated by the future mine. In addition, leaching caused by precipitation can carry particles from the ground into our lake, which is our current source of drinking water. We feel that the Agency should require the company to identify our drinking water source (Perchard Lake) on the maps and include it in the assessments.

According to the town of Fermont, Daviault Lake is a possible option for its future drinking water supplies. The fact that this resource could be contaminated by Alderon's Kami project is a concern.

Alderon Response to PC 08-29

Lac Perchard is identified as the municipal drinking water source on p. 16-33 and 16-54 in Volume 1 of the EIS. Lac Daviault is also identified on p. 16-54 in Volume 1. As stated on page 16-54 of Volume 1, Lac Perchard and Lac Daviault drain south toward the Gulf of St. Lawrence, whereas surface water in the PDA / LSA drains east to the Labrador Sea.

Based on the assessment conducted in Volume 1, Chapter 16 of the EIS, there are no pathway whereby leachate could leave this mine and migrate towards Fermont. Fermont is located several kilometres west of a major watershed divide and a large lake which would act as a boundary to any seepage. During normal operating conditions, all groundwater flow will be inward towards the open pit mine. After the mine is closed and decommissioned, the mine will flood, and groundwater flow directions should return to near existing equilibrium conditions.

4.8.30 PC 08-30

4. Groundwater

The company carried out drilling in the sector. In its view, groundwater flow appears to be in the direction of the province of Labrador only. However, it is unable to guarantee that groundwater flow is always in the direction of Labrador. The lack of data and studies on groundwater in the sector is perplexing. We are not entirely convinced that Alderon is in a position to be the primary resource for assuring us that the groundwater is in two different networks. We know that groundwater is a vast, complex, invisible network and we believe that independent studies must be conducted to validate the information provided by Alderon.

Alderon Response to PC 08-30

The groundwater divide will be a subdued reflection of the surface water divide between Québec and Labrador. Based on the assessment of the area, Gleeson Lake should provide a hydraulic boundary condition that will maintain groundwater levels in this area. Upland lakes in predominantly bedrock dominated topography are expected to have very low bottom sediment permeability; otherwise the lake would not persist in the dry season. Depending on the permeability of the lake bottom exfiltration may not be significantly increased even with a decrease in water level below the lake. Therefore, surface water recharge to Gleeson Lake would continue to follow its current drainage route to Daviault Lake. A revised cross-section is provided in Figure 4.5.1, which shows the expected impacts on groundwater levels in the area.

The distribution of precipitation will be maintained on each side of the surface / groundwater divide and the rate of groundwater infiltration/overland flow will not be altered. Based on the assessment presented in the EIS, Volume 1, Chapter 16 (Water Resources), there will be very little alteration to the groundwater divide due to the construction of the open pit. As the Project is not likely to extensively alter the groundwater divide, no significant adverse effect on the flow of water to Lac Daviault is expected. Groundwater will continue to follow natural hydraulic gradients and flow both toward Québec and Labrador.

4.8.31 PC 08-31

Wildlife

Given the proximity of the town of Fermont to the proposed Kami mine site, it is unacceptable that the company does not take Québec species into account in its assessment. Despite the fact that the guidelines require the company to make reference to Québec legislation, no information was provided concerning at risk or vulnerable bird, waterfowl or fish species in Québec.

Alderon Response to PC 08-31

As indicated in the EIS Guidelines, the Kami Mine Project is not subject to environmental assessment under Québec laws because the Project is located entirely in Newfoundland and Labrador. Regardless, the Québec Loi sur les especes menaces ou vulnerables (LEMV) was indicated as a source to be consulted for species at risk and species of conservation concern.

The species listed on the LEMV (Ressources naturelles 2012) that would occur within the vicinity of western Labrador (and possibly within the Regional Study Area) were addressed in the EIS as either part of the Species at Risk VEC (e.g., Barrow's Goldeneye, Harlequin Duck) or were included within the Birds, Other Wildlife snf their Habitat, and Protected Areas VEC (e.g., Bald Eagle).

Other information sources, such as Atlantic Canada Conservation Data Centre (ACCDC) and naturalists, and other relevant data (Bird Studies Canada 2012), were reviewed. The Québec Breeding Bird Atlas was consulted when preliminary data was gathered on year round migratory bird use of the area. However, as stated in Section 19.5.2 in Volume 1 of the EIS "The first Québec Breeding Bird Atlas was limited to southern Québec and therefore does not have any data relevant to the Project. However, the second iteration that is ongoing (Québec Breeding Birds Atlas 2012) is targeting the entire province. A 10 x 10 km square is situated near Fermont, but the effort to date has not been sufficient for meaningful results."

4.8.32 PC 08-32

Closure plan

At the October meeting, Alderon informed us that it had not yet prepared its closure plan. It is unfortunate that all aspects of such mining projects were not completed at the time of the environmental assessment, particularly since we know that mines have significant environmental impacts at the time of closure. The closure of a mine is typically done in a rush and can occur at any time given the cyclical fluctuations in the iron ore industry. This is why the closure plan should be completed even before construction begins.

According to Mr. Potvin, Alderon will not restore the site to its original condition. He confirmed that it was possible that the huge holes would not be filled, but would rather simply be left to fill up with precipitation and eventually form immense artificial lakes.

- **Are the company's responsibilities limited to this?**
- **Is the company not required to restore the site to its original condition, as specified in Canada's Economic Action Plan?**

Alderon Response to PC 08-32

Alderon's Rehabilitation and Closure Plan will be based on the early stages of engineering and further advanced through the detailed design stage, prior to submission to NLDOEC as a component of the required submissions to obtain construction and operational approvals for the

Project. Beyond the rehabilitation and closure objectives and goals set prior to Project construction as part of the planning and permitting stage of the Project, a process of updating the Rehabilitation and Closure Plan is required in order to address any changes in the design and construction of the Project, expansions or other changes during the operational stage of the Project, environmental monitoring over the construction and operational stages of the Project, and to address changes in closure 'best practices' and technology and changing regulations. The Rehabilitation and Closure Plan will meet all requirements under the *Mining Act* and associated guidelines in Newfoundland and Labrador.

Alderon has committed to progressive rehabilitation of the mine site, including the TMF and waste rock disposal areas. Alderon intends to consult with the other mining operations in the area with respect to their experiences (successes and failures) regarding revegetation practices in support of conducting independent vegetation studies and trials given the specific overburden, topography, drainage, and mine design conditions for the Project. Current revegetation strategies generally combine quick-growth vegetation such as grasses to aid in surface stabilization (dust and erosion suppression) and to provide regenerative organics as a base for other vegetation (shrubs and trees). The ultimate goal is to achieve revegetation via vegetation types native to the area that can survive, grow, and regenerate in the local climate.

4.8.33 PC 08-33

Noise effects

Noise generated by the construction and operation of the mine cannot be overlooked. The proximity of the site will bring its share of nuisances for the residents of Fermont, who are accustomed to living with the natural noises of the surrounding forest. They do not wish to be inconvenienced by noise from the future mine.

- **Québec legislation respecting noise differs from federal legislation, for noise heard on Québec soil. Will Alderon also have to comply with the Québec legislation?**
- **Will Alderon be sure to respect the noise level of 40 db day and night?**
- **Will the Agency require Alderon to adjust its noise level to 30 dBA, given that the WHO indicates that, where background noise is continuous, the equivalent noise level should not exceed 30 dBA?[13]**

[13] *http://www.who.int/docstore/peh/noise/Commnoise4.htm*

Alderon Response to PC 08-33

According to guidelines on ambient noise levels issued by the province of Québec (http://www.rqcb.ca), the Town of Fermont is considered to be a Zone II, requiring noise levels to not exceed 50 dBA during the day and 45 dBA at night. Acoustics modeling of the Project shows that noise levels will not exceed 45 dBA in the Town of Fermont (Figure 14-10 in Volume 1 of the EIS).

The World Health Organization (WHO) guideline of 30 dBA pertains to indoor noise (http://www.euro.who.int), as noted in EIS Section 14.2.3 (page 14-12). Typically, a home with partially opened windows will have a noise level indoors that is at least 15 dB lower than that outdoors; therefore, the WHO guideline will be met in normal circumstances. Alderon reiterates its intent to comply with all provincial guidelines regarding acoustic emissions from the Kami mine.

4.8.34 PC 08-34

Community services and infrastructure

Although Alderon has indicated that its activities will be restricted to Newfoundland and Labrador, it includes the town of Fermont for various aspects of the project, including community services and infrastructure, health services, education services and all other related services.

The company states that it approached the cities of Wabush and Labrador City for certain services, such as housing. Moreover, Alderon provides its assurances that the workers for the construction phase will be housed in Wabush or Labrador City. Fermont was not approached, despite the fact that the company includes it as a possibility for the housing of workers during the operations phase.

We have trouble understanding the company's intentions for the operations phase since it sometimes includes the town of Fermont for the housing of its workers and sometimes does not.

Alderon Response to PC 08-34

The Kami Mine is located inside the municipal boundaries of the Towns of Labrador City and Wabush. As a result, Alderon has an obligation to maximize the economic benefits to both of these municipalities. Alderon has signed Memorandum of Understanding with the Towns of Labrador City and Wabush to establish a framework for future engagement that addresses, in part, accommodation of its workforce within these jurisdictions.

Alderon plans to develop a Project accommodations strategy for the Project. The Company will solicit input from the municipalities of Labrador City and Wabush and other appropriate housing related committees and agencies taking into consideration ongoing supply and demand of various accommodation types. The strategy, which will be communicated and discussed with both CAP and the Regional Task Force (Section 13.11 in Volume 1 of the EIS), may include implementation of such measures as the use of temporary construction accommodations and the development of new operations and maintenance personnel housing in western Labrador.

Because the Project is not located within the Fermont municipal boundaries, Alderon has no plans to formalize an accommodations strategy with the community and does not plan to build housing infrastructure in Fermont. However, some of Kami's operations and maintenance employees may decide to live in Fermont, just as some employees of mines located in the

Fermont area currently reside in western Labrador. Although, as pointed out in the EIS (Section 24.7), very little free market housing is available there. Alderon has, and will continue to have, an open dialogue with the Fermont municipal council and will discuss this topic should there be a need to do so.

4.8.35 PC 08-35

Recap of the company's consultation session

We are extremely disappointed that the company is not being transparent vis-à-vis the Agency with respect to their meeting with the residents of Fermont.

At the first consultation, the company was forced, under pressure from the residents present, to hold a true consultation as opposed to separate information tables. The residents who assembled in the auditorium had to argue with the representatives of Alderon for at least 10 minutes to get them agree to present the information to all residents and to allow them to ask questions and receive the same information at the same time. Several residents found the atmosphere at that meeting frustrating, because the company was unable to answer their questions, stating repeatedly that it was in study mode. In most cases, the public's questions went unanswered. There was a gene

Like the first consultation, the second consultation held by Alderon was initially set up in the form of separate tables. Once again, the company had to change its plans and present the information to the full group. The residents were therefore able to ask their questions and get answers in front of everyone present. Once again, there was a general sense of disappointment. The company was unable to reassure the public or provide it with information on the true impacts of its project on the community. Questions remain unanswered.

First brief tabled by the Fermont Citizen's Movement

We wish to go back to the first brief submitted to the Agency for the Kami project. Since most of our questions remain unanswered, we ask that you ensure that the proponent provides answers. In addition, since land occupancy was discussed at length in the first brief, we would like further information from the company since this point was given very little attention in their EIS. Our brief can be found at www.mcfermont.wordpress.com.

Conclusion

After it reads this document, we hope that the Canadian Environmental Assessment Agency will take the residents of Fermont into account to ensure the greatest possible effort is made to protect their quality of life. We must ask whether this mine, which has a life of 15 years, will do the community more harm than good.

Alderon Response to PC 08-35

Alderon is committed to transparent engagement with all stakeholders, including the residents of Fermont.

Alderon's approach to consultation includes the following overall objectives: (i) provide as much information about the Project to the public as possible; (ii) listen to and record comments from the public; (iii) respond to questions and concerns using qualified expertise; and (iv) maximize the level of public participation in the engagement process.

It is Alderon's opinion that the format employed at the public information sessions held in Fermont was an effective way to disseminate information and engage directly with individual residents who had questions or concerns relating to the Project. These sessions were structured so that information stations on key aspects of the Project were set up and manned by Alderon staff and qualified experts. All community members in attendance were given the opportunity to ask any question about the Project, and Alderon personnel were able to provide detailed responses and record community concerns. The success of this format has led to its widespread use by a number of other companies in their public information sessions.

Alderon held two public information sessions in Fermont (March and October 2012). The first session was required by the Canadian Environmental Assessment Agency and the Newfoundland and Labrador Department of Environment and Conservation in the EIS Guidelines. The second session was held out of respect to the citizens of Fermont.

Alderon will continue to consult with the public, and carry out monitoring and follow-up activities as required throughout the life of the Project, in order to better understand the potential effects upon residents and respond to issues as they arise.

4.9 Nature NL (PC 09)

4.9.1 PC 09-1

Protected areas- There is recognition in the EIS of potential impacts and cumulative effects on existing and planned protected areas. However, the focus is confined to the Regional Study Area, and does not reflect the place of western Labrador in the overall provincial protected area strategy, particularly with respect to ecoregion representativeness and overall conservation goals. The proponent should indicate what possible constraints the project will place on overall conservation and protected areas planning for Labrador.

Alderon Response to PC 09-1

The Guidelines for the preparation and scope of the EIS require an examination of potential biophysical Project affects only in the vicinity of the proposed mine and associated infrastructure in western Labrador, and at the port facilities in Sept-Îles. Alderon has reduced the Project's footprint through engineering design and in consideration of other operations in the Project area.

It is important to consider potential impacts of the Project within the context of the regional landscape. The Project area is located within the existing industrial area of western Labrador which includes a number of existing developments such as: IOCC, Wabush Mines; the municipalities of Labrador City and Wabush, Labrador and Fermont, Québec; a rail line and other infrastructure associated with the Trans Labrador Highway.

Woodland caribou have been found to avoid human developments, with the level of avoidance related to the amount of human activity in the area (Dyer 1999). Due to their highly mobile nature, caribou require large tracts of undisturbed land without human developments that may act as barriers to movement (Curatolo and Murphy 1986; Dyer 1999). Given the existing developments in the surrounding area, it is unlikely that lands within the Project area would support caribou in the future.

The George River Caribou Herd (GRCH) has declined substantially over the past decade. While the known range of the migratory GRCH has expanded and contracted over the years since the first aerial surveys in 1958, caribou have typically remained north and northeast of the study area (Bergerud et al. 2008). Caribou were not observed in the vicinity of the Project during baseline surveys and interviews with local area residents and stakeholders indicate that caribou are not using the RSA. As the documented former range of the herd does not overlap the area of the Project, it is unlikely that potential effects would interact with the recovery of the GRCH. Animals from the sedentary Lac Joseph herd generally occupy an area south of the Smallwood Reservoir south to 51° N and between 66° and 62° W, which lies to the east of the Study Areas in western Labrador and Sept-Îles (Bergerud et al. 2008).

Consistent with the guidelines, potential environmental effects were assessed at the mine site in Labrador and at the port facilities in Sept-Îles. However, activities along the railway will be the same as existing activities, with the addition of changes to the volume of rail traffic associated

with the Project. During the initial years of iron ore production (8 Mtpa), Alderon will require operation of one loaded train leaving the min site daily. Once production increases (16 Mtpa), rail traffic will be increased, with two loaded trains leaving the mine each day.

4.9.2 PC 09-2

Freshwater ecosystems -As acknowledged in the EIS, destruction of freshwater ecosystems and fish habitat will result from the project. However, there is a commitment to provide a Habitat Compensation Plan. Specifically: "The process of authorization and compensation planning that will be undertaken for the current Project, which will result in a no-net loss of fish habitat in the RSA, will prevent the activities of the current Project from contributing further to any cumulative effect of the loss of fish habitat in the RSA". (EIS Vol 1 Pt.2 p. 18-50). Irrespective of recent changes to the federal Fisheries Act, the proponent should be held to this commitment and be made to provide adequate habitat compensation in the case of all fish habit destroyed as a result of this project.

Alderon Response to PC 09-2

Nature NL indicated its concern regarding changes to the *Fisheries Act* and the possibility that the Proponent would not be required to compensate for fish habitat destroyed as a result of the Project. Alderon is committed to proceeding with the Authorization requirements of the *Fisheries Act* and providing all necessary fish habitat compensation related to the Authorization. Regardless of whether a fishery exists on the ponds within the Project area, particularly those that will be lost as a result of the Project, all habitat determined to be included in the HADD (i.e., requiring a *Fisheries Act* Authorization) will be included in the Fish Habitat Compensation Plan. The compensation options are all located off-site and away from the Project area and hence will enhance nearby waterbodies and streams for increased fishing opportunities.

4.9.3 PC 09-3

Caribou - The EIS fails to deal adequately with either the threatened Lac Joseph herd or the migratory George River herd, now in dramatic decline. Given the planned increase in railroad traffic, it is very likely that key areas of the Lac Joseph herd's range will be negatively affected. What precautions will be taken to avoid disturbance to the Lac Joseph caribou? The mine site and operations areas are within the historic range of the George River herd. What effects will the project have on recovery efforts for the George River caribou and how can these be mitigated?

Alderon Response to PC 09-3

The Guidelines for the preparation and scope of the EIS require an examination of potential biophysical project affects only in the vicinity of the proposed mine and associated infrastructure in western Labrador, and at the port facilities in Sept-Îles. Alderon has reduced the Project's footprint through engineering design and in consideration of other operations in the Project area.

It is important to consider potential impacts of the Project within the context of the regional landscape. The Project area is located within the existing industrial area of western Labrador, which includes a number of existing developments such as; IOCC; Wabush Mines; the municipalities of Labrador City and Wabush, Labrador and Fermont, Québec; a rail line and other infrastructure associated with the Trans-Labrador Highway.

Woodland caribou have been found to avoid human developments, with the level of avoidance related to the amount of human activity in the area (Dyer 1999). Due to their highly mobile nature, caribou require large tracts of undisturbed land without human developments that may act as barriers to movement (Curatolo and Murphy 1986; Dyer 1999). Given the existing developments in the surrounding area, it is unlikely that lands within the Project area would support caribou in the future.

The GRCH has declined substantially over the past decade. While the known range of the migratory GRCH has expanded and contracted over the years since the first aerial surveys in 1958, caribou have typically remained north and northeast of the study area (Bergerud et al. 2008). Caribou were not observed in the vicinity of the Project during baseline surveys and interviews with local area residents and stakeholders indicate that caribou are not using the RSA. As the documented former range of the herd does not overlap the area of the Project, it is unlikely that potential effects would interact with the recovery of the GRCH. Animals from the sedentary Lac Joseph herd generally occupy an area south of the Smallwood Reservoir south to 51° N and between 66° and 62° W, which lies to the east of the Study Areas in western Labrador and Sept-Îles (Bergerud et.al. 2008).

Consistent with the guidelines, potential environmental effects were assessed only at the proposed mine site in Labrador and at the port facilities in Sept-Îles. However, proposed activities along the railway will be the same as existing activities, with the addition of changes to the volume of rail traffic associated with the Project. During the initial years of iron ore production (8 Mtpa), Alderon will require operation of one loaded train leaving the min site daily. Once production increases (16 Mtpa), rail traffic will be increased, with two loaded trains leaving the mine each day.

4.10 Newfoundland and Labrador Stewardship Association of Municipalities (PC 10)

November 16, 2012

Brent Keeping, Environmental Scientist
Kami Iron Ore Project
Environmental Assessment Division
P.O Box 8700
St John's, NL
A1B 4J6

Re: Kami Iron Ore Project (EA Reg. # 1611) - Environmental Impact Statement

Proponent: Alderon Iron Ore Corp.

Dear Mr Keeping;

Please accept this letter as comment from the Newfoundland and Labrador Stewardship Association of Municipalities Inc. on the Environmental Impact Statement (EIS) submitted by the Alderon Iron Ore Corporation in relation to the proposed Kami Iron Ore project. The below comments build upon my previous letters in regards this matter, dated November 18, 2011 and March 14, 2012 respectively.

The Stewardship Association of Municipalities Inc (SAM) is a non-profit organization whose membership comprises Newfoundland and Labrador municipalities who have made a formal commitment to the conservation of wildlife habitat within their municipal planning boundaries via signing municipal stewardship agreements with the Provincial government as represented by the Minister of Environment and Conservation. SAM meets bi-annually and together seeks to secure, enhance and restore important wildlife habitat in the province. SAM also represents its members on issues of common concern related to wildlife habitat conservation.

On that basis, I provide comment on the Alderon development from the perspective of the two Municipal Wetland Stewardship Agreements signed in 2005, respectively, by SAM members, the Town of Labrador City and the Town of Wabush with the Province of Newfoundland and Labrador. In general, Municipal Stewardship Agreements dictate that specific areas of important wildlife habitat, in particular waterfowl breeding, staging and molting habitat, in this case within the planning area boundaries of Labrador City and Wabush, be set aside from industrial development in order to maintain the wildlife values they contain for the benefit of current and future generations of Labradorians.

4.10.1 PC 10-1

First, the proposed development will have some environmental impact in the Town of Wabush. Specifically of concern, is the proposed location of what is referred to as the Kami railway, roadway and power line. The current proposed route of this infrastructure

will pass through what is known as the Jean Lake Rapids Management Unit and just south of the Elephant Head Management Unit. However, it is our assessment that these impacts can, in all likelihood be mitigated through careful planning and collaboration with the proponent in particular in relation to the road/railway which could potentially be constructed across the Jean Lake rapids building on the existing bridge infrastructure. However, Alderon indicates in its EIS document that there are three alternate rail-line routes which would avoid crossing through this management unit altogether. It is our recommendation that utilizing these routes would be the preferred option to minimize impact on the Jean Lake Rapids Management Unit.

Alderon Response to PC 10-1

An evaluation of the road / rail options were completed in Section 2.8.3 of Volume 1 of the EIS. From a variety of environmental, engineering and economic perspectives the selected route at the existing Jean Lake Rapids Crossing is the most acceptable. Regardless, a series of mitigation measures have been proposed by Alderon to address potential environmental effects in the vicinity of the proposed route to a not significant level. These include:

- Construction activities will be planned and executed in a manner to protect the PWSA. An EPP for construction within the PWSA will be developed as part of the overall Environmental Management System and Sustainability Management Framework for the Project.
- The rail line will be operated as safely as possible to reduce the risk of a derailment by transporting fuel and consumables separately from the main iron ore cars, reducing the speed of the shipment, only moving fuel and consumable railcars by daylight and sending an inspection vehicle (hi-rail pick-up truck) ahead of the fuel cars to inspect the line for damage and obstructions so that the train can be stopped well in advance of any problems on the route. In addition, the movement of fuel to the site will employ new, double-jacketed tank cars that are designed to withstand certain types of roll-overs and not spill.
- To address the unlikely event that there is a spill, the rail and road corridor through the PWSA will be designed as a spill containment area with lined ditches and berms along both sides of the corridor to capture spills, oil / water separators (OWS) will be installed that will capture fuels so that they do not enter Wahnahnish Lake, and sluice gates will be installed that will be shut before the fuel train moves through the PWSA to stop flow in the event of a spill.
- Emergency response and spill response plans will be established to provide protocols to quickly react to any spills in order to protect the water supply. The operators of the hi-rail inspection vehicle that travels in front of the fuel train will be trained members of the emergency response team and will be in constant communication with the locomotive and mine operations to provide rapid response in the event of a spill.
- Alderon commits to studying and implementing options to ensure the continued supply of water to the Town of Wabush in the unlikely event of a spill. Alderon will also consult and

work with the WRMD and the Town of Wabush with the objective of identifying an alternative water supply location that can be used for emergencies and also as a back-up for maintenance and operational issues with the existing water supply system.

4.10.2 PC 10-2

Secondly, and of key importance to the members of the Stewardship Association of Municipalities Inc, the proposed Rose Pit mine lies in the heart of what is known under the Labrador City Stewardship Agreement as the Pike Lake South Management Unit. This open pit mine will result in the loss of a significant majority of this conservation area, some 400 hectares. As such, this aspect of the development is clearly contrary to the intent and letter of the Labrador City Stewardship Agreement and Conservation Plan. The Stewardship Association of Municipalities Inc is very concerned about the impact of any one of our member towns, in this case the Town of Labrador City, "breaking" their Stewardship Agreement or being forced to relinquish some of its protected areas. Our concern relates, first to the impact it will have on one of our members, the Town of Labrador City but also to the significant provincial impact and precedent it sets for other SAM member municipalities. We are concerned in terms of how other municipalities, particularly those with less of a tax base than Labrador City, will respond to potential future developments which may arise in their conserved areas. In this sense you should be aware that although this development will have a major impact on both of these towns, it also has major implications to other SAM members, particularly in terms of the future integrity of those agreements and how they view the commitment made under these agreements.

Alderon Response to PC 10-2

Mineral exploration and development have been characterized as the key economic drivers of the region. As stated in Section 3.11 of Labrador City's 2007 Municipal Plan, "Almost the entire landmass within the town's planning area has either commercial mineral reserves or high potential to contain mineral resources that are economically feasible to develop. Because of these valuable mineral reserves the Council's intent is to protect these areas from development that would hinder future developments of these mineral reserves. The development of iron ore mining in the area is the main economic engine that drives the town and all its subsidiary business." And, although the reviewer notes that "this aspect of the development [i.e., the Rose Pit] is clearly contrary to the intent and letter of the Labrador City Stewardship Agreement and Conservation Plan, the 2012 Town of Labrador City Conservation Plan itself states "the Stewardship Zone and Management Units were designated to try to avoid important areas for mineral exploration."

It is clear that the designation of this Management Unit as a protected area under the town's 2007 Municipal Plan and associated Development Regulations failed to take into account the validly existing mineral interests previously acquired by Altius Resources Inc. in 2006. Briefly, on March 7, 2005, the Town of Labrador City entered into a Municipal Wetland Stewardship Agreement with the Province under the auspices of the Eastern Habitat Joint Venture (EHJV).

The Municipal Wetland Stewardship Agreement identified and recommended nine candidate areas, including the Pike Lake South Management Unit, for inclusion as protected areas under the town's Municipal Plan. On December 28, 2007, the Town of Labrador City Municipal Plan (2007 – 2017) and Development Regulations came into effect and the nine candidate management units referred to in the Municipal Wetland Stewardship Agreement were classified as conservation areas and made subject to restrictions respecting future development. The Town Plan further provided that any loss of habitat within a Management Unit was to be replaced either by improving existing habitat or constructing new wetland habitat.

The Pike Lake South Management Unit overlaps in its entirety mineral licence 0011927M which was issued to Altius Resources Inc. (Altius) by the Department of Natural Resources on April 24, 2006. This licence was ultimately grouped as mineral licence 15980M and transferred to Alderon Iron Ore Corp. on December 8, 2010. Mineral licence 0011927M was issued to Altius prior to the enactment of the Municipal Plan and Development Regulations. There is no evidence that Altius was made aware that the area was recommended for protection at the time Altius acquired its mineral interests or that Altius's mineral interests were identified by either the Town or the provincial government during the development, drafting, review and approval of the Municipal Plan. A full chronology of these events is set out in Appendix R.

Alderon proposes to work with the Town of Labrador City to implement a strategy that will permit the development of the Project while advancing the protection of wetlands. Alderon proposes to enter into bilateral negotiations with the Town to conclude a Corporate Municipal Stewardship Agreement. Since Alderon has been advised by the Department of Environment and Conservation that, as a result of the number of mining claims within the Town's municipal planning boundaries, there are no suitable locations for alternative replacement, Alderon will work with the Town to identify and implement community conservation initiatives. Alderon acknowledges the concerns of the Stewardship Association of Municipalities respecting the loss of the Pike Lake South Management Unit. However, in Alderon's view, the circumstances surrounding the creation of this Management Unit – including the failure to take into account pre-existing and valid mineral interests or to consult with the rights holder in the development of the Municipal Plan and the recognition in the Town Plan of the importance of the development of mineral interests – are sufficiently unique that no adverse precedent will be set.

4.10.3 PC 10-3

I am pleased to note, that there is some preliminary recognition of these dual impacts noted with the EIS submission. Alderon is proposing to negotiate a Corporate Municipal Stewardship Agreement as a means to mitigate these impacts, namely the impacts on the Town of Labrador City, but it makes relatively little reference to how it might mitigate the project's impacts on the wider stewardship agreement municipalities, i.e. SAM members. The company further indicates that activities are currently ongoing as it relates to this initiative but makes no clear commitments or statements as to what such a Corporate Municipal Stewardship Agreement might contain.

The Stewardship Association of Municipalities Inc. agrees that a Corporate Municipal Stewardship Agreement could be a means to mitigate these impacts, but only if that agreement recognizes the dual impacts already referenced. The company does indicate that, in addition to pursuing a Corporate Municipal Stewardship Agreement, it would seek to "establish a replacement protected area that performs the regional functions of the Pike Lake South Management Unit." It should be understood that SAM, at an absolute minimum, seeks a "zero net loss" with regards to protected lands, if and when areas must be altered, and preferably a 2:1 ratio of lands conserved. This additive/punitive 2:1 ratio of acres conserved to those lost is utilized in similar compensation instances in much of Canada, in particular via implementation of the Federal Wetland Policy.

We feel that it should be applied in this instance in recognition that a municipality cannot simply move its protected areas to another location when development is proposed in existing ones. By incorporating this principle, the corporate agreement could in some way recognize the wider consequences on other municipalities and their stewardship agreements. It is our central hope that all parties can work together to see that any potential losses in one area can be offset by significant environmental gains in another. Further, it is our understanding that finding alternate acres within the existing mosaic of mining exploration and land-use in Labrador City might be difficult, limiting this element of a potential Corporate Municipal Stewardship Agreement. Should this prove to be the case, it is our submission that financial compensation must be considered in lieu of conserved acres based upon Canadian precedent for valuing land conservation/restoration. Indeed, this could provide Alderon with a meaningful opportunity to demonstrate its stated desire to carry out its operations in an environmentally friendly manner.

If you have any specific questions or concerns about our comments, or would like to discuss the matter in more detail, please do not hesitate to contact me @ 709.437.7294.

Sincerely,
Cathy Kleinwort, SAM Secretary
on behalf of
Geoff Gallant, President
Stewardship Association of Municipalities Inc

cc Mayor and Councillors, Town of Wabush
Mayor and Councillors, Town of Labrador City

Town of Wabush
15 Whiteway Drive
P.O. Box 190 Wabush, NL A0R 1B0
Town of Labrador City
P.O. Box 280
Labrador City, NL A2V 2K5

Alderon Response to PC 10-3

Alderon has committed to work with the Town of Labrador City to revise its Municipal Plan and enter into a Corporate Municipal Stewardship Agreement with the town in order to develop and implement community conservation strategies consistent with the objectives of wetland stewardship. This solution will involve the following:

- An amendment to the 2007 Municipal Plan to repeal the current zoning classification of the Pike Lake South Management Unit and permit the development of the Project, if and when it is released from environmental assessment. Section 28 of the *Urban and Rural Planning Act, 2000* provides for a review of a municipal plan and development regulation within five years of the date on which the plan and development regulations initially came into effect and it is Alderon's understanding that a review of the *Municipal Plan and Development Regulations* is currently underway. Alderon will work with the town in the preparation of the necessary amendment to the *Municipal Plan and Development Regulations*.
- Entry into a Corporate Municipal Stewardship Agreement with the Town of Labrador City to establish a process to identify and implement conservation initiatives. Initially Alderon sought to identify replacement habitat that performs the regional function of the Pike Lake South Management Unit. Work was initiated and field surveys were conducted by Alderon to find suitable replacement habitat within the municipal planning boundaries. In a subsequent meeting with a Department of Environment and Conservation representative and the Town of Labrador City, Alderon presented candidate replacement areas for discussion. Unfortunately, at this meeting Alderon was inform by government that it was highly unlikely that replacement habitat could be re-established within the municipal planning boundaries as the majority of lands were under active mineral claims. Under the proposed Corporate Municipal Stewardship Agreement, Alderon will commit to work with the Town to identify and implement community conservation initiatives consistent with the objectives of wetland stewardship. Alderon has been advised by the Department of Environment and Conservation that the negotiation of a Corporate Municipal Stewardship Agreement with the Town of Labrador City is a bilateral negotiation between the two parties and that it will not be involved in the negotiations.

Alderon is prepared to enter into similar corporate stewardship arrangements with Wabush. In Alderon's view, these initiatives will not undermine but rather advance the objectives of wetland stewardship protection. Alderon acknowledges the concerns of the Stewardship Association of Municipalities. However, in Alderon's view the circumstances surrounding the creation of the Management Unit – including the failure to take into account pre-existing and valid mineral interests, lack of consultation with the original rights holder and the recognition in the Town Plan of the importance of the development of mineral interests – are sufficiently unique that no adverse precedent will be set.

4.11 Regroupement Pour la Sauvegarde de la Grande Baie de Sept-Îles (PC 11)

The Regroupement pour la Sauvegarde de la grande Baie de Sept-Îles (RSGBSI) is an association of Sept-Îles residents concerned about the situation in the Sept-Îles area. Our organization was established in November 2010 following the announcement of a proposed apatite mine in Sept-Îles, in the township of Arnaud. The objectives of our association are as follows:

- **To provide relevant, appropriate information to all residents of Sept-Îles so that they are aware of all the issues associated with Mine Arnaud Inc.'s proposed open-pit apatite mine.**
- **To counterbalance the positive spin of the proponents, who pass over in silence the many unresolved issues and questions concerning the mining and processing of the titaniferous magnetite and apatite deposits and their environmental impacts.**
- **To promote debate and democracy, with the goal of informed decision making.**
- **To convey the viewpoint, questions, concerns and arguments of the population of Sept-Îles to the municipal council, regional authorities, the various levels of government and the media.**
- **To network with other Québec and regional citizen groups concerning mining, the Québec Mining Act, the social acceptability of mining and all other mining-related issues facing residents.**
- **Through the representative character of our organization, to compel project proponents to take our demands seriously.**
- **To preserve our healthy environment, particularly in the Baie de Sept-Îles area and its watershed, and maintain our quality of life.**

In the last two years, the Regroupement pour la Sauvegarde de la grande Baie de Sept-Îles has met or corresponded, sometimes on several occasions, with federal and provincial government departments, the Sept-Îles municipal council, the Port of Sept-Îles as well as Mine Arnaud Inc. The RSGBSI is therefore a recognized stakeholder in the Mine Arnaud project and for the Baie de Sept-Îles. In the case of the Kami iron ore mine, the RSGBSI is particularly concerned about the Pointe-Noire and Sept-Îles areas. The Baie de Sept-Îles is obviously of great socio-economic value to both the local population and industries, as well as to the provincial and federal governments.

4.11.1 PC 11-1

1. Language of communication

In our comments on the EIS Guidelines for the Kami project, we asked the Canadian Environmental Assessment Agency to ensure that all documents pertaining to the analysis of this project were made available in French. We note that Volume II, Kami

Concentrate Storage and Load-Out Facility, Québec, Part II and the appendices are available in English only. Does this mean that the appendices are not useful to Francophones? Or that the appendices and Volume II are not useful for understanding the impacts of this EIS? We believe that all documentation concerning the Pointe-Noire, Québec, area must be translated, as is required by Québec's Official Language Act (Bill 22). This information may be useful to fully understand the following conclusion as well as its impacts on the public and the environment: "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." (p. E-10)

Alderon Response to PC 11-1

Alderon is committed to complying with all applicable laws and regulations. The *Official Languages Act* referenced in the above comment relates to federal institutions and therefore does not apply to private individuals and organizations. Notwithstanding the fact that the *Official Languages Act* does not apply to Alderon, the company is in compliance with the EIS guidelines, which require the Plain Language Summary to be provided in both English and French.

Alderon, however, has made the offer to provide detailed technical environmental workshops in French upon request by stakeholders in order to provide more information on the methodology and other technical details of the assessment. On November 2, 2012, Alderon held a technical workshop with representatives from the *Regroupement pour la sauvegarde de la grande Baie de Sept-Îles* and the *Comité de défense de l'air et de l'eau*.

4.11.2 PC 11-2

In Chapter 10, the Regroupement pour la Sauvegarde de la grande Baie de Sept-Îles is not listed as one of the organizations that submitted comments on the draft guidelines. Did Alderon not receive our submission? If so, why are we not explicitly named?

Alderon Response to PC 11-2

Alderon has added the group to its stakeholders list and commenced consultation activities with this group.

4.11.3 PC 11-3

2. Water and sediment studies

There are still many questions and comments concerning the Sept-Îles terminal that we feel are too late to address and that are not sufficiently discussed in the EIS submitted:

- **Although this question was asked during the meeting with Alderon on November 2, 2012, it remains unanswered: "Dust suppression, such as watering roads and limiting certain earth-disturbing activities (???) on especially dry and windy days;" (p. E-7) What is the source of this water? Will this be potable water?**

Alderon Response to PC 11-3

During construction, small quantities of water will be used as needed as a dust suppressant. Water sources will be determined during construction planning, and will meet all regulatory requirements.

4.11.4 PC 11-4

What is the distance between the Alderon facilities and the drinking water well at the RV park? And how far is it to the first private well?

Alderon Response to PC 11-4

According to the Système d'information hydrogéologique (2012) of the ministère du Dévéloppement durable, de l'Environnement, de la Faune et des Parcs du Québec, the nearest water well to the Kami Terminal is located in Plage Sainte-Marguerite at a distance of approximately 5 kilometers. The Caravaning campground (RV park) is also located in Plage Sainte-Marguerite.

4.11.5 PC 11-5

Water quality of the stormwater retention pond discharge will be monitored to ensure compliance with the Ministère du Dévéloppement 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."(p. E-11) Could you tell us exactly what parameters will be measured and more precisely the criteria that will be applied. Will this include MDDEFP effluent discharge objectives? Will there be other parameters in addition to those usually required? How will the proponent respond to the fact that criteria have already been exceeded in the unnamed streams and in Ruisseau à la Baleine?

Alderon Response to PC 11-5

Parameters other than those that Alderon has already committed to follow will be identified during the permitting process at the provincial level. This may also include specific discharge objectives that will consider actual conditions in ruisseau à la Baleine. Alderon has already contacted MDDEFP representatives and discussions are ongoing.

4.11.6 PC 11-6

"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." (p. 4-19) What studies were used as the basis for this statement?

Alderon Response to PC 11-6

The storm water management system for the Kami Terminal will be designed to prevent an uncontrolled release of water from the site including diversion of clean storm water around the site to minimize the volume of water that will potentially be in contact with iron ore and design of storm water collection and treatment to meet up to date information and predictions of storm intensity and volumes of precipitation. Treatment of the storm water will include sedimentation which will occur in the retention pond and, if required, mechanical treatment of the decant water prior to release. The mechanical treatment is currently anticipated to include an enhanced coagulation/settling treatment system which includes pH adjustment, feed of sand as a ballast to improve settling, and settling substrate, polymer feed, inclined plate settling chamber, ongoing removal of settled sludge and sand recovery system similar. The system uses the same mechanical treatment that is in use at a number of similar facilities.

The retention pond is sized to receive a run off volume of 1,037 m^3/hr, which is consistent with a 1 in 100 year rain event, over a 24 hour period, for a total volume capacity of 25,000 m^3. The treatment plant has been sized to treat the collected water over a 4-day period, at a flow rate of approximately 4.3 m^3/min. This flow rate is capable of managing high water volumes including a very wet season. In order to exceed the flow conveyance of the system there would need to be a second 1 in 100 year storm event within 4 days of the initial storm.

Assuming the unlikely scenario of a complete accidental breach of the retention pond, a maximum of 25,000 m^3 would be released in baie des Sept-Îles. Considering the surface area of the bay (100 km^2) and average depth, this represents a large body of water compared to 25,000 m^3. More importantly, as red water contains particles that are extremely small, these particles would remain suspended in the upper water column and would be evacuated by tidal flushing.

4.11.7 PC 11-7

What will be the monitoring program for the settling pond and its discharges into the bay? We would like to see a permanent program. We would like more details concerning the following statements on page 4-19: "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 (what methods will be used for this continuous monitoring?)**
- **Regular inspection of containment structures (what frequency does "regular" imply?).**

Alderon Response to PC 11-7

Detail engineering design of the retention pond typically includes a non-contact radar or ultrasonic type level transmitter that would send a level signal to the Kami Terminal control room. This would provide the operations team with a real time indication of the pond level as well as long term record if desired.

Inspection frequency will be determined in detail at the start-up of the Kami Terminal, but a typical inspection program for this type of containment structure would include a weekly check list inspection by operations staff and then an annual inspection by a qualified engineer to renew the certificate of approval.

4.11.8 PC 11-8

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. (Could you provide us with the technical specifications for this retention pond and the materials used?) 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. (What will be the sampling schedule? What parameters will be measured? To which government departments must this data be submitted and how frequently?) This aspect (monitoring and follow-up) is important to us, considering the information provided in the last section of our brief entitled The past: A legacy of broken promises about the environment.

Alderon Response to PC 11-8

The technical design specifications for the stormwater retention pond, including materials, will be finalized during the detailed design of the Project. Mitigation measures associated with the stormwater retention pond include the installation of groundwater monitoring wells at the perimeter of the pond. Alderon is planning to install at least three groundwater monitoring wells to monitor the quality of groundwater upstream and downstream of the planned infrastructures (concentrate storage area, stormwater retention pond). Ideally, two wells will be located downstream of the installation on a perpendicular line with the groundwater flow direction. Prior to the operation phase, Alderon will conduct a groundwater characterization study to define notably the baseline groundwater quality and depth of the water and confirm direction of flow.

As described in Volume 2, Section 16.10 of the EIS, water quality of the stormwater retention pond discharch will be monitored to ensure compliance wit 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. The monitoring will be conducted on a monthly basis for at least the first year of operations. Afterwards, the frequency of monitoring will be adjusted dependint on the effluent quality. Parameters that will be monitored include flow, pH, temperature, metals (aluminum, arsenic, copper, iron, lead, nickel, and zinc), TSS, alkalinity, and petroleum hydrocarbons (C_{10}-C_{50}).

The water quality monitoring will be part of Alderon's Sustainability Management Framework. The Sustainability Management Framework is a part of the overall Project management system that includes quality management systems, document control, risk management and Health, Safety and Environment (HSE) systems. The framework is made up of three main systems, the components of which are shown in Appendix J.

1. The Sustainable Project Delivery system will provide a high level approach to sustainability management by establishing clear objectives, tracking of key Project commitments, support for engineering and procurement activities and reporting on overall sustainability performance;

2. The EMS will provide detailed management of regulatory and permit requirements and includes environmental protection plans and procedures. The EMS will include environmental monitoring and reporting on specific construction and operational activities. Environmental Management Plans will be developed in consultation with relevant regulatory agencies and stakeholder groups.

3. The Social Responsibility System will manage and track the commitments made in various guidance documents and contracts (e.g., benefits agreement) as well as establish plans for effective Project communications, community liaison and complaints management.

Working closely with the HSE team, the Sustainability Management Framework will ensure that sustainability issues are incorporated into employee orientation, daily tailgate and safety meetings, contractor management, monitoring and incident response procedures.

4.11.9 PC 11-9

- **What are the natural (background) sediment concentrations in the Alderon shipping area?**

Alderon Response to PC 11-9

Alderon will not be carrying out any shipping activities. This information should be obtained from the Port Authority of Sept-Îles.

4.11.10 PC 11-10

We asked Alderon to provide us with an in situ rock leaching test since the Mine Arnaud tests showed that criteria for certain elements, including copper and vanadium, had been exceeded. Alderon provided a test of the water in the quarry dated June 2012. We are not sure whether this test is valid since the pH is far too high to be natural, or whether it complies with the sampling protocol for rock leachate. Given the quantity of rock used (ballast, etc.), it is important to ensure that the rock leachate is not harmful to the environment or to ecosystems.

Alderon Response to PC 11-10

Water pooling in the existing rock quarry was sampled. Water samples were field-filtered and preserved (aliquot for metals only) in compliance with standard sampling protocol. Field pH and TDS were measured in the pools using calibrated meters. Water was analyzed for pH, sulfate, and dissolved metals including copper and vanadium in a CEAL certified ALS laboratory. Please see attached certificates of analyses for analytical methods, quality checks and results (Appendix L).

Field and laboratory pH measurements were in agreement. Mafic rocks (such as gabbro) associated with quarry walls naturally increase water alkalinity and pH when dissolved, whereas streams around the quarry mostly drain glacial sediments and topsoil, which usually maintain solutions from neutral range to slightly acidic. Therefore, as outlined in the question, the difference in pH is attributed to the nature of materials reacting with the surface water, and not to analytical errors.

The results indicate that vanadium concentrations were very low (approximately 0.001 mg/L). The highest copper concentration in quarry water was 0.008 mg/L, exceeding the CCME Guideline for Aquatic Life (0.002 mg/L) by four fold. However, a sample taken upstream of the quarry from the baseline dataset had greater concentration of copper (0.12 mg/L) than in water from the quarry. Therefore, it is unlikely that copper leaching from the rock will have a significant effect on the quality of water surrounding the quarry.

4.11.11 PC 11-11

Although various types of treatment processes for red water are explained, Alderon does not specify which one or ones will be used (November 2 meeting). We feel that, by this stage, more details should be available, so that we can comment on this aspect.

Alderon Response to PC 11-11

The treatment process will be determined during the detailed engineering stage. The selected treatment process will comply with all applicable regulatory standards.

4.11.12 PC 11-12

We ask that flows from the entire site be considered, for contamination of the water table and the soil as well as for the final effluent, and that special measures be taken to ensure that the entire site does not become so contaminated that the only option is to keep the site active, since it would cost too much to restore. This is a matter of fairness to the population and to future generations.

Alderon Response to PC 11-12

All Alderon activities onsite were evaluated as part of Volume 2 of the EIS. The more significant interactions were identified with concentrate handling and storage. Thus in this case, specific mitigation measures were designed such as the use of a liner, and the collection (retention pond) and treatment of water within the storage area.

Water collection on other parts of the site is not considered necessary. Other operational activities (e.g., onsite vehicle / equipment operation, waste management, etc.) will be mitigated through adherence to guidelines or operational statements, implementation of activity specific plans (spill prevention, surface water management, materials handling, erosion and sediment control) and inclusion of aspects within the port operations plan (dust suppression, etc.). Standard, proven measures to reduce the environmental effect and control the potential occurrence of dust, turbidity and sedimentation will be included in the Terminal Site EPP.

4.11.13 PC 11-13

There is no explanation of the landfill site for sludge from the retention pond or how it will be managed (volume, etc.).

Alderon Response to PC 11-13

The management and disposal for sludge from the retention pond will be determined during the detailed engineering stage. The selected treatment process will comply with all applicable regulatory standards.

4.11.14 PC 11-14

Will there be a treatment system for removing any oils and greases that might be mixed in with the water in the pond?

Alderon Response to PC 11-14

The potential for hydrocarbons to be present in the effluent to be treated in the sedimentation pond will be further evaluated during the detailed engineering phase. Effluent treatment will include treatment systems necessary to ensure that the effluent discharged to the environment meets all regulatory criteria, including hydrocarbons.

4.11.15 PC 11-15

Did Alderon take climate change into consideration in the design of its pond? If so, how?

Alderon Response to PC 11-15

The final design for the storm water management system for the Kami Terminal will meet up to date information and predictions of storm intensity and volumes of precipitation, including projections of increased storm intensity and duration events due to climate change.

The retention pond is sized to receive a run off volume of 1,037 m^3/hr, which is consistent with a 1 in 100 year rain event, over a 24 hour period, for a total volume capacity of 25,000 m^3. The treatment plant has been sized to treat the collected water over a 4-day period, at a flow rate of approximately 4.3 m^3/min. This flow rate is capable of managing high water volumes including a very wet season. In order to exceed the flow conveyance of the system there would need to be a second 1 in 100 year storm event within 4 days of the initial storm.

4.11.16 PC 11-16

Radium 226 was found (SW12-07 and SW12-08). Table 5.2 does not include any threshold or criterion. Could you give us an order of magnitude (international studies?) as to what 0.01 and 0.02 Bq/L represent?]

Alderon Response to PC 11-16

The Metal Mining Effluent Regulations set concentration limits for deleterious substances in effluents; the authorized limits for radium 226 are the following:

- Maximum Authorized Monthly Mean Concentration: 0.37 Bq/L;
- Maximum Authorized Concentration in a Composite Sample: 0.74 Bq/L; and
- Maximum Authorized Concentration in a Grab Sample: 1.11 Bq/L.

4.11.17 PC 11-17

3. Plants and wildlife in the bay

"Blasting will be conducted in accordance with the Guidelines for the Use of Explosives in or Near Canadian Fisheries Waters (Wright and Hopky 1998);" (p. E-7). Even if these guidelines are applied, what will be the impacts on whales, fry, spawning grounds, salmon (in transit in the bay before returning to their natal river,) etc.?

Alderon Response to PC 11-17

Alderon will comply with DFO Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters. These guidelines are specifically designed for the conservation and protection

of fish, marine mammals, and fish habitat from impacts arising from the use of explosives and its destructive forces. For instance, to prevent the deposition of deleterious substances into waters due to the production of toxic by-products (ammonia) during blasting, Alderon will prohibit the use of ammonium nitrate-fuel oil mixtures, such as suggested in the DFO guidelines.

4.11.18 PC 11-18

Similarly, what will be the impact of repeated blasting on birds that use the bay? We would like to remind the proponent that the Baie de Sept-Îles is an Important Bird Area (IBA) which is the subject of consensus among decision-making authorities in the region. What will be the blasting season? Waterfowl concentration areas can be found around virtually the entire perimeter of the bay, including the one at Anse à Brochu near the proposed Alderon facilities. These areas are also not indicated on any map in the EIS. "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." (p. 2-6) Does Alderon consider the protected areas of the Baie de Sept-Îles sensitive areas? If so, what are the proposed mitigation measures? Do the mudflats and eelgrass beds constitute sensitive areas? If so, what are the proposed mitigation measures? Is the Checkley Plain nature reserve a sensitive area recognized by Alderon? If so, what are the proposed mitigation measures?

Alderon Response to PC 11-18

The Proponent is aware that the baie des Sept-Îles is an IBA. Blasting is required during construction only. While the duration and timing of blasting has not yet been finalized, only select areas are expected to potentially be blasted, where rock drills and excavators cannot be used. Blasting will be timed when there are no concentrations of birds in the waterfowl gathering area. This will be specified in the Avifauna Management Plan. The Proponent is aware of the waterfowl gathering areas; those in close proximity of the Project are illustrated in Volume 2 of the EIS in Figure 19.5 titled "Waterfowl Gathering Areas".

The first sentence of Paragraph 2 in Section 2.4, Volume 2 of the EIS, should read:

> "*As a result of this significant and long-standing industrial activity in the area, there are few identified environmentally sensitive or significant areas located immediately within or adjacent to the proposed Kami Terminal components and activities.*"

The Proponent does consider the IBA and waterfowl gathering areas as sensitive areas. There is low potential for interaction between the Kami Terminal construction or operation on mudflats and eelgrass beds of the baie des Sept-Îles, which are predominately at the northern end of baie des Sept-Îles, though at a lesser extent within or near anse à Brochu.

The proposed mitigation measures presented in Volume 2 of the EIS will minimize potential effects.

The Plaine Checkley Nature Reserve, included in the Sept-Îles IBA, is recognized as a sensitive area; however given the distance from the PDA (approximately 5 km), no interaction is anticipated.

4.11.19 PC 11-19

Are the two days of field studies in June (June 28 and 29, 2011) sufficient to provide a comprehensive inventory of all bird species in the area, whether migratory species or year-round residents? What method was used to inventory the migratory birds that had already gone north but that use the region as a staging area and transitory feeding grounds? What about others that were breeding at that time and may not have been visible or audible, and those that had already finished breeding and had already left the area (sea, lakes, etc.)?

Alderon Response to PC 11-19

Given the nature of the Kami Terminal and the fact that the site can be classified mostly as a brownfield site, the field effort is considered adequate to characterize bird species' use of the habitats that may interact with the Project. The key interaction is that of habitat loss and interactions during construction, and breeding habitat adjacent to the PDA. Considering the potentially affected habitats, the timing of the survey in June was considered sufficient to record the majority of breeding bird species that would be expected in these habitats. Existing data sources (including GENIVAR 2008) are considered adequate to identify species use in the RSA, throughout the year.

4.11.20 PC 11-20

For the environmental assessment of Birds, Other Wildlife and their Habitats, and Protected Areas, the LSA includes the PDA in its entirety and adjacent areas where environmental effects due to noise and dust may reasonably be expected to occur. For the purposes of the assessment, the LSA is restricted to wildlife habitats within 500 m of the PDA (Figure 19.2)" (p. 19-5) and also: "The Kami Terminal does not overlap with any protected or designated areas."(Table 19.1). Is it necessary for the Alderon facilities to overlap a sensitive area in order for there to be impacts caused by noise, light, particulates, etc.? Will Alderon consider the disturbance of the species mentioned, as well as fish and marine mammals? What studies were used to determine that 500 m is a sufficient distance?

Alderon Response to PC 11-20

The response to the first issue identified in Table 19.1, Page 19-4, Volume 2 of the EIS, should read:

> "*The Kami Terminal does not overlap with any protected wetland in the area. The assessment of the Kami Terminal on protected areas is provided in Section 19.6.*"

The LSA is the maximum area within which Project-related environmental effects can be predicted or measured with a reasonable degree of accuracy and confidence. The LSA includes the PDA and adjacent areas where Project-related environmental effects may reasonably be expected to occur. The 500 m buffer around the PDA represents the zone of other potential effects (e.g., air emissions, or particles and dust).

4.11.21 PC 11-21

Is it possible that the impacts of the Alderon terminal on birds will extend beyond the high water mark toward the bay (noise, species disturbance, light, traffic, etc.)? "Alderon conducted dispersion modelling for the Kami Terminal, the results of which indicate that no substantive changes in air quality are expected on local or regional scales due to emissions from the Kami Terminal. The modeling results are presented in Section 19.2." In our view, this is a very simplistic and inappropriate way of dealing with the terminal's impacts on birds and underwater habitat.

Alderon Response to PC 11-21

Volume 2 of the EIS does not limit the assessment of potential environmental effects on birds to the high water mark of the baie de Sept-Îles.

Project activities will occur in a previously disturbed area with a high level of background noise. Noise and dust associated with the Project will affect an area of limited extent. Waterfowl that may be present in the waterfowl gathering area in anse à Brochu and anse à la Baleine (immediately north of the PDA) are likely to use area for short duration during migration, assuming they currently tolerate the existing noise generated by Port activities. Mitigation measures will be implemented to limit noise and dust emissions (e.g., rail car dumper will be enclosed in a building equipped with dust collector, and conveyor belts will be enclosed). Monitoring of the anse à Brochu and anse à la Baleine for concentrations of waterfowl will be conducted prior to and during blasting, if it is to occur during the migration season. This monitoring will be addressed in the Avifauna Management Plan.

4.11.22 PC 11-22

The following quotes seem simplistic:

- **"No change in habitat for flora or fauna is expected as a result of expenditures or employment, during construction or operation and maintenance." (p. 19-20)**

- **"No change in distribution and movement is expected as a result of expenditures or employment, during construction or operation and maintenance." (p. 19-20)**

Alderon Response to PC 11-22

There is no potential for Project employment and expenditures to interact with Birds, Other Wildlife and their Habitats, and Protected Areas. As non-phyiscal Project acitivies, employment and expenditures will not cause potential environmental effects, such as change in habitat or change in distribution or movement, that would affect this VEC. The potential for Project physical works to interact with this VEC has been described in Table 19.2 of Volume 2 of the EIS, and Project effects have been described and assessed throughout Section 19.6

Project employment and expenditures have potential to influence socio-economic, rather than biophysical, VECs. The potential for these Project activites to affect socio-econoimc VECs is described and assessed in the EIS where appropriate. For example, see Chapters 24 and 26 in Volume 2 of the EIS.

4.11.23 PC 11-23

Is Alderon considering maintaining a buffer area between its facilities and the marine environment? If so, could we have more details (depth, vegetation, traffic, etc.).

Alderon Response to PC 11-23

A buffer will be maintained between the stockpile and water. However, a portion of the enclosed conveyor leading to the last transfer station will run adjacent to (or above) the shore line. Alderon will obtain required permits from DFO for the section of enclosed conveyor near or above water.

4.11.24 PC 11-24

4. Responsibilities

"No Kami Terminal activities are proposed within the marine environment." (p. 1-8) On p. 4-20, you write: "Product loading of ships will be managed by the Port, which will comply with all applicable laws and regulations."

- **Who will be responsible for carrying out the environmental assessment associated with ore transfer and who will be responsible for any potential contamination (of air, water or marine sediments) associated with the transfer of Kami ore?**
- **Will Alderon apply to the MDDEFP for a certificate of authorization for the transfer of the ore to the dock? If not, what authority will be responsible for issuing authorization?**

Alderon Response to PC 11-24

As noted in Section 4.5.1 in Volume 2 of the EIS, iron ore concentrate will be carried from the concentrate storage and load-out facility at the Kami Terminal to the Port of Sept-Îles's common offload point. Handling of ore, including transfer of concentrate from the offload point onto ships, is under the responsibility of the Sept-Îles Port Authority. Any permitting or authorizations associated with the transfer of ore from the offload point is the responsibility of the Port. Alderon is in discussion with MDDEFP regarding the permitting and authorization processes applicable to the Kami Terminal.

Alderon's responsibility is limited to mitigating the effects of its activities up to the common offload point. For instance, to prevent spillage of product, Alderon will build an enclosed conveyor system up to the common offload point.

4.11.25 PC 11-25

"The Kami Terminal infrastructures will be mainly located on the Pointe-Noire Terminal on the Port of Sept-Îles property." (p. 1-8) What will be the respective responsibilities of the Port of Sept-Îles and Alderon in the event of a failure/breach of the settling pond? In the event of a problem in the collection of water from the terminal? In the event of contamination of the water or sediments in the bay following the operation of the Kami terminal? In the event of soil contamination? Contamination of the water table? Photo 26 is a good example: the wind whips up dust particles on the iron piles (companies?) on Crown land (federal?); this dust disperses into the air (federal or provincial if this is above the bay?), and is eventually deposited in the water of the bay (federal or provincial, depending on the intertidal zone?), and in sediments (federal?). If there is no certificate of authorization and no one has therefore authorized the transfer, then who is responsible? Although we put this question to the Port of Sept-Îles on August 29, 2012, we have not even received an acknowledgement of receipt. "[Translation] Is it actually the Sept-Îles Port Authority that will conduct the environmental assessment of the Mine Arnaud facilities and the environmental impacts on the bay, water, sediments, soil and water table, and dust fall, as well as the post-project follow-up concerning these aspects relating to the handling and transfer of any commodity mined by Mine Arnaud transiting through the Port of Sept-Îles?" The appended photographic file clearly demonstrates the impact of a storage and transfer area on air, water, sediments and soil.

In view of the fact that there are no criteria for assessing iron and manganese in sediment, could any losses of Alderon ore during loading at the dock constitute sediment contamination? If so, who will be responsible? Does this constitute changes to fish habitat?

Alderon Response to PC 11-25

This issue will be carefully assessed during the detailed engineering of the water treatment for the retention pond. This may not be an issue since the retention pond will serve to remove much of the suspended solids.

The storm water management system for the Kami Terminal will be designed to prevent an uncontrolled release of water from the site including diversion of clean storm water around the site to minimize the volume of water that will potentially be in contact with iron ore and design of storm water collection and treatment to meet up to date information and predictions of storm intensity and volumes of precipitation. Treatment of the storm water will include sedimentation which will occur in the retention pond and, if required, mechanical treatment of the decant water prior to release. The mechanical treatment is currently anticipated to include an enhanced coagulation/settling treatment system which includes pH adjustment, feed of sand as a ballast to improve settling, and settling substrate, polymer feed, inclined plate settling chamber, ongoing removal of settled sludge and sand recovery system similar. The system uses the same mechanical treatment that is in use at a number of similar facilities.

The retention pond is sized to receive a run off volume of 1,037 m^3/hr, which is consistent with a 1 in 100 year rain event, over a 24 hour period, for a total volume capacity of 25,000 m^3. The treatment plant has been sized to treat the collected water over a 4-day period, at a flow rate of approximately 4.3 m^3/min. This flow rate is capable of managing high water volumes including a very wet season. In order to exceed the flow conveyance of the system there would need to be a second 1 in 100 year storm event within 4 days of the initial storm.

Information sought regarding marine sediment is the responsibility of the Port of Sept-Îles.

4.11.26 PC 11-26

Could you specify exactly what certificates of authorization will be required under sections 22 and 48 of the Québec Environment Quality Act and for what components?

Alderon Response to PC 11-26

Potential permits, approvals and authorizations that may be required for the Kami Terminal are listed in Table 1.3 of Volume 2 of the EIS.

4.11.27 PC 11-27

During the meeting with Alderon on November 2, 2012, we observed contaminated sediments near the Alderon facilities. "When, for one or more substances, the concentration is higher than the TEL (class 3), the probability of observing adverse effects on benthic organisms increases with the concentrations measured. If the concentration measured is also higher than the natural concentration or the ambient level, the sources of contamination must be identified and, if necessary, action targeting the parties responsible taken in order to stop the contamination. To prevent new inputs of contaminants, additional measures may be planned for any new facility likely to produce discharges that could lead to an increase in concentrations above the TEL or above the natural levels in zones of sediment deposition downstream, and sometimes even upstream, of the discharge point. (Virtual elimination refers either to the total elimination of persistent, bioaccumulative and toxic substances in the environment or to the suppression of the effects of these substances on the environment and the

ecosystem (SLV 2000 1999).” CRITERIA FOR THE ASSESSMENT OF SEDIMENT QUALITY IN QUÉBEC, p. 20. What action does Alderon plan to take in view of the above?

Alderon Response to PC 11-27

This issue will be carefully assessed during the detailed engineering of the water treatment for the retention pond. This is unlikely to be an issue because the retention pond will serve to remove suspended solids.

Information sought regarding marine sediment is the responsibility of the Port of Sept-Îles.

4.11.28 PC 11-28

5. Cumulative effects on the Baie de Sept-Îles

Does Alderon acknowledge that inputs from the settling pond contribute to the cumulative effects on the bay? “These incremental effects may be significant even though the effects of each action, when independently assessed, are considered insignificant.” Cumulative Effects Assessment Practitioners’ Guide, p. 1

Alderon Response to PC 11-28

For projects that were considered as part of the cumulative impact assessment of the Kami Terminal, detailed information on future effluent characteristics, flows, volume of water and concentration of pollutants do not exist at this point in time. This level of information may only be available once these projects have achieved the permitting stage of their development.

The approach that was adopted for cumulative effects assessment on water resources for the Kami Terminal is based on all future projects coming on line in the foreseeable future including the Kami Terminal having to abide by regulatory water quality standards and criteria.

As indicated in Subsection 16.7 of Volume 2 of the EIS, the Kami Terminal could lead to a change to surface water quality as a result of ground disturbance at proximity to watercourses. Surface and water quality could also be affected by the release of suspended particles and iron laden water (red water) in the environment during the operation phase. With the application of mitigation measures, including the collection and treatment of water in contact with the ore concentrate, these effects are likely to be not significant.

Two watercourses are located within the LSA: ruisseau à la Baleine and an unnamed stream located further west. They flow into small coves (anse à Brochu and anse à la Baleine) of baie des Sept-Îles. Both streams are partially channelled through culverts at road and railway crossings.

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. 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 lines will be constructed and that numerous crossing may have to be built. No overlapping is expected within the Kami Terminal activities.

Cliffs Naturals 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 this Project would be similar to the Kami Terminal infrastructure 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 tonnes 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. 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 Water Resources as a result of the Kami Terminal and other projects and activities are not likely to be significant.

4.11.29 PC 11-29

"[Translation] The fuel transfer activities will be separate from the iron ore transport activities." What is the basis for separating a project into distinct components? (+volume, +infrastructure, + benzene, +risks, …)?

The fragmentation of the waterfowl concentration areas, mud flats and eelgrass beds (grazing effect) contributes to the cumulative effects (Practitioners' Guide). Could

Alderon provide more precise details about its impact on fragmentation, even indirect, as well as the mitigation measures?

Some companies and the municipality have a certificate of authorization for discharges into the bay, while others are made without any control (transfer for example). While there is periodic sampling in the first case, in our opinion, the cumulative impacts over the years (sewage from the town for several decades, IOC and Cliffs-Wabush Mines since the early 1960s, Alouette since 1990) has never been studied, nor have the synergistic effects of the various contaminants in the same environment (both water and sediments). The analysis of Alderon's cumulative effects did not take into account the impacts that have accumulated over the years, or future impacts. This analysis of the cumulative effects on the environmental components of the water, in particular the bay and its habitat (including fish, sediments, birds, marine mammals, wetlands, etc.), was far too simple. In addition, the effects of IOC's operations (see appended photo) are significant and are carried into the bay by marine currents. The impact of Labrador Iron Mine, which ships from the IOC facilities, was not included, even though it is already operational. The photographic file also clearly shows the Cliffs-Wabush Mines facilities as well as their impacts on the bay: the corrective actions required will undoubtedly take a number of years to be effective since they just signed their depollution attestation, not counting their proposed expansion. Atmospheric contamination (wet and dry deposition) must be considered in the cumulative effects.

Several major projects are expected in Sept-Îles within a relatively short period of time, including the Mine Arnaud project, which is indicated as having a potential cumulative effect with the Kami project. The Mine Arnaud effluents would empty directly into the Baie de Sept-Îles via Clet Creek. Passage through a settling pond is currently the only method proposed by Mine Arnaud to reduce suspended solids. This effluent has been neither characterized nor modelled. Vanadium could be a problematic element, particularly since it has been listed in Schedule 1 of section 64 of the Canadian Environmental Protection Act since March 20, 2010 because it is persistent in the environment. Since the effluents from the storage areas, aerated ponds (if applicable) and settling ponds of the CN project will inevitably end up in the bay, the impact of the addition of any new project on the bay should be properly and conservatively assessed. We were also surprised that the CN storage and transfer area was not expressly listed among the projects in connection with the cumulative impact with the Kami project, since the CN project is at the EIS Guidelines comments stage. It will be recalled that tides and currents promote the movement of sediments in the bay.

"Spatial and temporal crowding: Cumulative effects can occur when too much is happening within too small an area and in too brief a period of time. A threshold may be exceeded and the environment may not be able to recover to pre-disturbance conditions." Cumulative Effects Assessment Practitioners' Guide, p. 6

Might it be beneficial for Kami to consolidate its project with all the iron ore transfer projects at a single site in order to reduce the ecological footprint and make more efficient use of the area's resources?

The monitoring and follow-up program should be stringent, permanent, comprehensive and public (transfer, pilotage, regulations, contamination, etc.).

We want to ensure that areas already considered protected (IBA, Checkley Plain nature reserve and waterfowl concentration areas) or sensitive (wetlands) are in fact effectively and consistently protected and that this protection does not vary arbitrarily according to the needs of this or that development project. It is particularly important that the criteria that would justify overriding the legal or special status are explicitly stated and approved by the relevant authorities.

Very clear indications should be provided in the guidelines, which would require strict compliance with standards at all times so that deviation from these standards is not tolerated. Exceedances have already been recorded in surface water (water resources baseline study). Given this situation, should a new project be approved?]

Alderon Response to PC 11-29

The EIS provides an assessment of the potential Project-specific environmental effects of the Project, as well as its likely cumulative environmental effects in combination with other relevant projects and activities that have been or will be carried out.

In understanding and describing the existing environment and the nature and degree of any likely changes to that environment resulting from the Project, the EIS does consider the Project and its potential effects in the context of the overall environmental setting within which it would be developed (see Chapter 3 and each VEC in Volume 2 of the EIS), as well as the presence and effects of other existing and proposed developments in the region (see Section 6.3 of Volume 2, for example). Other ongoing and adjacent projects and activities and their environmental effects were an important and integral consideration in the cumulative effects assessments for all VECs.

The nature, size and layout of the Kami Terminal is described in Chapter 2 (Project Description, see Section 2.5 and Figure 2.4 in particular) in Volume 2 of the EIS, including its associated concentrate stockpiles and its relationship to the overall size of, and existing activities at, the Port of Sept-Îles, Québec. The proximity of these existing and proposed development activities to existing communities and residences in the area and to the marine environment, and the potential for dust, noise and other Project-related disturbances and emissions to extend to these areas and affect local residents, was a key focus of the environmental assessment.

The environmental assessment of the effects of dust on special receptors was based on the results of the Air Quality Dispersion Modeling Study included in Appendix G of Volume 2 of the EIS. The model considered meteorological and climate data, existing emissions sources (including Kami Terminal stockpiles) and transport and dispersion behaviour of atmospheric emissions. The analysis of the modeling results was done by considering the background that is prescribed in *Québec Clean Air Regulation*, which is a way to consider the cumulative effects of a project.

Based on the modeling results, the highest predicted concentrations will occur in the vicinity of the south-east side of the property. With respect to the piles of concentrate, fugitive emissions resulting from wind erosion may lead to exceedances of the criteria, but the frequency of the meteorological conditions leading to these potential exceedances is low and the concern is restricted to neighbouring uninhabited industrial properties. Emissions from the diesel locomotive used for transporting the concentrate to Sept-Îles and along the bay are not expected to cause substantive changes in air quality.

With regards to water resources, water run off within the concentrate storage area will be collected in the stormwater retention basin and treated before being released into the environment. The treatment concept under consideration at this stage is mechanical treatment, which will be designed to meet ministère du Dévéloppement durable, de l'Environnement, de la Faune et des Parcs Directive 019 effluent discharge limits and the CCME water quality guideline for the protection of aquatic life and the Québec surface water quality criteria for the protection of aquatic life. Similarly, other projects assessed for cumulative effects will also have to comply with regulatory standards for the protection of aquatic life.

In addition to predicting and evaluating these potential environmental effects, each VEC section also describes mitigation measures that are designed to help avoid or reduce the potential adverse effects of the Kami Terminal on the biophysical and socio-economic environments, and thus, its potential contribution to any such overall (cumulative) environmental effects. For example, mitigation measures to limit the dispersion of atmospheric emissions resulting from the Kami Terminal include enclosing equipment used for transporting ore and outfitting equipment such as the conveyor system with dust collectors; using a stacker with an adjustable height; and, performing routine inspections of equipment and dust collectors.

Besides treating surface water to a level that meets the federal and provincial regulations and guidelines mentioned previously, Alderon proposes several mitigation measures to limit Project effects on water resources. Among others, these include installing fencing downstream of work areas to reduce carriage of silt and fines, avoiding unnecessary encroachments on riparian habitat and maintaining and storing work site machinery and vehicles on a site designated 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.

The EIS also includes and described a number of environmental monitoring and follow-up programs that Alderon will develop and implement during the Project's construction and/or operations phases to monitoring compliance with relevant regulatory standards and guidelines, and/or to study the environmental effects of the Project and the effectiveness of mitigation. During the construction phase, it is recommended to monitor the impact of blasting on air quality near the Kami Terminal's site, in relation to carbon monoxide (CO), by using portable monitors. Later on, during the operations phase, Alderon will participate in the air quality monitoring program initiated in Sept-Îles. Alderon will also monitor 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. Parameters that will be monitored include flow, pH, temperature, metals (aluminum, arsenic, copper, iron, lead, nickel and zinc), total suspended solids, alkalinity and petroleum hydrocarbons C10-C50.

The environmental components of the Sept-Îles IBA are considered in the EIS, as warranted, including the portion of the baie des Sept-Îles within the LSA. The entire IBA, including Plaine Checkley is included in the RSA. Given the identified boundaries of the IBA, the Project PDA (footprint) is not within the IBA. The relevant aspects of the Sept-Îles IBA that overlap the Project and have potential to be affected by the Project, with potential resultant cumulative effects, are addressed in the cumulative environmental effects assessment. The IBA itself, however, was not specifically named and included in its entirety. Paragraph 4 of sub-section 19.7 (Assessment of Cumulative Effects), Volume 2 of the EIS should include discussion of the Sept-Îles IBA, as follows:

> *"The only protected area identified within the LSA is a waterfowl gathering area located in baie des Sept-Îles, northeast of the PDA, also considered part of the Sept-Îles IBA. Other nearby protected areas in the RSA include additional waterfowl gathering areas around the coast of Marconi Peninsula, and the Sept-Îles IBA in its entirety, including islands in baie des Sept-Îles. With the exception of the nearby waterfowl gathering areas and portion of the Sept-Îles IBA near Pointe-Noire, other protected areas are unlikely to be directly affected by industrial activity at Point Noire. The remaining portions of the Sept-Îles IBA however, are likely affected by other industrial and commercial activities in the RSA.*

The second paragraph on page 19-43 of Volume 2 of the EIS should read:

> *"There is no spatial or temporal overlap between the Kami Terminal and the Second Port-Cartier pellet plant (ArcelorMittal Mines Canada), as the pellet plant project is located approximately 30 km southeast of the Kami Terminal, and therefore does not overlap the RSA. The remaining projects will all affect land (directly) and protected areas (indirectly) within the RSA, however they are expected to be constructed primarily on developed land or other disturbed or edge habitats. Cumulative losses of natural terrestrial habitat, either small or substantive, are not likely and direct effects on wildlife will be limited. One possible exception is the future expansion of the Aluminerie Alouette aluminum smelter. No information is currently available to determine what, if any, terrestrial habitat would be lost. However based on habitat maps adjacent the smelter, no interior forest is likely to be affected, and limited forest habitat may be lost. The remaining projects principally involve the erection of additional infrastructure within developed areas for additional rail traffic and ship loading. All development is expected to keep close to existing development, similar to the Kami Terminal, with no encroachment on interior forest habitat. There is also no or limited overlap with protected areas, with only waterfowl gathering areas and the Sept-Îles IBA holding any potential to be affected indirectly by sensory disturbance from other projects located near the coast which may overlap temporally with construction activities for the Kami Terminal (e.g. the Mine Arnaud dock and ship loader)."*

Table 19.12 in Volume 2 of the EIS is updated below to address the changes made to related text above, and to strengthen the detailed cumulative effects assessment discussion of other projects, as presented in Table 4.11.1.

Table 4.11.1 Summary of Potential Cumulative Effects to Birds, Other Wildlife and their Habitats, and Protected Areas (Updated EIS Table 19.12, Volume 2)

Valued Ecosystem Component Existing Condition (Past and Ongoing Activities)	• Most of the northern part of the Marconi Peninsula has been cleared of vegetation owing to industrial activity. Existing vegetation on the peninsula as a whole is boreal coniferous and boreal mixed forest. Habitats available within the bird survey study area consist of patches of young mixed forest stands, which have resulted from either forest harvesting or excavation for roads, and mature coniferous stands. These habitats are interspersed, as they are small and present in patches, and are found both within and south of the proposed concentrate unloading, stacking, storage and reclaiming facilities. Developed areas make up 24 percent of the Marconi Peninsula, while the dominate habitat is mature coniferous forest at 39 percent. • Common bird and other wildlife species were recorded in the study area; 29 birds at least possibly breeding and 4 of the 10 herpetofauna species known from the region were recorded, all outside the PDA. Common small mammals are likely to inhabit the peninsula, which is not favourable for large mammals. • Protected areas identified within the LSA include a waterfowl gathering area located in baie des Sept-îles, northeast of the PDA, and the overlapping marine portion of the Sept-Îles IBA.
Kami Terminal Residual Environmental Effects	• Of the total estimated area of the PDA (25.7 ha), over 43 percent is on developed or otherwise disturbed land. The majority of affected forest habitat is from the concentrate unloading, stacking, storage and reclaiming facilities, where 7.6 ha of forest will be removed. Interior forest (defined as mature forest habitat more than 100 m from an edge and that is a minimum of 10 ha in size) is not located within 100 m of the PDA, and will therefore not be affected. The terrestrial habitat loss will be permanent; however, the loss represents less than 1 percent of the Marconi Peninsula, part of the RSA, or approximately 1 percent of the terrestrial habitat excluding the developed or cleared lands. • Residual environmental effects on bird mortality should be low with the application of mitigation, including avoidance of clearing activities during the breeding season of most birds. • Given the common species recorded and the common, fragmented habitats within the PDA, and the relatively small amount of undisturbed habitats that will be directly and indirectly affected by site preparation activities, the proportion of birds and other common wildlife that would be displaced by the Kami Terminal would be low, well below 5 percent of the populations in the greater landscape (i.e., the RSA). Given the limited extent of expected dust deposition or other airborne contaminates as a result of construction activities, the potential and extent of health effects such as reproductive output and success, and environmental effects on the protected areas, is expected to be low, in particular due to the short duration, and expected limited extent of effects.

Other Projects / Activities	Likely Effect Interaction (Y/N)	Rationale	Cumulative Effects
Pointe-Noire Port Expansion (Port of Sept-Îles)	Y	Will affect land (directly) and protected areas (indirectly) within the RSA	• Limited cumulative effect on habitat, as expected to largely be constructed on developed land or other disturbed or edge habitats. • Indirect effects from noise and dust on adjacent protected area (Sept-Îles IBA) likely.
CFA and QNS&L	Y	Will affect land (directly) and protected areas (indirectly) within the RSA	• Limited cumulative effect on habitat, as expected to largely be constructed on developed land or other disturbed or edge habitats. • Indirect effects from noise and dust on adjacent protected area (Sept-Îles IBA) likely.
Alouette Aluminum Smelter (Aluminerie Alouette)	Y	Will affect land (directly) and protected areas (indirectly) within the RSA (Marconi Peninsula)	• Limited cumulative effect on habitat, as expected to largely be constructed on developed land or other disturbed or edge habitats. Some fragmented forest habitat may be affected. • Indirect effects from noise and dust on adjacent protected area (Sept-Îles IBA) likely.
Second Port-Cartier Pellet Plant (ArcelorMittal)	N	The Mount Wright Mine project is not located within the RSA.	• N/A
Bloom Pointe-Noire Terminal (Cliffs Resources)	Y	Will affect land (directly) and protected areas (indirectly) within the RSA	• Limited cumulative effect on habitat, as expected to largely be constructed on developed land or other disturbed or edge habitats. • Indirect effects from noise and dust on adjacent protected area (Sept-Îles IBA) possible.
Arnaud Apatite-Magnetite mine (Mine Arnaud)	Y	Will affect land (directly) and protected areas (indirectly) within the RSA	• Limited cumulative effect on terrestrial habitat, as expected to largely be constructed on developed land or other disturbed or edge habitats. • New port facilities to include a new dock and shiploader, constructed in the waterfowl gathering area (in part of Sept-Îles IBA), potentially resulting in cumulative effects if temporal overlap during construction.

Cumulative Effects Summary (Kami Terminal + All Relevant Projects / Effects)	Direction	Magnitude	Geographic Extent	Duration	Frequency	Reversibility	Significance	Confidence
	A	L	R	P	C	I	N	M

The overlapping projects will all affect land within the RSA however are expected to largely be constructed on developed land or other disturbed or edge habitats. There would therefore not likely be any or substantive cumulative losses of natural terrestrial habitat. One possible exception is the future expansion of Aluminerie Alouette Aluminum Smelter. No information is currently available to determine what, if any, terrestrial habitat would be lost, however based on habitat maps adjacent the smelter, no interior forest would likely be affected, and limited forest habitat may be lost. The remaining projects are largely the placement of additional infrastructure within developed areas for additional rail traffic and ship loading. All development is expected to keep close to existing development, similar to the Kami Terminal, with no encroachment on interior forest habitat. The Kami Terminal effects are unlikely to overlap with effects of construction of the planned Mine Arnaud dock and shiploader, located in a waterfowl gathering area in baie des Sept-Îles. It is not known if there will be temporal overlap of construction of the new dock and construction of the nearby rail loop of the Kami Terminal.

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. The Kami Terminal will not contribute substantively to cumulative effects, because of the planned mitigation measures such as applying standard and best management practices and general environmental protection measures; implementing measures detailed in the EPP; and employee training.

The characterization of the potential cumulative effects and associated mechanisms, combined with the proposed mitigation / effects management measures demonstrate that the residual cumulative effect of change in population on Birds, Other Wildlife and their Habitats, and Protected Areas during all phases, is rated not significant. This determination has been made with a moderate level of confidence. Alderon will participate in the baie des Sept-Îles monitoring project in order to monitor the cumulative environmental effects of industrial development on the biological environment.

Note: Environmental effects descriptors and their definitions are as used in the assessment of environmental effects (Table 19.11).

Again a key priority of Alderon and important focus of the environmental assessment has been on identifying, assessing and attempting to mitigate any adverse environmental effects resulting from the proposed Project, including its various components and activities at the Port of Sept-Îles, Québec. The overall nature, scale and pace of current and future development activities at the Port of Sept-Îles, and ensuring that these issues are considered and addressed through appropriate planning and decision-making at the facility, is clearly beyond the ability and responsibility of a single project Proponent such as Alderon, and falls within the realm of overall management and planning by the Port and municipality. Alderon will, however, continue to work with local and regional planning and management authorities and consult and cooperate with other proponents in that regard, as well as implement appropriate mitigation measures to help ensure that the effects of its Project, and thus, its contribution to any such regional / cumulative effects, are minimized.

4.11.30 PC 11-30

6. The past: A legacy of broken promises about the environment

Many monitoring and mitigation measures have been proposed over the years, but industry and governments have been slow to apply them with the requisite degree of diligence. Contamination of the water table by IOC is a problem that has been known since 1986, but has not yet been resolved. In the case of the Port of Sept-Îles, will the same type of mitigation measures proposed in the document Agrandissement du terminal de Pointe-Noire no 10-01-5549 [Expansion of the Pointe-Noire terminal, No. 10 01-5549] be sufficient for CN's mega storage area and the Kami storage area? For example, there are two settling ponds designed to contain a 10-year flood rainfall event, which at first glance seems insufficient in the event of heavy rainfall, since the retention period is a minimum of four hours (perhaps a bit short to ensure proper settling?). According to the Genivar document Agrandissement du terminal de vrac de Pointe-Noire, rapport d'examen préalable [Expansion of the Pointe-Noire bulk terminal, Screening Report], there was to be monthly water quality monitoring of effluents from the settling ponds for the first year of operation and subsequent monitoring adjusted based on the quality of the effluent. To our knowledge, this monthly monitoring has never been carried out by the Port of Sept-Îles. In Genivar's first follow-up report, it is noted:

> ***"[Translation] Based on observations, the settling pond is watertight, but its surface area is so large that it is highly likely that the small quantity of water that makes its way into this pond will have time not only to settle, but even to evaporate."***

We find this claimed high rate of water evaporation at this site a little odd. In addition, the analysis of one of the seepages on October 5, 2010 indicated a zinc level of 390 mg/L, or 5,820 times the applicable criterion for groundwater contamination (0.067 mg/L). To our knowledge, nothing has been done to obtain a more accurate description of the situation or to correct it. The document by Fournier (2009) on the environmental characterization of the port facilities (Cliffs-Wabush Mine) states on page 5:

> ***"[Translation] The lands formerly or currently occupied by commercial and/or industrial facilities, located along the Pointe-Noire road and within the project site boundaries, could also be or may have been potential sources of soil or groundwater contamination depending on the activities that are or were carried out there, the precautions taken on these properties to protect the environment and any environmental accidents that may have occurred there."***

There are many quotes like the following in environmental impact statements and it is unfortunate that this viewpoint is encouraged, since the soil influences other components of the environment such as the water table (during the operating phase, the residual impact on soil and its effects can extend beyond the industrial area):

> ***"[Translation] The soil quality value assigned to this industrial site is low. The degree of disturbance to soil quality is also considered low since only the surface layer of the fill material is likely to be contaminated. The magnitude of the disturbance is therefore low. The geographic extent of the anticipated impact is limited, but its duration is long since it is associated with the entire duration of the operation, and its probability of occurrence is high. Consequently, no significant impact is anticipated." Genivar, Agrandissement du terminal de vrac de Pointe-Noire, rapport d'examen préalable, p. 48***

> ***"[Translation] Since this site is subject to drainage, the effluent will be occasional and limited. In addition, it will be quickly diluted; therefore no loss of use for aquatic wildlife is anticipated." (p. 52)***

The RSGBSI is calling for an end to the practice whereby environments that have already been disturbed are deemed to be excluded from any effort to apply contamination thresholds, standards and criteria. Considering that there are no criteria for assessing iron and manganese levels in sediment, should losses of ore at the dock be considered to constitute sediment contamination?

Concerning the proposed mitigation measure of watering the bulk material piles, this is clearly a measure that the industry does not apply, since they do not want to load wet material onto ships or material that could freeze in the piles during the winter. In addition to consuming additional water, there would be a volume of effluent to manage. It serves no purpose to draw up a list of mitigation measures that have no likelihood of actually being applied.

In the document entitled Aménagement d'infrastructures portuaires au Port de Sept-Îles, construction d'un quai multi-usagers à Pointe-Noire [construction of the port infrastructure in the Port of Sept-Îles, construction of a multi-user dock in Pointe-Noire], for the operational phase, no mitigation measures were proposed to reduce the risk of contamination of water due to the dispersion of dust and particles from the materials transferred at the dock, and the only mitigation measure for sediments was:

> ***"[Translation] For the handling of iron ore and other bulk materials, the equipment located above the water, including the conveyors, will have to be covered (note that it does not say enclosed…) and the unloading points will have to be reduced in order to prevent the dispersion of these materials into the environment." (p. 79)***

This is quite minimal in the way of mitigation measure for such a large dock.

Alderon Response to PC 11-30

The EIS includes and described a number of environmental monitoring and follow-up programs that Alderon will develop and implement during the Project's construction and/or operations phases to monitoring compliance with relevant regulatory standards and guidelines, and/or to study the environmental effects of the Project and the effectiveness of mitigation. These will be integrated into Alderon's Sustainability Management Framework that will address preventative and risk-reduction measures, maintenance, and emergency response and spill response plans as further described in Appendix J. For example, during the construction phase, it is recommended to monitor the impact of blasting on air quality near the Kami Terminal's site, in relation to carbon monoxide (CO), by using portable monitors. Later on, during the operations phase, Alderon will participate in the air quality monitoring program initiated in Sept-Îles. Alderon will also monitor 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. Parameters that will be monitored include flow, pH, temperature, metals (aluminum, arsenic, copper, iron, lead, nickel and zinc), total suspended solids, alkalinity and petroleum hydrocarbons C_{10}-C_{50}.

4.12 Gulf North Shore ZIP Committee (PC 12)

INTRODUCTION

This brief concerns the Kami iron ore project of Alderon Iron Ore Corp., which plans to operate a mining site and ore concentration and shipping facilities in Labrador, northeast of the community of Fermont, and to ship iron concentrate to foreign markets via the Québec North Shore and Labrador Railway and the Port of Sept-Îles.

This type of project gives rise to a multitude of issues: environmental, social and economic. This brief is therefore being presented in the context of the environmental impact statement and outlines the concerns of the Gulf North Shore ZIP Committee (GNSZIP) about the portion of the project that affects the GNSZIP's territory, namely the iron ore storage site. Nonetheless, the fact remains that it is essential to take into consideration the issues related to the other components of the project and we therefore support the brief submitted by the Conseil Régional de l'Environnement du Côte-Nord (CRECN).

WHO WE ARE AND WHAT WE DO

The Gulf North Shore ZIP Committee is a non-profit organization that is part of a network comprising 13 ZIP committees across Québec. Its territory extends from the Calumet River west of Port-Cartier to Blanc-Sablon at the eastern end of the Lower North Shore, including Anticosti Island and the many islands along the shore. Like all the ZIP committees, it is an organization that brings together stakeholders from many backgrounds: businesses, members of the public, environmental groups, municipalities and social agencies. Its members share the common objectives of protecting and enhancing the St. Lawrence River, raising public awareness about environmental problems and promoting concrete actions for the ecological restoration of the river.

BACKGROUND

World demand for iron is the driving force behind the development of the natural resources of the North Shore region. While the existing mining companies are looking to increase their production, new players are planning to set up operations in the region in order to mine the ore. According to projections, annual production is expected to increase from 44 to 216 million tonnes per annum (mtpa).

GRAPHIC NOT INCLUDED

CONCERNS

Over the past year or more, a number of environmental assessments have been conducted for various projects around the bay on which construction is to begin by 2014. Hence, in addition to the multi-user dock at the Port of Sept-Îles which is already

under construction, five other projects that have been announced are expected to proceed around the bay (Map 1):

- ***Open-pit apatite mine (Arnaud Township)***
- ***CN rail line with ore storage site (Pointe-Noire)***
- ***Gaz Métro gas pipeline (Pointe-Noire)***
- ***Champion ore storage site (Pointe-Noire)***
- ***Alderon ore storage site (Pointe-Noire)***

Socio-economic impacts (source: CRECN)

There are several models that can be used to assess the quality of life in a community. Although these models sometimes differ considerably, they often rely on essentially the same determinants or factors of quality of life.[1] We shall consider four of these, which recur fairly often and are directly related to the projects currently under development, namely access to employment, access to services, a high-quality environment and access to housing.

1 See
- http://www.linternaute.com/actualite/monde/qualite-de-vie-les-meilleures-villes-du-monde/en-savoir-plus.shtml
- http://atlas.nrcan.gc.ca/site/english/maps/peopleandsociety/QOL
- http://fcm.ca/home/programs/quality-of-life-reporting-system/program-resources.htm

[2] It should be noted that the exact location of the CN storage site in Pointe-Noire is still not known and is therefore not shown on the map.

GRAPHIC NOT INCLUDED

Now, while it may be assumed that the current project (and other similar foreseeable projects) will facilitate access to employment (assuming that this was a problem), it is also likely to have a significant adverse effect on the other determinants identified. We will present here two cases, namely access to housing and access to services, in order to clearly describe the context in which the present project will be carried out. The issues related to the quality of the environment will be dealt with in the later sections of this brief.

4.12.1 PC 12-1

Access to housing

There is currently a serious problem of access to housing in the community of Sept-Îles.[3] In an article published in January 2012 in the newspaper Le Nord-Côtier, the advocacy group Occupation quadruple reiterated the urgency of addressing the housing shortage in Sept-Îles, where the overall housing vacancy rate at that time was 0.7% and the vacancy rate for three-bedroom apartments was 0.2%. Such low vacancy rates obviously tend to drive up rents.

[3] Lévesque, Fanny. "La crise du logement touche aussi la classe moyenne." Le Nord-Côtier. January 10, 2012.
Lévesque, Fanny. "Crise aigüe du logement à Sept-Îles." Le Soleil. January 16, 2012.
Jobboom. "Le boom minier entraîne une flambée immobilière." August 15, 2012.
Radio-Canada.ca. "Côte-Nord: le prix des maisons toujours à la hausse." July 12, 2012.

Although it is difficult to obtain validated data on average housing costs in the community, it is generally recognized that housing costs have risen dramatically over the past few years. Occupation quadruple stated in January 2012 that "[Trans.] It can easily cost $800 to rent a two-bedroom apartment." As far as new housing projects are concerned, they are aimed at a more affluent clientele and monthly rents often exceed $1,300 for a two-bedroom apartment. The situation in terms of access to home ownership is equally problematic. House prices have been rising for several years in Sept-Îles. While the price of an average house was $118,000 in 2006, it had risen to about $263,000 this summer.

All this obviously has the effect of severely limiting access to housing in the community.

Alderon Response to PC 12-1

Accommodations are addressed in Chapter 24, Volume 2 of the EIS. Section 24.5 notes the existing pressure on the Sept-Îles and Port-Cartier housing markets. The City of Sept-Îles has developed a strategy to encourage housing developers and contractors to build new accommodations for private ownership and rental properties in response to current pressures. Additionally, the City is considering ways to provide temporary housing for construction workers coming to the region for work.

As explained in Chapter 24, Volume 2 of the EIS, the expected effect of the Kami Terminal on local housing is considered to be not significant. As stated in Section 24.4, up to 300 workers will be required over the two-year Kami Terminal construction phase. An additional average of 50 workers per year will be required for the construction by CFA of rail infrastructure in association with the Kami Terminal. These jobs will be spread out over the construction phase according to the specific activities (e.g., site preparation, construction, equipment testing). These jobs will be temporary and short-term.

Many of the workers will be hired from within the region, though it is anticipated that it will also be necessary to hire workers from outside the region given the limited availability of qualified workers in the Sept-Îles area. It is expected that workers from within the region are already housed and will not contribute to increasing pressure on housing. However, the arrival of workers from outside the region will result in an increase in demand for housing. As explained in Section 24.6.1, Volume 2 of the EIS, workers are not very likely to relocate permanently when a contract is short-term and finite. As a result, these workers will seek temporary accommodations. In this way, the Kami Terminal will result in an increase in demand for short-term accommodations but will do so only temporarily.

During the operation and maintenance phase, the Kami Terminal will employ 17 workers. Those recruited from outside the region will likely be small in number and will not have a significant effect on housing supply.

As stated in Section 24.6.1, in order to minimize the effects of Kami Terminal 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. In addition, Alderon will monitor local housing indicators (vacancy rates, rental prices, sale prices, etc.).

4.12.2 PC 12-2

Access to services

The North Shore communities that are directly experiencing the effects of the current mining boom (particularly Sept-Îles, Port-Cartier, Fermont and Schefferville) are struggling with serious problems of access to services. The main factor that explains this situation is undoubtedly the labour shortage which, although it has existed for some time, is exacerbated by the overheated economy in the region.

This obviously results in the widespread problem of limited access to services. Basic services such as child care services and health care services are particularly affected. Indeed, it is difficult to obtain child care services on short notice in the communities affected, while the expansion of services is not able to keep up with demand. With respect to health care services, the situation is not unique to Québec , but once again is exacerbated by the economic situation.

The labour shortage is also affecting service businesses. The problem is particularly dramatic in the restaurant sector, where a number of restaurant owners have decided to get out of the business because of the increasing difficulty of recruiting labour and their inability to maintain competitive prices in a context of rising wages.

Alderon Response to PC 12-2

As explained in Section 24.6.1, Volume 2 of the EIS, the Kami Terminal is expected to have no significant adverse effects on municipal services and infrastructure during the operation and maintenance phase given the small workforce. The same can be said of effects on other services such as childcare and health services.

Despite the larger labour requirements for the construction phase, no significant effects on municipal services and infrastructure are anticipated for this phase of the Kami Terminal. As noted in Section 24.6.1, experience suggests that construction workers do not relocate where the potential employment period is finite and short-term. Any increase in demand for services, including health care services, that is associated with hiring workers from outside the region are likely to be short-term and will not exceed the employment period. As construction workers are

not likely to relocate their families for the purpose of temporary work, the demand of the Kami Terminal construction phase on childcare services is anticipated to be low or non-existent.

Construction associated with the Kami Terminal will have a short-term effect on the local labour supply. Employment associated with the Kami Terminal will offer competitive wages and is therefore likely to contribute to temporary labour shortages affecting local businesses. However, since many of the positions associated with the Kami Terminal will require skilled workers, the increase in competition for labour with the service sector, which includes restaurants, will likely be minimal.

4.12.3 PC 12-3

In an article dated May 12, 2012, Le Soleil wrote:

> ***"Almost none of the small and medium-sized businesses in the service sector, such as restaurants, are able to hire all the people they need. The local newspapers are full of job offers and these businesses obviously cannot compete with the wages offered by the big companies. The McDonald' s restaurant in Sept-Îles has even had to bring in Philippinos, who have poor French-language skills, to meet its staffing requirements."***[4]

In certain cases, these factors inevitably lead to the closure or sale of the business. This was the experience of a young entrepreneur from Sept-Îles, as reported by Radio-Canada.ca:

> ***"This labour shortage literally suffocated Glen Méthot, a native of Sept-Îles. "I hate being in business in Sept-Îles," he snapped. In two years, he has not managed to find a cook to work in his restaurant and bar.***
>
> ***"I contacted all the cooking schools to find out if there was anyone interested in coming to Sept-Îles. I called everyone I knew; I offered to provide housing; I offered a wage bonus; I offered profit-sharing. And we were making profits. The bonus could be as much as $25,000," he explained. After suffering from burnout, Glen Méthot decided to sell his business.***
>
> ***"The president of Développement Économique Sept-Îles, Luc Dion, is very familiar with the problem: "We're experiencing a real labour shortage. Some of our entrepreneurs work 60 to 70 hours a week at their businesses. This can only lead to burnout or to the closure of the business."***

In the SMBs that provide various services to the big corporations, the labour shortage is being keenly felt and is likely to have serious consequences for the community. Some, such as Christian Michaud from the firm Métal 7, are even talking about outsourcing work to other countries:

> ***"The labour shortage is hurting us" […] "We're really having great difficulty recruiting. We're going to try and grab our share of the new graduates, but we still need engineers and technicians. We're starting to look seriously at India to develop our engineering, and this may be our next stage of development – having facilities abroad."***
> **[4] Paradis, Steeve. "Main d'œuvre recherchée à Sept-Îles." Le Soleil. May 12, 2012.**

The construction/renovation sector is another area where the demand for labour currently far exceeds supply. The situation is not expected to improve significantly with the number of projects currently at the planning stage. However, Alderon does not hesitate to describe the project's social and economic impacts as positive.

Several service sectors are partially or totally absent. For example, there is no longer a single shoe repair shop or a record store. Business owners also report that they have great difficulty selling their businesses or even passing them on to their heirs when they decide to retire or get out of the business. Furthermore, there is a net loss of access to the services that are generally available in a regional centre the size of Sept-Îles.

Alderon Response to PC 12-3

As explained in Section 24.6.1, Volume 2 of the EIS, the Kami Terminal is not expected to have significant effects on municipal services and infrastructure during the operation and maintenance phase given the small workforce. The same can be said of effects on other services such as childcare and health services.

Despite the larger labour requirements for the construction phase, no significant effects on municipal services and infrastructure are anticipated for this phase of the Kami Terminal. As noted in Volume 2, Section 24.6.1, experience suggests that construction workers do not relocate where the potential employment period is finite and short-term. Any increase in demand for services, including health care services, that is associated with hiring workers from outside the region are likely to be short-term and will not exceed the employment period. As construction workers are not likely to relocate their families for the purpose of temporary work, the demand of the Kami Terminal construction phase on childcare services is anticipated to be low or non-existent.

Construction associated with the Kami Terminal will have a short-term effect on the local labour supply. Employment associated with the Kami Terminal will offer competitive wages and is therefore likely to contribute to temporary labour shortages affecting local businesses. However, since many of the positions associated with the Kami Terminal will require skilled workers, the increase in competition for labour with the service sector, which includes restaurants, will likely be minimal.

4.12.4 PC 12-4

In addition, this shortage is creating strong pressure to rely on ever younger workers, as the big corporations are creating a strong drain on the labour pool available to small and

medium-sized businesses. As a result, there has been a substantial increase in both labour force participation and hours worked by young people.

Alderon Response to PC 12-4

It is anticipated that the long-term effect of the Kami Terminal on local labour supply will be minimal given the small workforce of 17 people required to operate and maintain the terminal. The staff positions and NOC codes are listed in Table 2.4 in Chapter 2, Volume 2 of the EIS. Among the positions, ten or eleven require specific skills and training, for instance, one railway and yard locomotive engineer, five heavy equipment operators, one or two heavy-duty equipment mechanics, a general manager and two railway carmen. The remaining six or seven positions are made up of a receptionist, janitor and labourers. By extension, the Kami Terminal will not contribute significantly to the reliance on young or unskilled staff by small and medium scale businesses.

During the two-year construction phase the Kami Terminal will employ 300 workers, plus an average of 50 workers per year who will be required by CFA to construct rail infrastructure associated with the Kami Terminal. Once again, many of these positions will require specialized skills, training and certification. It is expected that many workers for this phase will be hired locally, however, given the labour shortages and the number of large construction projects expected to occur around the same time as the Kami Terminal that will compete for workers with similar skills, other workers will need to be hired from outside the region. The nature of the jobs during the construction phase is both short-term and finite. As such, the pressure on local labour supply will be short-term.

4.12.5 PC 12-5

In a report aired on February 20, 2012, Radio-Canada presented the stories of two SMBs that confirmed this trend:

> ***"For small businesses like ours, there is no doubt that the high-school dropouts are our future. The kids who went to community college or university are not interested in coming to work in a restaurant as a dishwasher […]. We need a young person who dropped out of school, because if he or she stays in school, they're going to be hired by the mining companies." (Line Lejeune, Restaurant chez Omer)*** [5]

and

> ***"We're looking for young men and women who did not finish high school. They see that they have the opportunity to learn a trade. We hire them and we train them. After two or three years, they have truly learned the trade. That's useful for them later." (Yves-Marie Côté, Fabnor)*** [4]

Concerns about the potential effects on the high-school dropout rate have been expressed on many occasions by various stakeholders in the education sector and community organizations.

Finally, this situation is also contributing to a significant increase in the cost of living in the community. In addition to the dramatic rise in housing costs mentioned earlier, the combined effect of the housing and labour shortages also results in higher consumer prices.

On the Web site of the blog Fièrement Sept-Îles (www.fierementseptiles.com), the section entitled Le développement commercial à Sept-Îles contains some 30 stories contributed by local residents who report problems of access to services and the very real hardships they sometimes cause.

Alderon Response to PC 12-5

Accommodations are addressed in Chapter 24, Volume 2 of the EIS. Section 24.5 notes the existing pressure on the Sept-Îles and Port-Cartier housing markets. The City of Sept-Îles has developed a strategy to encourage housing developers and contractors to build new accommodations for private ownership and rental properties in response to current pressures. Additionally, the City is considering ways to provide temporary housing for construction workers coming to the region for work.

As explained in Chapter 24, Volume 2 of the EIS, the expected effect of the Kami Terminal on local housing is considered to be not significant. As stated in Section 24.4, up to 300 workers will be required over the two-year Kami Terminal construction phase. An additional average of 50 workers per year will be required for the construction by CFA of rail infrastructure in association with the Kami Terminal. These jobs will be spread out over the construction phase according to the specific activities (e.g., site preparation, construction, equipment testing). These jobs will be temporary and short-term. Many of the workers will be hired from within the region, though it is anticipated that it will also be necessary to hire workers from outside the region given the limited availability of qualified workers in the Sept-Îles area. It is expected that workers from within the region are already housed and will not contribute to increasing pressure on housing. However, the arrival of workers from outside the region will result in an increase in demand for housing. As explained in Section 24.6.1, Volume 2 of the EIS, workers are not likely to relocate permanently when a contract is short-term and finite. As a result, these workers will seek temporary accommodations. In this way, the Kami Terminal will result in an increase in demand for short-term accommodations but will do so only temporarily. Alderon will engage with local authorities and other stakeholders to address issues related to community services and infrastructure as needed. In addition, Alderon will monitor local housing indicators (vacancy rates, rental prices, sale prices, etc.).

Given the short-term nature of the labour demands during the construction phase, the low labour requirements during the operation and maintenance phase, effects of the Kami Terminal on local labour availability and housing supply will be temporary, contributing little to sustained increases in the cost of living in the Sept-Îles region.

During the operation and maintenance phase, the Kami Terminal will employ 17 workers. Those recruited from outside the region will likely be small in number and will not have a significant effect on housing supply.

Alderon's commitment to engage with local authorities and other stakeholders to address issues related to community services and infrastructure as needed and monitor local housing indicators (vacancy rates, rental prices, sale prices, etc.) will mitigate against the Kami Terminal's impact on housing supply and therefore cost of living increases.

4.12.6 PC 12-6

Environmental impacts

There are also many environmental concerns. The Baie de Sept-Îles is an ecologically rich environment where the salt marshes, eelgrass beds and numerous smelt and capelin spawning grounds contribute to a rich and varied wildlife. In addition, several wildlife habitats and protected areas recognized by both the provincial and federal governments are present in the bay (Map 2):

- ***Waterfowl gathering area***
- ***Heronries***
- ***Bird colonies***
- ***Migratory bird sanctuary***

The Checkley Plain and the bay and archipelago of Sept-Îles are part of the Sept-Îles IBA (Important Bird Area) (Nature-Québec 2007). Although IBAs do not have the official status of protected areas, they are part of an international program that recognizes habitats essential for bird fauna and works to promote their conservation. There are nearly 10,000 IBAs in the world, which are recognized by BirdLife International. The Sept-Îles IBA is home to:

- ***More than 1% of the world population of razorbills, herring gulls and great black-backed gulls;***
- ***More than 1% of the continental population of double-crested cormorants and black-legged kittiwakes; and***
- ***14 species of birds with conservation status.***

[5] http://www.radio-canada.ca/regions/est-Québec /2012/02/20/003-emplois-sept-iles-decrocheurs.shtml "Côte-Nord: Les PME courtisent les décrocheurs." Radio-Canada.ca. February 20, 2012.]

Alderon Response to PC 12-6

The environmental components of the Sept-Îles IBA are considered in the EIS, as warranted, including the portion of the baie des Sept-Îles within the LSA. The entire IBA, including Plaine

Checkley is included in the RSA. Given the identified boundaries of the IBA, the Project PDA is not within the IBA.

The relevant aspects of the Sept-Îles IBA that overlap the Project and have potential to be affected by the Project, with potential resultant cumulative effects, are addressed in the cumulative environmental effects assessment. The IBA itself, however, was not specifically named and included in its entirety. Paragraph 4 of sub-section 19.7 (Assessment of Cumulative Effects), Volume 2 of the EIS should include discussion of the Sept-Îles IBA, as follows:

> *"The only protected area identified within the LSA is a waterfowl gathering area located in baie des Sept-Îles, northeast of the PDA, also considered part of the Sept-Îles IBA. Other nearby protected areas in the RSA include additional waterfowl gathering areas around the coast of Marconi Peninsula, and the Sept-Îles IBA in its entirety, including islands in baie des Sept-Îles. With the exception of the nearby waterfowl gathering areas and portion of the Sept-Îles IBA near Pointe-Noire, other protected areas are unlikely to be directly affected by industrial activity at Point Noire. The remaining portions of the Sept-Îles IBA however, are likely affected by other industrial and commercial activities in the RSA.*

The second paragraph on page 19-43 of the EIS should read:

> *"There is no spatial or temporal overlap between the Kami Terminal and the Second Port-Cartier pellet plant (ArcelorMittal Mines Canada), as the pellet plant project is located approximately 30 km southeast of the Kami Terminal, and therefore does not overlap the RSA. The remaining projects will all affect land (directly) and protected areas (indirectly) within the RSA, however they are expected to be constructed primarily on developed land or other disturbed or edge habitats. Cumulative losses of natural terrestrial habitat, either small or substantive, are not likely and direct effects on wildlife will be limited. One possible exception is the future expansion of the Aluminerie Alouette aluminum smelter. No information is currently available to determine what, if any, terrestrial habitat would be lost. However based on habitat maps adjacent the smelter, no interior forest is likely to be affected, and limited forest habitat may be lost. The remaining projects principally involve the erection of additional infrastructure within developed areas for additional rail traffic and ship loading. All development is expected to keep close to existing development, similar to the Kami Terminal, with no encroachment on interior forest habitat. There is also no or limited overlap with protected areas, with only waterfowl gathering areas and the Sept-Îles IBA holding any potential to be affected indirectly by sensory disturbance from other projects located near the coast which may overlap temporally with construction activities for the Kami Terminal (e.g. the Mine Arnaud dock and ship loader)."*

Table 19.12 in Volume 2 of the EIS is updated below to address the changes made to related text above, as presented in Table 4.12.1.

Table 4.12.1 Summary of Potential Cumulative Effects to Birds, Other Wildlife and their Habitats, and Protected Areas (Updated EIS Table 19.12, Volume 2)

Valued Ecosystem Component Existing Condition (Past and Ongoing Activities)	• Most of the northern part of the Marconi Peninsula has been cleared of vegetation owing to industrial activity. Existing vegetation on the peninsula as a whole is boreal coniferous and boreal mixed forest. Habitats available within the bird survey study area consist of patches of young mixed forest stands, which have resulted from either forest harvesting or excavation for roads, and mature coniferous stands. These habitats are interspersed, as they are small and present in patches, and are found both within and south of the proposed concentrate unloading, stacking, storage and reclaiming facilities. Developed areas make up 24 percent of the Marconi Peninsula, while the dominate habitat is mature coniferous forest at 39 percent. • Common bird and other wildlife species were recorded in the study area; 29 birds at least possibly breeding and 4 of the 10 herpetofauna species known from the region were recorded, all outside the PDA. Common small mammals are likely to inhabit the peninsula, which is not favourable for large mammals. • Protected areas identified within the LSA include a waterfowl gathering area located in baie des Sept-îles, northeast of the PDA, and the overlapping marine portion of the Sept-Îles IBA.
Kami Terminal Residual Environmental Effects	• Of the total estimated area of the PDA (25.7 ha), over 43 percent is on developed or otherwise disturbed land. The majority of affected forest habitat is from the concentrate unloading, stacking, storage and reclaiming facilities, where 7.6 ha of forest will be removed. Interior forest (defined as mature forest habitat more than 100 m from an edge and that is a minimum of 10 ha in size) is not located within 100 m of the PDA, and will therefore not be affected. The terrestrial habitat loss will be permanent; however, the loss represents less than 1 percent of the Marconi Peninsula, part of the RSA, or approximately 1 percent of the terrestrial habitat excluding the developed or cleared lands. • Residual environmental effects on bird mortality should be low with the application of mitigation, including avoidance of clearing activities during the breeding season of most birds. • Given the common species recorded and the common, fragmented habitats within the PDA, and the relatively small amount of undisturbed habitats that will be directly and indirectly affected by site preparation activities, the proportion of birds and other common wildlife that would be displaced by the Kami Terminal would be low, well below 5 percent of the populations in the greater landscape (i.e., the RSA). Given the limited extent of expected dust deposition or other airborne contaminates as a result of construction activities, the potential and extent of health effects such as reproductive output and success, and environmental effects on the protected areas, is expected to be low, in particular due to the short duration, and expected limited extent of effects.

Other Projects / Activities	Likely Effect Interaction (Y/N)	Rationale	Cumulative Effects
Pointe-Noire Port Expansion (Port of Sept-Îles)	Y	Will affect land (directly) and protected areas (indirectly) within the RSA	• Limited cumulative effect on habitat, as expected to largely be constructed on developed land or other disturbed or edge habitats. • Indirect effects from noise and dust on adjacent protected area (Sept-Îles IBA) likely.
CFA and QNS&L	Y	Will affect land (directly) and protected areas (indirectly) within the RSA	• Limited cumulative effect on habitat, as expected to largely be constructed on developed land or other disturbed or edge habitats. • Indirect effects from noise and dust on adjacent protected area (Sept-Îles IBA) likely.
Alouette Aluminum Smelter (Aluminerie Alouette)	Y	Will affect land (directly) and protected areas (indirectly) within the RSA (Marconi Peninsula)	• Limited cumulative effect on habitat, as expected to largely be constructed on developed land or other disturbed or edge habitats. Some fragmented forest habitat may be affected. • Indirect effects from noise and dust on adjacent protected area (Sept-Îles IBA) likely.
Second Port-Cartier Pellet Plant (ArcelorMittal)	N	The Mount Wright Mine project is not located within the RSA.	• N/A
Bloom Pointe-Noire Terminal (Cliffs Resources)	Y	Will affect land (directly) and protected areas (indirectly) within the RSA	• Limited cumulative effect on habitat, as expected to largely be constructed on developed land or other disturbed or edge habitats. • Indirect effects from noise and dust on adjacent protected area (Sept-Îles IBA) possible.
Arnaud Apatite-Magnetite mine (Mine Arnaud)	Y	Will affect land (directly) and protected areas (indirectly) within the RSA	• Limited cumulative effect on terrestrial habitat, as expected to largely be constructed on developed land or other disturbed or edge habitats. • New port facilities to include a new dock and shiploader, constructed in the waterfowl gathering area (in part of Sept-Îles IBA), potentially resulting in cumulative effects if temporal overlap during construction.

Cumulative Effects Summary (Kami Terminal + All Relevant Projects / Effects)	Direction	Magnitude	Geographic Extent	Duration	Frequency	Reversibility	Significance	Confidence
	A	L	R	P	C	I	N	M

The overlapping projects will all affect land within the RSA however are expected to largely be constructed on developed land or other disturbed or edge habitats. There would therefore not likely be any or substantive cumulative losses of natural terrestrial habitat. One possible exception is the future expansion of Aluminerie Alouette Aluminum Smelter. No information is currently available to determine what, if any, terrestrial habitat would be lost, however based on habitat maps adjacent the smelter, no interior forest would likely be affected, and limited forest habitat may be lost. The remaining projects are largely the placement of additional infrastructure within developed areas for additional rail traffic and ship loading. All development is expected to keep close to existing development, similar to the Kami Terminal, with no encroachment on interior forest habitat. The Kami Terminal effects are unlikely to overlap with effects of construction of the planned Mine Arnaud dock and shiploader, located in a waterfowl gathering area in baie des Sept-Îles. It is not known if there will be temporal overlap of construction of the new dock and construction of the nearby rail loop of the Kami Terminal.

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. The Kami Terminal will not contribute substantively to cumulative effects, because of the planned mitigation measures such as applying standard and best management practices and general environmental protection measures; implementing measures detailed in the EPP; and employee training.

The characterization of the potential cumulative effects and associated mechanisms, combined with the proposed mitigation / effects management measures demonstrate that the residual cumulative effect of change in population on Birds, Other Wildlife and their Habitats, and Protected Areas during all phases, is rated not significant. This determination has been made with a moderate level of confidence. Alderon will participate in the baie des Sept-Îles monitoring project in order to monitor the cumulative environmental effects of industrial development on the biological environment.

Note: Environmental effects descriptors and their definitions are as used in the assessment of environmental effects (Table 19.11).

4.12.7 PC 12-7

GRAPHIC NOT INCLUDED

Deficiencies observed in the impact study

At no point in the environmental impact statement does the proponent mention the presence of the Sept-Îles IBA. Worse yet, the proponent states on p. 35 of the EIS Plain Language Summary that no species at risk were found in the study area. However, we must criticize the woefully inadequate character of the field studies of bird life, which were carried out over a two-day period in June, which was not sufficient either to demonstrate beyond any doubt that no special-status species are present or to make allowance for late- or early-breeding species or migratory species. While this study inventoried 30 species in the study area, Génivar inventoried 99 species on the same site in 2009 for an impact study for the Port of Sept-Îles. Moreover, Alderon's nocturnal field studies targeted only the common nighthawk and owls (what species?), while specific inventories would also be required for the yellow rail and the short-eared owl. The above-mentioned Génivar study also reported two short-eared owls observed less than 5 km from the site.

RECOMMENDATIONS

In light of the deficiencies noted in the environmental impact statement, we are making a series of recommendations in order to improve the quality of the EIS and minimize the project's environmental impacts:

- **More detailed inventories of the bird fauna should be carried out in order to ensure coverage of the entire breeding season and to optimize the detection of special-status species such as the yellow rail and the short-eared owl.**
- **The proponent should undertake to join the Baie de Sept-Îles monitoring project in order to assess the cumulative impacts of industrial development on the biological components.**
- **The proponent should undertake to participate in the consultative committee on air quality and carry out air quality monitoring.**
- **An integrated management committee for the bay should be established in order to ensure sustainable development of the bay.**

REFERENCES

Champions Iron Mines Limited. 2012. Projet de mine de fer Fire Lake North.

Genivar. 2012. Aménagement d'infrastructures portuaires au Port de Sept-Îles, Construction d'un quai multi-usagers à Pointe-Noire – Examen environnemental préalable. Report submitted by the Port of Sept-Îles and GENIVAR Inc. 115 p. + appendices

MDDEP. 2012. http://www.mddep.gouv.qc.ca/eau/criteres_eau/fondements.htm

Table d'environnement de Sept-Îles. 2012. Recommandations des organismes-conseils et de concertation en environnement concernant l'élaboration du plan directeur d'aménagement industriel de la ville de Sept-Îles.]

Alderon Response to PC 12-7

Information on IBAs was obtained from the official IBA Canada website (www.ibacanada.ca), which identified two IBAs in the Sept-Îles area. The IBA identified as QC081 was illustrated as being Corossol Island. Another IBA (QC080), encompassing the other migratory bird sanctuary (Ile de la Grosse Boule), is located within the Sept-Îles IBA boundaries as identified in "ZICO de Sept-Îles: Plan de Conservation (Nature Québec / UQCN 2007). Nonetheless, the environmental components of the Sept-Îles IBA are considered in the EIS, as warranted, including the portion of the baie des Sept-Îles within the LSA. The entire IBA, including Plaine Checkley, is included in the RSA. As noted above, in consideration of the identified boundaries of the IBA, the PDA is not within the IBA.

Given the nature of the Kami Terminal and the fact that the site can be classified mostly as a brownfield site, the field effort is considered adequate to characterize bird species' use of the habitats that may interact with the Project. The key interaction is that of habitat loss and interactions during construction, and breeding habitat adjacent to the PDA. Considering the potentially affected habitats, the timing of the survey in June was considered sufficient to record the majority of breeding bird species that would be expected in these habitats. Existing data sources (including GENIVAR 2008) are considered adequate to characterize species use in the RSA.

The environmental assessments in which the GENIVAR (2008a) field work was used have been reviewed (GENIVAR 2008b, 2010). The Kami Terminal overlaps the footprint of the Lac Bloom Mine infrastructure at the Port. GENIVAR collected data from as far away as the Plaine Checkley which is located approximately 5 km from the Kami Terminal. Yellow Rail and Short-eared Owl surveys were included in Genivar' study. Of the 99 species identified, species of conservation concern include Short-eared Owl and Common Nighthawk. The Short-eared Owl observations were identified at least 5 km from the Kami Terminal. The location of the Common Nighthawk is unknown. However, as noted in Section 20.4, Volume 2 of the EIS (page 20-17, last paragraph), Common Nighthawk was not detected during nocturnal surveys in June 2012, and are not likely present near the site due to existing disturbances. The nocturnal survey in June was designed to target Common Nighthawk and nocturnal owls (Volume 2, Page 19-2), and included playbacks of Common Nighthawk and Northern Saw-whet Owl, as these were the expected nocturnal species considering the regional checklists and available habitat.

PC 12 References

GENIVAR 2008a. Construction d'une aciérie à Sept-Îles – Inventaire des espèces d'oiseaux et des plantes menacées et vulnérables – rapport descriptif. 16 p.+ annexes.

GENIVAR 2008b. Projet Minier Du Lac Bloom, Aménagement D'infrastructures De Manutention Du Concentré De Fer, Port De Sept-Îles -Examen environnemental préalable. Projet B111563, Novembre, 2008.

GENIVAR 2010. Agrandissement du terminal de vrac de Pointe-Noire Rapport d'examen préalable réalisé dans le cadre de la Loi canadienne sur les evaluations environnementales (LCÉE). Nº du RCEE 10-01-55490. Version finale, 1er septembre 2010.

Nature Québec / UQCN, 2007. ZICO de Sept-îles : Plan de conservation. 57 p. http://www.natureQuébec .org/uploads/tx_qmiba/planQC081_01.pdf.

4.13 Information Conseil régional de l'environnement de la Côte-Nord (PC 13)

1. Introduction

This brief concerns the Kami iron mine project of Alderon Iron Ore Corp., which plans to operate a mining site and ore concentration and shipping facilities in Labrador, northeast of the community of Fermont, Québec, and to ship iron ore concentrate to foreign markets via the Québec North Shore and Labrador Railway and the Port of Sept-Îles. The proponent estimates the measured and indicated resources at 1.1 billion tonnes and presumed additional resources of approximately 300 million tonnes. It plans to mine part of these resources at a projected average rate of 16 million tonnes a year over a 20-year period. The average estimated iron content of the sites is 29% to 30%.

This type of project gives rise to a multitude of issues: environmental, social and economic. After a short description of the Conseil régional de l'environnement de la Côte-Nord (CRECN) and its interest in this project, this brief will deal with these issues from three different vantage points. Given the fact that a large part of the project will be carried out in Labrador, and therefore outside the territory served by the CRECN, we will begin by examining the potential cross-border impacts, particularly those related to the health and quality of life of the residents of the community of Fermont, which is located near several of the project's components. The second part of the brief will deal with the impacts related to the rail transport of ore to the port of Sept-Îles. Finally, the third will examine the anticipated impacts on the community of Sept-Îles and the ecosystems, more particularly those of the Baie de Sept-Îles.

2. The CRECN and its mandate

The CRECN is a non-profit organization that has been active in the region for some 20 years. An independent, community-based organization, its mandate is to promote the protection of the environment and sustainable development. Through its work, it endeavours to ensure that environmental concerns are taken into account in the regional development process.

Over the years, the CRECN has developed solid expertise in the environmental field, particularly in the areas of information and awareness-raising aimed at the public and regional stakeholders. The CRECN has been involved in numerous projects related to climate change, energy, waste management, conservation of natural environments and sustainable management of natural resources. The CRECN also sits on boards of directors, consultative committees, round tables and regional committees. For example, it is represented on the Comité régional concernant l'exploration et l'exploitation de l'uranium [regional committee on uranium exploration and mining] established by the Public Health Department and is also represented on the Commission régionale des ressources naturelles et du territoire [regional land and natural resources commission]. Our organization is a member of the Regroupement des conseils régionaux de l'environnement du Québec (RNCREQ) [association of regional environmental councils

of Québec], which enables us to have an overview of the issues at the provincial level and to see how our actions at the regional level fit into this context. The RNCREQ's 16 member regional environmental councils are recognized by and receive funding from the Québec Department of Sustainable Development, Environment and Parks.

The CRECN's objectives also include uniting, consulting, representing and providing leadership to various decision-making bodies, corporations, environmental organizations and individuals who are committed to protecting the environment and promoting sustainable development on the North Shore. The CRECN is also active in the field of environmental health through a strong partnership with the Agence de la santé et des services sociaux de la Côte-Nord [North Shore health and social services agency]. Our organization's priorities are to ensure that regional development takes place in accordance with the principles of sustainable development and to meet the needs of individuals and communities while ensuring that the carrying capacity of the ecosystems is not exceeded.

As a regional organization dedicated to protecting the environment and promoting sustainable development, the CRECN is actively involved in mining issues at both the regional and national levels, having contributed for instance to the briefs and submissions of the RNCREQ on the reform of mining regulations. It is therefore with great interest that the CRECN is participating in the process of environmental assessment of mining projects on the North Shore and in Québec. The Kami project will have economic, social and environmental impacts, particularly in the communities of Fermont and Sept-Îles (and the nearby Aboriginal community of Uashat mak Mani Utenam), which are the sixth- and first-largest communities by population in the region, with 2,881 and 26,549 inhabitants, respectively. The CRECN is particularly interested in the Kami project in light of the current economic boom which is being driven both by the current strength of the volatile natural resources market and the stated objective of the Government of Québec to make the development of Northern Québec the next major driver of economic growth in the province. In order to provide input on these policies, the CRECN is a member of the Coalition Vigilance Plan Nord, a coalition of labour organizations, community groups and environmental groups that is keenly interested in the development of Northern Québec and its social, environmental and economic impacts, with the goal of ensuring that the development of Northern Québec truly takes place in a sustainable manner.

4.13.1 PC 13-1

3. Anticipated cross-border impacts

The Alderon Iron Ore Corp. project involves the planned development and operation of an open-pit iron mine in Labrador, on the eastern side of the watershed divide which defines the border with Québec . First of all, the CRECN would like to reiterate its disappointment at the way both the proponent and the Government of Québec have considered the project's impacts on the community and population of Fermont. Despite

repeated appeals from several stakeholders, including the CRECN, for the Department of Sustainable Development, Environment and Parks to play an active role in the process concerning this project, the Government of Québec has decided to stand aside and let the federal process follow its course. We believe that it would have been in the interest of the population of Fermont in particular and of Québec in general for the Québec government to take on the task of advocating for the legitimate concerns of Québec ers about the potential cross-border impacts of the Kami project.

As far as the proponent is concerned, one has the impression, on reading the documentation pertaining to the environmental impact statement (EIS) (plain language summaries, for example), that the anticipated impacts on the Québec side of the border may not have been accorded the importance that they should have, probably owing to the absence of a Québec assessment process. For example, the fact that the EIS was divided into two volumes and that the volume entitled Kami Iron Ore Mine and Rail Infrastructure was identified with Labrador, while the volume entitled Concentrate Storage and Load-Out Facility was identified with Québec , may lead some to believe that the only presumed impacts of the project in Québec would be those resulting from the activities in Sept Îles. In addition, although the introduction to the two plain language summaries states that "the mine property is located south of the towns of Wabush and Labrador City in Newfoundland and Labrador and east of Fermont, Québec " (p. 1 of both documents), the presence of this community is not mentioned on p. 6 of the summary – Labrador, even though Fermont is considerably closer than the communities in Labrador.

These issues aside, the CRECN has a number of concerns about the potential cross-border impacts of the project. These concerns will therefore be presented in this first part of our brief. Since the CRECN's mandate is limited to the administrative region of the North Shore, we will focus our attention on the anticipated impacts on this region, mainly on the community of Fermont.

Alderon Response to PC 13-1

As is indicated by the commenter, it is acknowledged on page 1 of the PLS, for Volume 1 of the EIS, that the Project is in proximity to Fermont. Consideration of Fermont during the environmental assessment process is reflected by numerous references to the town throughout the Volume 1 PLS (e.g., pages 1, 5, 18, 25, 31, 32, 33). The reference to Labrador City and Wabush in the description of the open pit mine on page 6 of the PLS is intended to provide geographic reference. The location of Fermont is indicated in the Project Components figure on the same page (page 6) of the Volume 1 PLS.

Issues related to the Town of Fermont and the surrounding area have been given careful consideration throughout Volume 1 of the EIS. While the community is addressed within Volume 1 of the EIS too frequently to provide an exhaustive list, the importance of Fermont with respect to the environmental effects analyses is evidenced by the following:

- Volume 1, Section 6.3 of the EIS discusses residential, commercial and industrial land use in Fermont as activities to be considered in cumulative effects assessment throughout all VEC chapters;
- Fermont has been considered in the Study Area design for all VECs, detailed in Chapters 14.0-26.0 in Volume 1;
- The Fermont area has been addressed by comprehensive environmental surveys and modeling (e.g., Sections 14.6.1, 14.6.2, 15.6.3, 16.6.2, 18.5, 18.7, 19.6, 20.6.1, 21.7, 22.7.1, 22.7.2, 22.7.3. 23.6, 24.6, 25.6, and 26.4 of Volume 1);
- The location of Fermont is indicated on all reference maps throughout Volume 1 the EIS; and,
- Issues raised by residents of Fermont are included with those of other public stakeholders in the "Issues" sub-section of each VEC chapter. Also provided is a summary response to each issue raised and the location in the EIS for more detailed information.

Alderon's Communities Relations Policy, provided in Section 1.1.1 of Volume 1, states:

> *"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."*

Recognizing the Town of Fermont and its residents as key stakeholders, Alderon has engaged with the community through a range of consultation activities. Volume 1, Chapter 10 of the EIS provides a description of all consultation and engagement activities undertaken by Alderon as a part of the development of the EIS for the Project. A detailed description of Alderon's consultation activities with the Town of Fermont and its residents is provided in Chapter 10 of Volume 1 of the EIS and in Chapter 10 of this Amendment.

Alderon acknowledges the concerns of the residents of Fermont and is committed to developing and maintaining a positive relationship with all public stakeholders. For example, in response to concerns raised by Fermont residents, Alderon has also moved the Rose South Waste Rock Disposal Area approximately 5 km east, to minimize potential effects on the Town of Fermont. Alderon will continue to engage with the Town of Fermont and respond to the concerns of its residents as the environmental assessment process continues.

4.13.2 PC 13-2

3.1. Atmospheric dispersion and air quality

The aspect of greatest concern to residents living near open-pit mine projects is undoubtedly the atmospheric dispersion of particulates and pollutants and their impact on health and quality of life. According to the proponent, these components give rise to

only 77 concerns that were mentioned during the consultation activities. The sources of concern identified at that time were mainly associated with two aspects of the project, namely blasting activities and the presence of a waste rock disposal area approximately 1 km to the east of the community of Fermont. The CRECN welcomes the proponent's decision to modify its project in order to move this waste rock disposal area approximately 5 km to the east. In our view, this is an essential condition for the social acceptability of the project and we strongly believe that no reversal of this decision should be permitted.

Alderon Response to PC 13-2

The South Waste Rock Disposal Area will be located as shown in the EIS (i.e., away from the Town of Fermont), as is the indicated preference of the commenter.

4.13.3 PC 13-3

With respect to blasting, as is also the case for other mining activities, we believe it is essential to ensure that these operations do not cause any deterioration of air quality in the neighbouring communities, particularly Fermont, which is the closest. Although the prevailing winds are from the northwest and southwest (EIS, Figure 3.2, p. 3-1), the wind sometimes blows from the northeast, which could transport pollutants and/or particulates to the community of Fermont.

In particular, specific steps should be taken to minimize the impacts during the infrequent periods when wind conditions promote the transport of particulates to the community.

Alderon Response to PC 13-3

Alderon's Blasting Plan will provide detailed information on the blasting techniques, procedures, and monitoring. The Plan will address technical aspects of mine blasting as well as address the environmental interactions including impacts on wildlife, fish, and fish and the impacts of weather on blasting operations (dust, run off, etc.). Municipal regulations and federal guidance documents and regulations limit the vibrations and airblast over-pressure levels to acceptable limits with respect to potential damage to infrastructure. If required, pre-blast surveys of buildings, towers, and other infrastructure in the area of the mine will be completed.

4.13.4 PC 13-4

3.2. Noise pollution and vibrations

Another aspect that concerns the CRECN is the issue of noise pollution and vibrations caused by mining operations. First of all, the CRECN questions the proponent's statement that the distance between the mine and the communities would almost entirely mitigate the effects of the blasting. To the contrary, the residents of Fermont reported on several occasions, during the proponent's consultations, that they can feel the effects of

blasting carried out by existing mines at considerably greater distances (by a factor of three to six times). In addition, we find it questionable that the proponent has not proposed a blasting plan. The recent history of mining in Québec makes it clear that this issue is a significant determinant of the acceptability of mining projects in the eyes of the local population.

We therefore believe that the proponent should quickly submit a blasting plan and consult the communities impacted in order to ensure that its project more effectively addresses public concerns.

Alderon Response to PC 13-4

Blasting noise limits are set by municipalities, and all blasts at mines in the area are routinely monitored for compliance. The blast plan that will be developed will be designed for compliance with the set limits. All blasts will occur in the daytime, and will be accompanied by public notification to help avoid startle effects. Blasting is routine in this region; although anecdotal information suggests that some rare blasts have exceeded sound limits, most routine blasts are similar to distant thunder rather than the explosive bang that persons unfamiliar with the situation might anticipate.

Alderon will complete a detailed blasting plan of the Kami mine once the design of the mine is finalized; it is not possible to complete a blasting plan without the design. The blasting plan will be developed to meet the local regulations with respect to noise and vibration. Typically these limits are enforced at the nearest residences to the blast; this will therefore be protective of residences and communities at greater distances. Alderon will have a plan, it will meet the limits, and it will be monitored to demonstrate compliance with the applicable limits.

Alderon understands the concerns regarding blasting. A professional blasting consultant has been engaged to assist in understanding what air blast and ground vibration levels could be expected at locations around the Rose Pit. The preliminary results of this review are provided below with further information regarding air quality presented below.

While it will be possible to feel and hear the blasting activity from the Rose Pit, the ground vibrations from the blasting will not be sufficient to impact foundations in Fermont. Vibration levels are highly dependent upon the amount of explosive that is instantaneously detonated and the distance away from the detonation location. It is Alderon's intention to sequence blast events with multiple holes by detonating one hole at a time. Each hole will contain approximately 1,000 kg of explosives. The blasting consultant has analyzed the magnitude of vibrations that would result from 2,000 kg of explosives being detonated instantaneously and has determined that structures within 600 m are not likely to suffer foundation and/or structural damage and predicted air blast levels would be between 120 and 123 dB. Fermont is approximately 3.5 km away from the southwest edge of the pit and at this distance, the ground and air vibration levels are well below those that would damage structures. Alderon is committed to blast design and monitoring the air blast and ground vibration levels from blasting activities at the mine and limiting the mass of explosives that are instantaneously initiated so that vibrations are minimized. This is critical not only for the protection of infrastructure in the

surrounding communities, but for protection of Alderon's on-site infrastructure and the adjacent environment.

Blast events will be taken during daylight hours and while the specific initiation time has not been determined it is expected that most of the blasts will occur between the hours of 3:00 to 5:00 in the afternoon. At its most active, blasting may occur on a daily basis, however this frequency will likely be reduced as the pit develops. Blasts will range in size from approximately 50,000 to 500,000 tonnes of rock blasted. In the context of mines around the world these are large blasts and this is consistent with practices at other mines in the western Labrador area. Current calculations from experience with this type of rock at other operations in the area suggest that the Project will need to use 0.35 to 0.40 kg of explosives per tonne of rock blasted. Consistent with Alderon's efforts to reduce the vibrations from blasting, individual blast holes will be sequenced so that the explosives do not all blast at the same time and any blast will take a few seconds to be completely detonated.

Alderon's Blasting Plan will provide detailed information on the blasting techniques, procedures, and monitoring. The Plan will address technical aspects of mine blasting as well as address the environmental interactions including impacts on wildlife, fish, and fish and the impacts of weather on blasting operations (dust, runoff, etc.). Blasting noise limits are set by municipalities, and all blasts at mines in the area are routinely monitored for compliance. Guidance and regulations limit the vibrations and airblast over-pressure levels to acceptable limits with respect to potential damage to infrastructure. If required, pre-blast surveys of buildings, towers, and other infrastructure in the area of the mine will be completed.

4.13.5 PC 13-5

3.3. The landscape

The third anticipated cross-border impact of the project on which we which we would like to comment briefly is the protection of the landscape. In our view, moving the Rose South waste rock disposal area is a positive development for the protection of the landscape visible from Fermont. We therefore reiterate our conviction that this component of the project must be maintained as is.

Alderon Response to PC 13-5

To minimize effects on the citizens of Fermont, the Rose South Waste Rock Disposal has been relocated approximately 5 km to the east. Due to the relocation of the Rose South Waste Rock Disposal Area, the Project will be minimally visible from Fermont. A before and after photo-simulation was completed for Fermont, from the western shore of Lac Daviault and from the peak of Mont Daviault. This simulation showed that the Project is minimally visible. Section 23.6.4 in Volume 1 of the EIS provides the viewshed analysis and photo-simulations completed for the Project.

4.13.6 PC 13-6

4. Anticipated impacts related to shipping and rail transport

Although the project proposes to use existing rail lines (QNS&L and Arnaud) to ship the ore to Sept-Îles, which will contribute to substantially reducing the environmental impacts of the project, there are still certain aspects that raise serious concerns in our view, such as the adaptation or improvement of the rail system to accommodate the increase in the daily volume of freight (for example, the addition or extension of side-tracks), which will result in a loss of productive territory for plants and wildlife. In addition, the increased volume of freight will necessarily result in an increase in environmental risks.

While we understand that it is not within the proponent's mandate to manage the issues related to the rail transport of its production, we nonetheless wish to briefly discuss a few anticipated environmental issues stemming directly or indirectly from the project.

Alderon Response to PC 13-6

The EIS Guidelines issued by the provincial and federal governments for the environmental assessment require an assessment of the potential environmental effects of the proposed mine and associated infrastructure in western Labrador and at the facilities in Port of Sept-Îles. The scope of the environmental assessment therefore focused on these proposed Project components and activities for which Alderon is the Proponent. The QNS&L railway extends for approximately 420 km from western Labrador to the Port of Sept-Îles, Québec. This federally regulated railway is owned and operated by the IOCC, and provides rail services for both IOCC operations as well as various third party clients (including other existing and future mining operations).The QNS&L Railway and associated activity on it was not directly considered in assessing potential Project-specific or cumulative environmental effects, as this is existing infrastructure that has been in operation for decades. The railway's current operations involves approximately 12 to 14 trains per day, and it is not anticipated that the Project will cause a substantial change to or increase in this, as the Project will contribute one to two additional trains per day as described in Volume 1, Chapter 2 (Project Description) of the EIS.

In consideration of past and existing operation levels and any overall future growth in the use of the QNS&L Railway (which are certainly not specific to Alderon's activities), the Project's incremental contribution to these activities are not anticipated to be material, or especially, to increase or change existing environmental disturbance levels. Should there be any required future upgrades or expansions to the QNS&L Railway infrastructure (e.g., additional siding or other equipment) to support any future growth in overall railway activities and capacity requirements, these would again not be driven solely (or even primarily) by Alderon's requirements. Indeed, Alderon currently has no information on any such planned or potential upgrades, which would be completed by the railway owner and operator and which would require compliance with applicable regulatory requirements.

4.13.7 PC 13-7

4.1. Impacts on aquatic habitats

The fact that the route of the QNS&L Railway follows, for a substantial part of its total length, the valley of the Moisie River and its tributaries has been a source of concern since the railway was first built in the 1950s. The Moisie River is one of the most important salmon rivers both internationally and for the local population, and outdoors enthusiasts and sport fishermen in particular have always been concerned about activities that threaten the river in any way. The mobilization in the early 1990s in opposition to the diversion of two major tributaries by Hydro-Québec (Carheil River and Rivière aux Pékans) as well as the almost unanimous support during the BAPE hearings in 2005 in favour of granting official protected status to the river are examples that clearly demonstrate the importance of the river for the population. The Moisie River currently has the status of proposed aquatic reserve.

While using the existing rail line does greatly reduce the impact compared to the construction of a new rail line, it nonetheless has environmental impacts, particularly on aquatic ecosystems. One of the significant effects associated with transport infrastructures in river watersheds is sediment input in the river and its streams. Indeed, the risk of silting of spawning grounds during erosion events of varying severity is an issue faced by all authorities that regulate the construction and management of transport infrastructures on public land. In Québec , the Department of Natural Resources and Wildlife (MRNF) has taken initiatives that include proposing an Objectif de protection et de mise en valeur (OPMV) [protection and development objective] entitled Protéger l'habitat aquatique en évitant l'apport des sédiments[2] [protecting aquatic habitat by preventing sediment deposition], with special emphasis on protecting salmon rivers. The MRNF has also produced two guides (L'aménagement des ponts et ponceaux dans le milieu forestier [construction of bridges and culverts in forest environments] and Saines pratiques -Voirie forestière et Installation de ponceaux [best practices – forest roads and culvert installation) the objective of which is also to minimize the impact of transport infrastructure work on the aquatic environment. All these initiatives demonstrate how serious this issue is.[3]

In addition, the repeated passage of ore trains (more than 20,000 tonnes per train) causes vibrations that can contribute to sediment deposition in rivers and streams. Adding trains only increases the risk associated with this phenomenon. Moreover, under certain specific climatic conditions, extreme erosion events are also likely to occur. The following pictures taken from a QNS&L Railway document graphically illustrate this.

GRAPHIC NOT INCLUDED

Although these spectacular events are infrequent and it is difficult to link then directly to anything other than adverse climatic conditions, they have significant impacts on the quality of ecosystems, and the presence of rail transport infrastructure is undoubtedly a factor in their amplitude and/or frequency.

Alderon Response to PC 13-7

The use of the existing railway is considered an important mitigation in terms of environmental and financial effects of this development. It is reasonable to expect that additional shipments will require additional maintenance and monitoring by its owner, the IOCC. The guideline documents referenced by CRECN are important in limiting the potential effects of any project, existing or proposed, on fish habitat particularly with respect to siltation and sediment deposition. The contracted use of the existing railway by Alderon to ship ore is not considered within the scope of the proposed Project; it is considered the use of existing infrastructure under existing regulatory permitting and operation and maintenance.

4.13.8 PC 13-8

4.2. Soil and water contamination

Another source of concern for the CRECN is potential soil and water contamination. The increase in the transport of hydrocarbons, for example, is a serious issue. Mining companies are major consumers of heavy petroleum products, which are transported to the plants and production facilities by ship to the port of Sept-Îles, and then by train further north. In addition to the risks inherent in the increased shipping which would be generated by the development projects currently under way, the increase in rail traffic poses an additional risk in terms of accidents. Although they are rare, accidents involving hydrocarbon spills generally cause serious damage to the ecosystems in which they occur.

Given the annual tonnage of transport of hydrocarbons, the North Shore, particularly the Sept-Îles area, has nonetheless been relatively lucky in avoiding major hydrocarbon spills. The most serious such case occurred in Havre-Saint-Pierre in 1999, when the Gordon C. Leitch ran into the mining dock at Havre-Saint-Pierre, causing a spill of approximately 49 tonnes of bunker oil. According to Marie-Pierre Raymond,

> ***"[Trans.] Three weeks after the incident, the clean-up teams had recovered more than 43 t of bunker oil. However, the coastline was contaminated for a radius of 10 km around the town of Havre-St-Pierre. In addition, some 15 islands were affected by the spilled pollutant (Milot, P., 1999) and more than 1,000 sea birds were found dead in the days following the incident. The Gordon C. Leitch spill was thus responsible for one of the most serious instances of bird mortality caused by petroleum hydrocarbons in Canada (Roberge, B. and Chapdelaine, G., 2000)" [5]***

Alderon Response to PC 13-8

The risk of hydrocarbon spills related to any aspect of the Project construction, operation, or closure will be addressed via an integrated Environmental Management System within a Sustainability Management Framework that will address preventative and risk-reduction

measures, maintenance, and emergency response and spill response plans as further described in Appendix J.

4.13.9 PC 13-9

GRAPHIC NOT INCLUDED

The increase in rail freight traffic to serve various users will undoubtedly contribute to an increased risk of incidents and accidents. Indeed, a hydrocarbon spill in a sensitive environment such as the valley of an important river like the Moisie and its tributaries could constitute a major disaster in several respects. The CRECN is of the opinion that any substantial increase in traffic on the existing rail lines should trigger a new risk assessment and a review of the environmental protection/response measures in the event of a spill.

GRAPHIC NOT INCLUDED

Alderon Response to PC 13-9

The EIS Guidelines issued by the provincial and federal governments for the environmental assessment require an assessment of the potential environmental effects of the proposed mine and associated infrastructure in western Labrador and the facilities of the Port of Sept-Îles. The scope of the environmental assessment therefore focused on these proposed Project components and activities for which Alderon is the Proponent.

The QNS&L railway extends for approximately 420 km from western Labrador to the Port of Sept-Îles, Québec, and runs through the Moisie River valley. This federally regulated railway is owned and operated by the IOCC, and provides rail services for both IOCC operations as well as various third party clients (including other existing and future mining operations).The QNS&L Railway, associated activity on it, and associated accidental events, were not directly considered in assessing potential Project-specific or cumulative environmental effects, as this is existing infrastructure that has been in operation for decades. The railway's current operations involves approximately 12 to 14 trains per day, and it is not anticipated that the Project will cause a substantial change to or increase in this, as the Project will contribute one to two additional trains per day as described in Volume 1, Chapter 2 (Project Description) of the EIS.

In consideration of past and existing operation levels and any overall future growth in the use of the QNS&L Railway (which are certainly not specific to Alderon's activities), the Project's incremental contribution to these activities are not anticipated to be material, or especially, to increase or change existing environmental disturbance levels. Should there be any required future upgrades or expansions to the QNS&L Railway infrastructure (e.g., additional siding or other equipment) to support any future growth in overall railway activities and capacity requirements, these would again not be driven solely (or even primarily) by Alderon's requirements. Indeed, Alderon currently has no information on any such planned or potential upgrades, which would be completed by the railway owner and operator and which would require compliance with applicable regulatory requirements.

4.13.10 PC 13-10

5. Impacts related to the activities of the Kami Terminal (Pointe-Noire)

5.1. Project background

This part of the project involves the construction and operation of a terminal consisting of a rail loop, a load-out facility and a concentrate stockpile area at Pointe-Noire, west of Sept-Îles. This project must be considered in the context of the various other similar projects for which assessments are currently being conducted and studied in relation to the existing environmental, social and economic situation in the community of Sept-Îles and the Pointe-Noire area, in order to accurately assess its impacts.

Alderon Response to PC 13-10

The EIS provides an assessment of the potential Project-specific environmental effects of the Project, as well as its likely cumulative environmental effects in combination with other relevant projects and activities that have been or will be carried out.

In understanding and describing the existing environment and the nature and degree of any likely changes to that environment resulting from the Project, the EIS does consider the Project and its potential effects in the context of the overall environmental setting within which it would be developed (see Chapter 3 and each VEC in Volume 2 of the EIS), as well as the presence and effects of other existing and proposed developments in the region (see Section 6.3 of the EIS, for example). Other ongoing and adjacent projects and activities and their environmental effects were an important and integral consideration in the cumulative effects assessments for all VECs.

The nature, size and layout of the Kami Terminal is described in Chapter 2 (Project Description, see Section 2.5 and Figure 2.4 in particular) in Volume 2 of the EIS, including its associated concentrate stockpiles and its relationship to the overall size of, and existing activities at, the Port of Sept-Îles, Québec. The proximity of these existing and proposed development activities to existing communities and residences in the area and to the marine environment, and the potential for dust, noise and other Project-related disturbances and emissions to extend to these areas and affect local residents, was a key focus of the environmental assessment.

A key priority of Alderon and important focus of the environmental assessment has been on identifying, assessing and attempting to mitigate any adverse environmental effects resulting from the Project, including its various components and activities at the Port of Sept-Îles, Québec. The overall nature, scale and pace of current and future development activities at the Port of Sept-Îles, and ensuring that these issues are considered and addressed through appropriate planning and decision-making at the facility, is clearly beyond the ability and responsibility of a single-project Proponent such as Alderon, and falls within the realm of overall management and planning by the Port and municipality. Alderon will, however, continue to work with local and regional planning and management authorities and consult and cooperate with other proponents in that regard, as well as implement appropriate mitigation measures to help

ensure that the effects of its Project - and thus, its contribution to any such regional / cumulative effects - are minimized.

4.13.11 PC 13-11

5.1.1. A community under pressure

There are several models that can be used to assess the quality of life in a community. Although these models sometimes differ considerably, they often rely on essentially the same determinants or factors of quality of life. We shall consider four of these, which recur fairly often and are directly related to the projects currently under development, namely access to employment, access to services, a quality environment and access to housing. Now, while it may be assumed that the current project (and other similar foreseeable projects) will facilitate access to employment (assuming that this was a problem), it is also likely to have a significant adverse effect on the other determinants identified. We will present here two cases, namely access to housing and access to services, in order to clearly describe the context in which the present project will be carried out. The issues related to the quality of the environment will be dealt with in section 5.1.2. and subsequent sections of this brief.

Alderon Response to PC 13-11

Part II of Volume 2 of the EIS addresses quality of life through an assessment of the Kami Terminal's potential effects on both natural and socio-economic aspects of the Sept-Îles region environment, including access to work, access to services, a healthy environment and access to housing. This assessment was done in consideration of the EIS Guidelines, and with the application of standard mitigation.

Quality of the natural environment is part of quality of life in Sept-Îles and several chapters assess the potential Project effects on components of the natural environment and present mitigation measures. In all cases, the assessment shows that with the application of appropriate mitigation measures, no significant adverse effects are expected, including cumulative effects. Components of the natural environment addressed in the EIS include: atmospheric environment, including air quality and noise (Chapters 14 and 23), landforms, soils, snow and ice (Chapter 15), water resources (Chapter 16), wetlands (Chapter 17), freshwater fish, fish habitat and fisheries (Chapter 18), birds, other wildlife and their habitats, and protected areas (Chapter 19), and species at risk and species of conservation concern (Chapter 20).

Socio-economic aspects of quality of life are also addressed in the EIS. Expected effects of the Kami Terminal on community services and infrastructure and housing as well as mitigation measures are presented Chapter 24. Given the sizes of the workforces during the construction and operations phases, the effects of the Kami Terminal on services and housing are expected to be temporary and tied to the construction phase. With the application of appropriate mitigation measures, no significant adverse effects are expected, including cumulative effects. Expected effects of the Kami Terminal on local employment opportunities as well as enhancement measures are presented in Volume 2, Chapter 26. The Kami Terminal will

improve access to employment through the creation of both temporary employment during the construction phase and long-term employment during the operations phase as well as indirectly through the creation of business opportunities for local businesses.

4.13.12 PC 13-12

Given the small population of the region, official data concerning the above-mentioned issues are either non-existent, fragmentary or compiled for statistical purposes in larger territorial units which are only rarely useful for shedding light on regional issues. That is why we have had to use journalistic sources in order to compile a picture which corroborates our own observations in the community.

Access to housing

There is currently a serious problem of access to housing in the community of Sept-Îles. In an article published in January 2012 in the newspaper Le Nord-Côtier, the advocacy group Occupation quadruple reiterated the urgency of addressing the housing shortage in Sept-Îles, where the overall housing vacancy rate at that time was 0.7% and the vacancy rate for three-bedroom apartments was 0.2%.Such low vacancy rates obviously tend to drive up rents. Although it is difficult to obtain validated data on average housing costs in the community, it is generally recognized that housing costs have risen dramatically over the past few years. Occupation quadruple stated in January 2012 that "[Trans.] It can easily cost $800 to rent a two-bedroom apartment." As far as new housing projects are concerned, they are aimed at a more affluent clientele and monthly rents often exceed $1,300 for a two-bedroom apartment.

The situation in terms of access to home ownership is equally problematic. House prices have been rising for several years in Sept-Îles. While the price of an average house was $118,000 in 2006, it had risen to about $263,000 this summer.

All this obviously has the effect of severely limiting access to housing in the community.

Alderon Response to PC 13-12

Accommodations are addressed in Volume 2, Chapter 24. Section 24.5 notes the existing pressure on the Sept-Îles and Port-Cartier housing markets. The City of Sept-Îles has developed a strategy to encourage housing developers and contractors to build new accommodations for private ownership and rental properties in response to current pressures. Additionally, the City is considering ways to provide temporary housing for construction workers coming to the region for work.

As explained in Volume 2, Chapter 24, the expected effect of the Kami Terminal on local housing is considered to be not significant. As stated in Section 24.4, up to 300 workers will be required over the two-year Kami Terminal construction phase. An additional average of 50 workers per year will be required for the construction by CFA of rail infrastructure in association with the Kami Terminal. These jobs will be spread out over the construction phase

according to the specific activities (e.g., site preparation, construction, equipment testing). These jobs will be temporary and short-term.

Many of the workers will be hired from within the region, though it is anticipated that it will also be necessary to hire workers from outside the region given the limited availability of qualified workers in the Sept-Îles area. It is expected that workers from within the region are already housed and will not contribute to increasing pressure on housing. However, the arrival of workers from outside the region will result in an increase in demand for housing. As explained in Section 24.6.1, workers are not very likely to relocate permanently when a contract is short-term and finite. As a result, these workers will seek temporary accommodations. In this way, the Kami Terminal will result in an increase in demand for short-term accommodations but will do so only temporarily.

During the operation and maintenance phase, the Kami Terminal will employ 17 workers. Those recruited from outside the region will likely be small in number and will not have a significant effect on housing supply.

As stated in Section 24.6.1, in order to minimize the effects of Kami Terminal 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. In addition, Alderon will monitor local housing indicators (vacancy rates, rental prices, sale prices, etc.).

4.13.13 PC 13-13

Access to services

The North Shore communities that are directly experiencing the effects of the current mining boom (particularly Sept-Îles, Port-Cartier, Fermont and Schefferville) are struggling with serious problems of access to services. The main factor that explains this situation is undoubtedly the labour shortage which, although it has existed for some time, is exacerbated by the overheated economy in the region.

For example, basic services such as child care services and health care services are particularly affected. Indeed, it is extremely difficult to obtain child care services on short notice in the communities affected, while the expansion of services is not able to keep up with demand.

Alderon Response to PC 13-13

As explained in Section 24.6.1, the Kami Terminal is expected to have no significant effects on municipal services and infrastructure during the operation and maintenance phase given the small workforce. The same can be said of effects on other services such as childcare and health services.

Despite the larger labour requirements for the construction phase, no significant effects on municipal services and infrastructure are anticipated for this phase of the Kami Terminal. As noted in Section 24.6.1, experience suggests that construction workers do not relocate where the potential employment period is finite and short-term. Any increase in demand for services, including health care services, that is associated with hiring workers from outside the region are likely to be short-term and will not exceed the employment period. As construction workers are not likely to relocate their families for the purpose of temporary work, the demand of the Kami Terminal construction phase on childcare services is anticipated to be low or non-existent.

Construction associated with the Kami Terminal will have a short-term effect on the local labour supply. Employment associated with the Kami Terminal will offer competitive wages and is therefore likely to contribute to temporary labour shortages affecting local businesses. However, since many of the positions associated with the Kami Terminal will require skilled workers, the increase in competition for labour with the service sector, which includes restaurants, will likely be minimal.

4.13.14 PC 13-14

The labour shortage is also affecting service businesses. The problem is particularly dramatic in the restaurant sector, where a number of restaurant owners have decided to get out of the business because of the increasing difficulty of recruiting labour and their inability to maintain competitive prices in a context of rising wages. In an article dated May 12, 2012, Le Soleil wrote:

> ***"[Trans.] Almost none of the small and medium-sized businesses in the service sector, such as restaurants, are able to hire all the people they need. The local newspapers are full of job offers and these businesses obviously cannot compete with the wages offered by the big companies. The McDonald's restaurant in Sept-Îles has even had to bring in Philippinos, who have poor French-language skills, to meet its staffing requirements."[12]***

A concrete example

This was the experience of a young entrepreneur from Sept-Îles, as reported by Radio-Canada.ca:

> ***"[Trans.] This labour shortage literally suffocated Glen Méthot, a native of Sept-Îles. "I hate being in business in Sept-Îles," he snapped. In two years, he has not managed to find a cook to work in his restaurant and bar.***
>
> ***"I contacted all the cooking schools to find out if there was anyone interested in coming to Sept-Îles. I called everyone I know; I offered to provide housing; I offered a wage bonus; I offered profit-sharing. And we were making profits. The bonus could be as much as $25,000," he explained."***

After suffering professional burnout, Glen Méthot decided to sell his business.

The president of Développement Économique Sept-Îles, Luc Dion, is very familiar with the problem: "We're experiencing an acute labour shortage. Some of our entrepreneurs work 60 to 70 hours a week at their business. This can only lead to burnout or to the closure of the business."

In the SMBs that provide various services to the big corporations, the labour shortage is being keenly felt and is likely to have serious consequences for the community. Some, such as Christian Michaud from the firm Métal 7, are even talking about outsourcing work to other countries:

> **"[Trans.] The labour shortage is hurting us" […] "We're really having great difficulty recruiting. We're going to try and grab our share of the new graduates, but we still need engineers and technicians. We're starting to look seriously at India to develop our engineering, and this may be our next stage of development – having facilities abroad."[13]**

The construction/renovation sector is another area where the demand for labour currently far exceeds supply. The situation is not expected to improve significantly with the number of projects currently at the planning stage. On this point, Alderon Iron Corp.'s EIS states that "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." (Plain Language Summary, p. B-83)

Several service sectors are partially or totally absent. For example, there is no longer a single shoe repair shop or a record store. Business owners also report that they have great difficulty selling their business or even passing it on to their heirs when they decide to retire or get out of the business. Furthermore, there is a net loss of access to the services that are generally available in a regional centre the size of Sept-Îles.

Alderon Response to PC 13-14

As described in Section 24.6.1, the Kami Terminal is expected to have no significant adverse effects on municipal services and infrastructure during the operation and maintenance phase given the small workforce. The same can be said of effects on other services such as childcare and health services.

Despite the larger labour requirements for the construction phase, no significant effects on municipal services and infrastructure are anticipated for this phase of the Kami Terminal. As noted in Section 24.6.1, experience suggests that construction workers do not relocate where the potential employment period is finite and short-term. Any increase in demand for services, including health care services, that is associated with hiring workers from outside the region are likely to be short-term and will not exceed the employment period. As construction workers are not likely to relocate their families for the purpose of temporary work, the demand of the Kami Terminal construction phase on childcare services is anticipated to be low or non-existent.

Construction associated with the Kami Terminal will have a short-term effect on the local labour supply. Employment associated with the Kami Terminal will offer competitive wages and is therefore likely to contribute to temporary labour shortages affecting local businesses. However, since many of the positions associated with the Kami Terminal will require skilled workers, the increase in competition for labour with the service sector, which includes restaurants, will likely be minimal.

4.13.15 PC 13-15

In addition, this shortage is creating strong pressure to rely on ever younger workers, as the big corporations are creating a strong drain on the labour pool available to small and medium-sized businesses. As a result, there has been a substantial increase in both labour force participation and hours worked by young people.

Alderon Response to PC 13-15

It is anticipated that the long-term effect of the Kami Terminal on local labour supply will be minimal given the small workforce of 17 people required to operate and maintain the terminal. The staff positions and NOC codes are listed in Table 2.4 of the Project Description in Chapter 2 of the EIS. Among the positions, ten or eleven require specific skills and training, for instance, one railway and yard locomotive engineer, five heavy equipment operators, one or two heavy-duty equipment mechanics, a general manager and two railway carmen. The remaining six or seven positions are made up of a receptionist, janitor and labourers. By extension, the Kami Terminal will not contribute significantly to the reliance on young or unskilled staff by small and medium scale businesses.

During the two-year construction phase the Kami Terminal will employ 300 workers, plus an average of 50 workers per year who will be required by CFA to construct rail infrastructure associated with the Kami Terminal. Once again, many of these positions will require specialized skills, training and certification. It is expected that many workers for this phase will be hired locally, however, given the labour shortages and the number of large construction projects expected to occur around the same time as the Kami Terminal that will compete for workers with similar skills, other workers will need to be hired from outside the region. The nature of the jobs during the construction phase is both short-term and finite. As such, the pressure on local labour supply will be short-term.

4.13.16 PC 13-16

In a report aired on February 20, 2012, Radio-Canada presented the stories of two SMBs that confirmed this trend:

> ***"[Trans.] For small businesses like ours, there is no doubt that the high-school dropouts are our future. The kids who went to community college or university are not interested in coming to work in a restaurant as a dishwasher […]. We need a young person who dropped out of school,***

> ***because if he or she stays in school, they're going to be hired by the mining companies." (Line Lejeune, Restaurant chez Omer)[14]***
>
> ***"[Trans.] We're looking for young men and women who did not finish high school. They see that they have the opportunity to learn a trade. We hire them and we train them. After two or three years, they have truly learned the trade. That's useful for them later." (Yves-Marie Côté, Fabnor)[15]***

Concerns about the potential effects on the high-school dropout rate have been expressed on many occasions by various stakeholders in the education sector and community organizations.

Finally, this situation is also contributing to a significant increase in the cost of living in the community. In addition to the dramatic rise in housing costs mentioned earlier, the combined effect of the housing and labour shortages also results in higher consumer prices.

Alderon Response to PC 13-16

Accommodations are addressed in Volume 2, Chapter 24. Section 24.5 notes the existing pressure on the Sept-Îles and Port-Cartier housing markets. The City of Sept-Îles has developed a strategy to encourage housing developers and contractors to build new accommodations for private ownership and rental properties in response to current pressures. Additionally, the City is considering ways to provide temporary housing for construction workers coming to the region for work.

As described in Volume 2, Chapter 24, the expected effect of the Kami Terminal on local housing is considered to be not significant. As stated in Section 24.4, up to 300 workers will be required over the two-year Kami Terminal construction phase. An additional average of 50 workers per year will be required for the construction by CFA of rail infrastructure in association with the Kami Terminal. These jobs will be spread out over the construction phase according to the specific activities (e.g., site preparation, construction, equipment testing). These jobs will be temporary and short-term.

Many of the workers will be hired from within the region, though it is anticipated that it will also be necessary to hire workers from outside the region given the limited availability of qualified workers in the Sept-Îles area. It is expected that workers from within the region are already housed and will not contribute to increasing pressure on housing. However, the arrival of workers from outside the region will result in an increase in demand for housing. As explained in Section 24.6.1, workers are not very likely to relocate permanently when a contract is short-term and finite. As a result, these workers will seek temporary accommodations. In this way, the Kami Terminal will result in an increase in demand for short-term accommodations but will do so only temporarily.

During the operation and maintenance phase, the Kami Terminal will employ 17 workers. Those recruited from outside the region will likely be small in number and will not have a significant effect on housing supply.

As stated in Section 24.6.1, in order to minimize the effects of Kami Terminal 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. In addition, Alderon will monitor local housing indicators (vacancy rates, rental prices, sale prices, etc.).

Given the short-term nature of the labour demands during the construction phase, the low labour requirements during the operation and maintenance phase, effects of the Kami Terminal on local labour availability and housing supply will be temporary, contributing little to sustained increases in the cost of living in the Sept-Îles region.

Alderon's commitment to engage with local authorities and other stakeholders to address issues related to community services and infrastructure as needed and monitor local housing indicators (vacancy rates, rental prices, sale prices, etc.), will mitigate against the Kami Terminal's impact on housing supply and therefore cost of living increases.

4.13.17 PC 13-17

5.1.2. Disturbed natural environments

The Kami Terminal project, at Pointe-Noire, west of Sept-Îles, is located in an industrial area in which the environment is already significantly disturbed. Although the project in itself raises a certain number of ecological issues that we will discuss in the next section of this brief, we once again feel it is important to situate the project in its context by presenting here a summary of the current and planned activities in this receiving environment in order to provide an overview of the pressures being placed on the ecosystems in question.

Existing activities

There are currently several activities of various types at Pointe-Noire. The Cliffs-Wabush Mines mining company owns facilities there for receiving (by rail terminal), primary processing and shipment of iron ore extracted from mines in the Wabush area of Labrador and Fermont (Bloom Lake) in Québec . Aluminerie Alouette operates a large aluminum smelter there. Road and power transmission infrastructures also serve these companies. While most of the area is zoned industrial, a coastal strip on the western side includes private homes and a large campground in an area called Val Marguerite.

Projects

There are currently a number of industrial projects at Pointe-Noire. We will consider here only those projects expected to be carried out in the short or medium term and that are

similar in nature to the Kami project. The following table lists various proponents of iron mine projects in the Labrador Trough which ship from Pointe-Noire or which are likely to do so in the short or medium term.

Proponent				
Proponent		**Projected annual production**		**Status**
Cliffs Natural Resources		**28 Mt**		**In operation**
Adriana Resources		**50 Mt**		**Preliminary studies**
New Millennium		**27 Mt**		**Preliminary studies**
Century Iron Mines				
Century Iron Mines		**22 Mt**		**Preliminary studies**
Champion Iron Mines		**22 Mt**		**CEAA**
Alderon Iron Ore Corp.		**16 Mt**		**CEAA**

Sources: -Roche. Fire Lake North Iron Mine Project. Champion Iron Mines Limited. November 2012.
-www.centuryiron.com
-www.nmliron.com
-www.adrianaressources.com

If all these projects are carried out, this will result in nearly 200 Mt of iron ore or concentrate being shipped from Pointe-Noire. Given this figure, it is not hard to imagine the sheer scale of the port and rail infrastructures and of the stockpile areas required to permit this level of shipment.

Based on a study of the various scenarios proposed by the proponents of the most advanced projects and the discussions with these proponents, we believe that the stockpile areas that these projects would require (including a multi-user stockpile area to be developed as part of the CN mining railway project) would occupy a significant portion of the industrial zone of Pointe-Noire. Although these areas are zoned industrial, we are concerned about such a dramatic expansion of industrial development and its ecological and social impacts, since some of the projects are relatively close to cottagers and residents of the Val Marguerite area. These concerns will be the subject of a more in-depth analysis in the next section of this brief.

Alderon Response to PC 13-17

The EIS provides an assessment of the potential Project-specific environmental effects of the Project, as well as its likely cumulative environmental effects in combination with other relevant projects and activities that have been or will be carried out.

In understanding and describing the existing environment and the nature and degree of any likely changes to that environment resulting from the Project, the EIS does consider the Project and its potential effects in the context of the overall environmental setting within which it would be developed (see Chapter 3 and each VEC in Volume 2 of the EIS), as well as the presence and effects of other existing and proposed developments in the region (see Section 6.3 of

Volume 2, for example). Other ongoing and adjacent projects and activities and their environmental effects were an important and integral consideration in the cumulative effects assessments for all VECs.

The nature, size and layout of the Kami Terminal is described in Chapter 2 (Project Description, see Section 2.5 and Figure 2.4 in particular) in Volume 2 of the EIS, including its associated concentrate stockpiles and its relationship to the overall size of, and existing activities at, the Port of Sept-Îles, Québec. The proximity of these existing and proposed development activities to existing communities and residences in the area and to the marine environment, and the potential for dust, noise and other Project-related disturbances and emissions to extend to these areas and affect local residents, was a key focus of the environmental assessment. Cottagers and residents of the Val Marguerite area are located close to the mouth of the rivière Sainte-Marguerite, on the other side of the Marconi Peninsula. The EIS clearly indicates that impacts to this area that could result from the construction and operation of the Kami Terminal are not significant.

According to the results of the Air Quality Dispersion Modelling Study conducted for the Kami Terminal, air emissions incurred during Kami Terminal construction are expected to be small and of a short duration, and are not expected to cause substantive changes in air quality in surrounding residential and recreational areas. Drawing from the findings of the assessment of environmental effects related to the Kami Terminal on the acoustic environment, noise emissions from construction activities will be intermittent in nature over the course of the two-year construction period. The nearest dwelling to the site is over 1.5 km away and is unlikely to experience significant effects to the acoustic environment.

Results of the vibrations modelling study indicate the typical vibration pattern from machinery operation. Blasting activities associated with site preparation could be strong enough to cause structural damage to nearby houses; however blasting plans are typically designed to keep vibrations within a range that factor in the distance to the nearest houses to avoid structural damage. Residents may still feel a light vibration running through the ground. The overall effect of all these activities will not be intense as activities will not occur simultaneously and will be sporadic.

For the operation and maintenance phase, the results of the Air Quality Dispersion Modelling Study indicate that exceedances of air emissions standards are expected to be limited to within a perimeter of 100 m around the PDA and are not expected to cause substantive changes in air quality.

Noise emissions are expected to occur during the entire duration of the operations and maintenance phase. Significant noise emissions are expected to occur at each transfer point as a result of the operation of the conveyors, locomotive engines, and railcars both leading up to the site and on-site on the rail loop. Quantitative modelling of on-site activities was carried out to assess the possible effects on several locations representing clusters of residences or recreational areas. It was found that operations at the port site and additional traffic along the

railway will result in increased noise levels from the baseline levels; however the effects will not surpass the thresholds established by Health Canada for dwellings.

The level of vibrations during the operation and maintenance phase will depend on the rail type, train speed, vehicle parameters, track conditions and other variables. These design parameters are still under consideration, but the estimated vibration and ground-borne noise will meet the guidelines set out by Health Canada for locations at a distance of 80 m from the Project footprint and beyond. As the nearest residences/recreational areas are 700 m away along the CFA railroad, it is expected that there will be no perceptible effect resulting from rail-induced vibration.

The overall contribution of the Kami Terminal from a cumulative assessment point of view is low because of the location of the terminal and planned activities.

4.13.18 PC 13-18

5.2. Environmental issues

5.2.1. The Baie de Sept-Iles

The Baie de Sept-Îles is an ecologically rich environment where the salt marshes, eelgrass beds and numerous smelt and capelin spawning grounds contribute to a rich and varied wildlife. In addition, several wildlife habitats and protected areas recognized by both the provincial and federal governments are present in the bay (Map 2):

- **Waterfowl gathering area**
- **Heronries**
- **Bird colonies**
- **Migratory bird sanctuary**

The Checkley Plain and the bay and archipelago of Sept-Îles are part of the Sept-Îles IBA (Important Bird Area). Although IBAs do not have the official status of protected areas, they are part of an international program that recognizes critical habitats for bird fauna and works to promote their conservation. There are nearly 10,000 IBAs in the world, which are recognized by BirdLife International.

The Sept-Îles IBA is home to:

- **More than 1% of the world population of razorbills, herring gulls and great black-backed gulls;**
- **More than 1% of the continental population of double-crested cormorants and black-legged kittiwakes; and**
- **14 species of birds with conservation status.**

GRAPHIC NOT INCLUDED

The Baie de Sept-Îles is already exposed to numerous pressures caused by the existing infrastructure and facilities. In the Pointe-Noire area, studies conducted in 2006 showed that levels of arsenic, boron and sulfates exceeded the chronic aquatic life toxicity criterion (CVAC)[6] developed by the MDDEFP (Genivar, 2012). The industrial development around the bay is likely to exacerbate the adverse effects on the marine environment. Furthermore, the proponent has not proposed any concrete measures to minimize the cumulative effects of its project with the other projects. Yet, the risks of contamination by the ore are quite real since the three planned ore storage sites (Champion, Alderon and CN), in addition to the existing sites, will be exposed to the prevailing winds.

[6] CVAC is the highest concentration of a substance that will not cause any adverse effect on aquatic organisms (and their offspring) during daily and life-long exposure (MDDEFP 2012).

Alderon Response to PC 13-18

The EIS provides an assessment of the potential Project-specific environmental effects of the Project, as well as its likely cumulative environmental effects in combination with other relevant projects and activities that have been or will be carried out.

In understanding and describing the existing environment and the nature and degree of any likely changes to that environment resulting from the Project, the EIS does consider the Project and its potential effects in the context of the overall environmental setting within which it would be developed (see Chapter 3 and each VEC in Volume 2 of the EIS), as well as the presence and effects of other existing and proposed developments in the region (see Section 6.3 of Volume 2, for example). Other ongoing and adjacent projects and activities and their environmental effects were an important and integral consideration in the cumulative effects assessments for all VECs.

The nature, size and layout of the Kami Terminal is described in Chapter 2 (Project Description, see Section 2.5 and Figure 2.4 in particular) in Volume 2 of the EIS, including its associated concentrate stockpiles and its relationship to the overall size of, and existing activities at, the Port of Sept-Îles, Québec. The proximity of these existing and proposed development activities to existing communities and residences in the area and to the marine environment, and the potential for dust, noise and other Project-related disturbances and emissions to extend to these areas and affect local residents, was a key focus of the environmental assessment.

The environmental assessment of the effects of dust on special receptors was based on the results of the Air Quality Dispersion Modeling Study included in Appendix G of Volume 2 of the EIS. The model considered meteorological and climate data, existing emissions sources (including Kami Terminal stockpiles) and transport and dispersion behaviour of atmospheric emissions. The analysis of the modeling results was done by considering the background that is prescribed in *Québec Clean Air Regulation*, which is a way to consider the cumulative effects of a project.

Based on the modeling results, the highest predicted concentrations will occur in the vicinity of the south-east side of the property. With respect to the piles of concentrate, fugitive emissions resulting from wind erosion may lead to exceedances of the criteria, but the frequency of the meteorological conditions leading to these potential exceedances is low and the concern is restricted to neighbouring uninhabited industrial properties. Emissions from the diesel locomotive used for transporting the concentrate to Sept-Îles and along the bay are not expected to cause substantive changes in air quality.

With regards to water resources, water run off within the concentrate storage area will be collected in the stormwater retention basin and treated before being released into the environment. The treatment concept under consideration at this stage is mechanical treatment, which will be designed to meet ministère du Dévéloppement durable, de l'Environnement, de la Faune et des Parcs Directive 019 effluent discharge limits and the CCME water quality guideline for the protection of aquatic life and the Québec surface water quality criteria for the protection of aquatic life. Similarly, other projects assessed for cumulative effects will also have to comply with regulatory standards for the protection of aquatic life.

Noise levels from the Kami Terminal were also assessed. The acoustic environment from the construction and decommissioning phases are expected to be short in duration, limited to the LSA, rare in frequency and therefore not significant. Analysis of the acoustic modeling results for the Kami Terminal over its lifetime revealed that measureable increases in sound pressure level occurring at nearby sensitive receptors will not exceed Health Canada percent HA criteria, and are therefore expected to be not significant for the acoustic environment. Cumulative impacts of noise emissions from the Kami Iron Ore Mine site on the acoustic environment were also found to be not significant.

In addition to predicting and evaluating these potential environmental effects, each VEC section also describes mitigation measures that are designed to help avoid or reduce the potential adverse effects of the Kami Terminal on the biophysical and socio-economic environments, and thus, its potential contribution to any such overall (cumulative) environmental effects. For example, mitigation measures to limit the dispersion of atmospheric emissions resulting from the Kami Terminal include enclosing equipment used for transporting ore and outfitting equipment such as the conveyor system with dust collectors; using a stacker with an adjustable height; and, performing routine inspections of equipment and dust collectors.

Noise mitigation measures proposed include proper muffler installation on construction machinery and regular maintenance; enforceable low-speed standards on-site, enclosing conveyors and conveyor transfer points; and minimizing the disturbed area to maintain vegetation buffers

Besides treating surface water to a level that meets the federal and provincial regulations and guidelines mentioned previously, Alderon proposes several mitigation measures to limit Project effects on water resources. Among others, these include installing fencing downstream of work areas to reduce carriage of silt and fines, avoiding unnecessary encroachments on riparian habitat and maintaining and storing work site machinery and vehicles on a site designated 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.

The EIS also includes and described a number of environmental monitoring and follow-up programs as part of Alderon's Sustainability Management Framework. These will be developed and implemented during the Project's construction and/or operations phases to monitoring compliance with relevant regulatory standards and guidelines, and/or to study the environmental effects of the Project and the effectiveness of mitigation. During the construction phase, it is recommended to monitor the impact of blasting on air quality near the Kami Terminal's site, in relation to CO, by using portable monitors. Later on, during the operations phase, Alderon will participate in the air quality monitoring program initiated in Sept-Îles. Alderon will also monitor 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. Parameters that will be monitored include flow, pH, temperature, metals (aluminum, arsenic, copper, iron, lead, nickel and zinc), total suspended solids, alkalinity and petroleum hydrocarbons C_{10}-C_{50}.

With respect to noise effects, noise monitoring plans will be developed in consultation with regulatory authorities prior to the start of construction as part of the Sustainability Management Framework.

A key priority of Alderon, and important focus of the environmental assessment, has been on identifying, assessing and attempting to mitigate any adverse environmental effects resulting from the Project, including its various components and activities at the Port of Sept-Îles, Québec. The overall nature, scale and pace of current and future development activities at the Port of Sept-Îles, and ensuring that these issues are considered and addressed through appropriate planning and decision-making at the facility, is clearly beyond the ability and responsibility of a single-project Proponent such as Alderon, and falls within the realm of overall management and planning by the Port and municipality. Alderon will, however, continue to work with local and regional planning and management authorities and consult and cooperate with other proponents in that regard, as well as implement appropriate mitigation measures to help ensure that the effects of its Project - and thus, its contribution to any such regional / cumulative effects - are minimized.

4.13.19 PC 13-19

In our view, the EIS has serious deficiencies. First of all, the proponent does not mention the presence of the Sept-Îles IBA.

Alderon Response to PC 13-19

Information on Important Bird Areas was obtained from the official IBA Canada website (www.ibacanada.ca), which identified two IBAs in the Sept-Îles area. The IBA identified as QC081 was illustrated as being Corossol Island. Another IBA (QC080), encompassing the other migratory bird sanctuary (Ile de la Grosse Boule), restricted to located within the Sept-Îles IBA

boundaries as identified in "ZICO de Sept-Îles: Plan de Conservation (Nature Québec / UQCN 2007). Nonetheless, the environmental components of the Sept-Îles IBA are considered in Volume 2 of the EIS, as warranted, including the portion of the baie des Sept-Îles within the LSA. The entire IBA, including (Plaine Checkley) is included in the RSA. In consideration of the identified boundaries of the IBA, the Project PDA (footprint) is not within the IBA.

4.13.20 PC 13-20

Worse yet, the proponent states on p. 35 of the EIS Plain Language Summary that no species at risk were found in the study area. However, we must criticize the woefully inadequate character of the field studies of bird life, which were carried out over a two-day period in June, which, in our opinion, was not sufficient either to demonstrate beyond any doubt that no special-status species are present or to make allowance for late- or early-breeding species or migratory species. While this study inventoried 30 species in the study area, Génivar inventoried 99 species on the same site in 2009 for an impact study for the Port of Sept-Îles. Moreover, Alderon's nocturnal field studies targeted only the common nighthawk and owls (what species?), while specific inventories would also be required for the yellow rail and the short-eared owl. The above-mentioned Génivar study also reported two short-eared owls observed less than 5 km from the site.

We therefore recommend that additional and more detailed inventories of the bird fauna be carried out in order to ensure coverage of the entire breeding season and to optimize the detection of special-status species such as the yellow rail and the short-eared owl.

Alderon Response to PC 13-20

Given the nature of the Kami Terminal and the fact that the site can be classified mostly as a brownfield site, the field effort is considered adequate to characterize bird species' use of the habitats that may interact with the Project. The key interaction is that of habitat loss and interactions during construction, and breeding habitat adjacent to the PDA. Considering the potentially affected habitats, the timing of the survey in June was considered sufficient to record the majority of breeding bird species that would be expected in these habitats. Existing data sources (including GENIVAR 2008) are considered adequate to characterize species use in the Regional Study Area.

The environmental assesments in which the GENIVAR (2008a) field work was used have been reviewed (GENIVAR 2008b, 2010). The Kami Terminal overlaps the footprint of the Lac Bloom Mine infrastructure at the Port. GENIVAR collected data from as far away as the Plaine Checkley which is located approximately 5 km from the Kami Terminal. Yellow Rail and Short-eared Owl surveys were included in Genivar' study. Of the 99 species identified, species of conservation concern include Short-eared Owl and Common Nighthawk. The Short-eared Owl observations were identified at least 5 km from the Kami Terminal. The location of the Common Nighthawk is unknown. However, as noted in Section 20.4, page 20-17, last paragraph of the Volume 2 of the EIS, Common Nighthawk was not detected during nocturnal surveys in June 2012, and are not likely present near the site due to existing disturbances. The nocturnal survey

in June was designed to target Common Nighthawk and nocturnal owls (Volume 2, Page 19-2), and included playbacks of Common Nighthawk and Northern Saw-whet Owl, as these were the expected nocturnal species considering the regional checklists and available habitat.

In consideration of the site coverage and timing of surveys by GENIVAR in 2008 at the site, and the surveys conducted in June 2012, and in consideration of the potential for interactions between the Project and birds (including species at risk and species of conservation concern) no further surveys are warranted in support of the EIS.

4.13.21 PC 13-21

In a joint brief submitted to Développement économique Sept-Îles (DÉSI) last May, the Corporation de protection de l'environnement de Sept-Îles (CPESI) [Sept-Îles environmental protection corporation], the Organisme de Bassin Versant (OBV) de Duplessis [Duplessis watershed agency], the Gulf North Shore ZIP Committee and the Conseil régional de l'environnement de la Côte-Nord (CRECN) [North Shore regional council on the environment] wrote:

> ***"[Trans.] The main threat to the environment is undoubtedly the alteration of the shoreline as a result of the development around the bay. At present, the many gaps in our knowledge make it impossible to assess or predict the consequences of this development on the ecosystems. In addition, each proposed project or existing infrastructure is examined individually and the cumulative impact is never taken into consideration. Although each industry pledges to comply with government-mandated environmental standards, the bay ecosystem must be considered as a whole."***[17]

The brief goes on to make the following recommendations:

- **Determine a baseline for the bay in terms of water quality, diversity of plants and wildlife, etc.;**
- **Assess the impact of the increase in shipping traffic on marine mammals;**
- **Implement regular monitoring of the bay based on several easy-to-measure indicators;**
- **Examine the cumulative effect of the planned and existing projects on the ecosystems;**
- **Establish an integrated management committee for the bay where the three aspects of development would be represented: economic, environmental and social, in order to ensure the sustainable development of this environment.**

Over the past several years, a number of environmental assessments have been conducted for various projects around the bay on which construction is to begin by 2014. Hence, in addition to the multi-user dock at the Port of Sept-Îles which is already under construction and the proposed stockpile areas presented in 5.1.2., three other

projects have been announced that could be carried out around the bay in the short term (Map 2):

- **Open-pit apatite mine (Arnaud Township)**
- **CN rail line with ore storage site (Pointe-Noire)**
- **Gaz Métro gas pipeline (Pointe-Noire)**

GRAPHIC NOT INCLUDED

A permanent monitoring project for the Baie de Sept-Îles is currently under development. The goal of this project is, in part, to address the issues outlined above. We believe that only a tool of this type will make it possible to monitor the changes affecting this environment, which is essential to the quality of life of the population of Sept-Îles, to make informed choices and to take the necessary corrective measures in the event of any degradation of this environment.

It is our view that the proponent should undertake to join the Baie de Sept-Îles monitoring project in order to assess the cumulative impacts of industrial development on the biological components of the environment.

Alderon Response to PC 13-21

The EIS provides an assessment of the potential Project-specific environmental effects of the Project, as well as its likely cumulative environmental effects in combination with other relevant projects and activities that have been or will be carried out.

In understanding and describing the existing environment and the nature and degree of any likely changes to that environment resulting from the Project, the EIS does consider the Project and its potential effects in the context of the overall environmental setting within which it would be developed (see Chapter 3 and each VEC in Volume 2 of the EIS), as well as the presence and effects of other existing and proposed developments in the region (see Section 6.3 of Volume 2, for example). Other ongoing and adjacent projects and activities and their environmental effects were an important and integral consideration in the cumulative effects assessments for all VECs.

The nature, size and layout of the Kami Terminal is described in Chapter 2 (Project Description, see Section 2.5 and Figure 2.4 in particular) in Volume 2 of the EIS, including its associated concentrate stockpiles and its relationship to the overall size of, and existing activities at, the Port of Sept-Îles, Québec. The proximity of these existing and proposed development activities to existing communities and residences in the area and to the marine environment, and the potential for dust, noise and other Project-related disturbances and emissions to extend to these areas and affect local residents, was a key focus of the environmental assessment.

The environmental assessment of the effects of dust on special receptors was based on the results of the Air Quality Dispersion Modeling Study included in Appendix G of Volume 2 of the

EIS. The model considered meteorological and climate data, existing emissions sources (including Kami Terminal stockpiles) and transport and dispersion behaviour of atmospheric emissions. The analysis of the modeling results was done by considering the background that is prescribed in *Québec Clean Air Regulation*, which is a way to consider the cumulative effects of a project.

Based on the modeling results, the highest predicted concentrations will occur in the vicinity of the south-east side of the property. With respect to the piles of concentrate, fugitive emissions resulting from wind erosion may lead to exceedances of the criteria, but the frequency of the meteorological conditions leading to these potential exceedances is low and the concern is restricted to neighbouring uninhabited industrial properties. Emissions from the diesel locomotive used for transporting the concentrate to Sept-Îles and along the bay are not expected to cause substantive changes in air quality.

With regards to water resources, water run off within the concentrate storage area will be collected in the stormwater retention basin and treated before being released into the environment. The treatment concept under consideration at this stage is mechanical treatment, which will be designed to meet ministère du Dévéloppement durable, de l'Environnement, de la Faune et des Parcs Directive 019 effluent discharge limits and the CCME water quality guideline for the protection of aquatic life and the Québec surface water quality criteria for the protection of aquatic life. Similarly, other projects assessed for cumulative effects will also have to comply with regulatory standards for the protection of aquatic life.

Noise levels from the Kami Terminal were also assessed. The acoustic environment from the construction and decommissioning phases are expected to be short in duration, limited to the LSA, rare in frequency and therefore not significant. Analysis of the acoustic modeling results for the Kami Terminal over its lifetime revealed that measureable increases in sound pressure level occurring at nearby sensitive receptors will not exceed Health Canada percent HA criteria, and are therefore expected to be not significant for the acoustic environment. Cumulative impacts of noise emissions from the Kami Iron Ore Mine site on the acoustic environment were also found to be not significant.

In addition to predicting and evaluating these potential environmental effects, each VEC section also describes mitigation measures that are designed to help avoid or reduce the potential adverse effects of the Kami Terminal on the biophysical and socio-economic environments, and thus, its potential contribution to any such overall (cumulative) environmental effects. For example, mitigation measures to limit the dispersion of atmospheric emissions resulting from the Kami Terminal include enclosing equipment used for transporting ore and outfitting equipment such as the conveyor system with dust collectors; using a stacker with an adjustable height; and, performing routine inspections of equipment and dust collectors.

Noise mitigation measures proposed include proper muffler installation on construction machinery and regular maintenance; enforceable low-speed standards on-site, enclosing conveyors and conveyor transfer points; and minimizing the disturbed area to maintain vegetation buffers.

In addition to treating surface water to a level that meets the federal and provincial regulations and guidelines mentioned previously, Alderon proposes several mitigation measures to limit Project effects on water resources. Among others, these include installing fencing downstream of work areas to reduce carriage of silt and fines, avoiding unnecessary encroachments on riparian habitat and maintaining and storing work site machinery and vehicles on a site designated at a distance of over 30 metres 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.

The EIS also includes and described a number of environmental monitoring and follow-up programs that Alderon will develop and implement during the Project's construction and/or operations phases to monitoring compliance with relevant regulatory standards and guidelines, and/or to study the environmental effects of the Project and the effectiveness of mitigation. During the construction phase, it is recommended to monitor the impact of blasting on air quality near the Kami Terminal's site, in relation to CO, by using portable monitors. Later on, during the operations phase, Alderon will participate in the air quality monitoring program initiated in Sept-Îles. Alderon will also monitor 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. Parameters that will be monitored include flow, pH, temperature, metals (aluminum, arsenic, copper, iron, lead, nickel and zinc), total suspended solids, alkalinity and petroleum hydrocarbons C_{10}-C_{50}.

With respect to noise effects, noise monitoring plans will be developed in consultation with regulatory authorities prior to the start of construction as part of the Sustainability Management Framework.

A key priority of Alderon, and important focus of the environmental assessment, has been on identifying, assessing and attempting to mitigate any adverse environmental effects resulting from the Project, including its various components and activities at the Port of Sept-Îles, Québec. The overall nature, scale and pace of current and future development activities at the Port of Sept-Îles, and ensuring that these issues are considered and addressed through appropriate planning and decision-making at the facility, is clearly beyond the ability and responsibility of a single-project Proponent such as Alderon, and falls within the realm of overall management and planning by the Port and municipality. Alderon will, however, continue to work with local and regional planning and management authorities and consult and cooperate with other proponents in that regard, as well as implement appropriate mitigation measures to help ensure that the effects of its Project - and thus, its contribution to any such regional / cumulative effects - are minimized, including participating in the baie des Sept-Îles monitoring project.

4.13.22 PC 13-22

5.2.2. Air quality

Although the project in question does not involve industrial production activities that would generate significant emissions, it is nonetheless taking place in a context where

there are serious concerns in the community about air quality issues. In a letter addressed to the Québec Minister of Sustainable Development, Environment and Parks in January 2012, the CRECN made the following request that an air quality index (AQI) be established in Sept-Îles:

> ***"[Trans.] Considering the large-scale industrial presence on the outskirts of the town and the current context of strong economic growth, with a large number of planned industrial projects (increase in production by the big companies as well as new mining and industrial projects), we believe that it is particularly desirable to have the tools necessary for continuous air quality monitoring in Sept-Îles."***

Following repeated calls from citizens groups, environmental groups and the municipal government, an air quality characterization program was announced and implemented a few months ago by the MDDEFP. At the same time, a consultative committee on air quality was also established.

Alderon Response to PC 13-22

The EIS provides an assessment of the potential Project-specific environmental effects of the Project, as well as its likely cumulative environmental effects in combination with other relevant projects and activities that have been or will be carried out.

In understanding and describing the existing environment and the nature and degree of any likely changes to that environment resulting from the Project, the EIS does consider the Project and its potential effects in the context of the overall environmental setting within which it would be developed (see Chapter 3 and each VEC in Volume 2 of the EIS), as well as the presence and effects of other existing and proposed developments in the region (see Section 6.3 of Volume 2, for example). Other ongoing and adjacent projects and activities and their environmental effects were an important and integral consideration in the cumulative effects assessments for all VECs.

The nature, size and layout of the Kami Terminal is described in Chapter 2 (Project Description, see Section 2.5 and Figure 2.4 in particular) in Volume 2 of the EIS, including its associated concentrate stockpiles and its relationship to the overall size of, and existing activities at, the Port of Sept-Îles, Québec. The proximity of these existing and proposed development activities to existing communities and residences in the area and to the marine environment, and the potential for dust, noise and other Project-related disturbances and emissions to extend to these areas and affect local residents, was a key focus of the environmental assessment.

The environmental assessment of the effects of dust on special receptors was based on the results of the Air Quality Dispersion Modeling Study included in Appendix G of Volume 2 of the EIS. The model considered meteorological and climate data, existing emissions sources (including Kami Terminal stockpiles) and transport and dispersion behaviour of atmospheric emissions. The analysis of the modeling results was done by considering the background that is

prescribed in *Québec Clean Air Regulation*, which is a way to consider the cumulative effects of a project.

Based on the modeling results, the highest predicted concentrations will occur in the vicinity of the south-east side of the property. With respect to the piles of concentrate, fugitive emissions resulting from wind erosion may lead to exceedances of the criteria, but the frequency of the meteorological conditions leading to these potential exceedances is low and the concern is restricted to neighbouring uninhabited industrial properties. Emissions from the diesel locomotive used for transporting the concentrate to Sept-Îles and along the bay are not expected to cause substantive changes in air quality.

In addition to predicting and evaluating these potential environmental effects, each VEC section also describes mitigation measures that are designed to help avoid or reduce the potential adverse effects of the Kami Terminal on the biophysical and socio-economic environments, and thus, its potential contribution to any such overall (cumulative) environmental effects. For example, mitigation measures to limit the dispersion of atmospheric emissions resulting from the Kami Terminal include enclosing equipment used for transporting ore and outfitting equipment such as the conveyor system with dust collectors; using a stacker with an adjustable height; and, performing routine inspections of equipment and dust collectors.

The EIS also includes and described a number of environmental monitoring and follow-up programs that Alderon will develop and implement during the Project's construction and/or operations phases to monitoring compliance with relevant regulatory standards and guidelines, and/or to study the environmental effects of the Project and the effectiveness of mitigation. During the construction phase, it is recommended to monitor the impact of blasting on air quality near the Kami Terminal's site, in relation to CO, by using portable monitors. Later on, during the operations phase, Alderon will participate in the air quality monitoring program initiated in Sept-Îles. Alderon will also monitor 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. Parameters that will be monitored include flow, pH, temperature, metals (aluminum, arsenic, copper, iron, lead, nickel and zinc), total suspended solids, alkalinity and petroleum hydrocarbons C_{10}-C_{50}.

A key priority of Alderon, and important focus of the environmental assessment has been on identifying, assessing and attempting to mitigate any adverse environmental effects resulting from the Project, including its various components and activities at the Port of Sept-Îles, Québec. The overall nature, scale and pace of current and future development activities at the Port of Sept-Îles, and ensuring that these issues are considered and addressed through appropriate planning and decision-making at the facility, is clearly beyond the ability and responsibility of a single-project Proponent such as Alderon, and falls within the realm of overall management and planning by the Port and municipality. Alderon will, however, continue to work with local and regional planning and management authorities and consult and cooperate with other proponents in that regard, as well as implement appropriate mitigation measures to help

ensure that the effects of its Project - and thus, its contribution to any such regional / cumulative effects - are minimized.

4.13.23 PC 13-23

Further to this end, and given the potential cumulative impacts on air quality represented by the numerous development projects, particularly because the bay and the community of Sept-Îles are located to the east of the Kami project and exposed to the prevailing winds from Pointe-Noire, we believe that it is in the interest of Alderon Iron Ore Corp. to participate in the work of this consultative committee.

Alderon Response to PC 13-23

Alderon was invited to join the regional air quality consultative committee (Table de concertation sur la qualité de l'air à Sept-Îles) in November 2012, and accepted the invitation. As per a press release issued on October 23, 2012, the objectives of that committee are to: (1) facilitate the preparation of a global picture of the air quality in Sept-Îles by putting in common skills; (2) identify issues associated with air quality; (3) identify potential solutions mutually satisfactory aimed at mitigating issues identified by the Committee.

The committee includes representatives from the municipality, environmental organizations (Corporation de protection de l'environnement, Comité de défense de l'air et de l'eau, Conseil régional de l'environnement de la Côte-Nord), health agencies (Agence de la santé et des services sociaux de la Côte-Nord and Centre de santé et des services sociaux de Sept-Îles), industries (Cliffs Mines Wabush, Compagnie minière IOC, Aluminerie Alouette), with the participation of the Québec Environmental Ministry (MDEFP). Mine Arnaud, proponent of a new mine in the Sept-Îles area, was also invited to join the committee.

4.13.24 PC 13-24

5.2.3. Noise pollution

Although the CRECN considers that this project, on its own, as presented, will undoubtedly not have a significant impact compared to other current or planned activities, we nonetheless have concerns about the accumulation of noise pollution in the Pointe-Noire area. Although sources of noise are not additive in a linear way, there is nonetheless a cumulative impact when several separate sources of noise overlap at a specific point. We are therefore once again faced with an issue that cannot be dealt with in isolation and where we must assess the cumulative impact.

It is therefore legitimate to be concerned about the impacts in terms of noise pollution of all the above-mentioned projects on wildlife and the neighbouring communities. This is particularly worrisome if we consider that the closest human populations are located only a few kilometres from the various stockpile areas and other projects. It should also be noted that a large camping site is located only a few hundred metres from potential ore storage sites (see map inset – Map 2). It seems obvious to us that noise pollution has

a greater impact in such a context given the relatively poor sound-insulating qualities of camping equipment, the greater frequency of outdoor activities and the fact that campers come to the outdoors looking for peace and quiet.

We are therefore of the opinion that the Town of Sept-Îles, the Port of Sept-Îles and the proponents of development projects should take into account the anticipated cumulative effects of the increasing number of sources of noise in the Pointe-Noire area in the development planning process in order to ensure that this noise pollution does not cause a degradation of the quality of life of neighbouring communities or a degradation of the social climate in the Val Marguerite area.

Alderon Response to PC 13-24

The EIS provides an assessment of the potential Project-specific environmental effects of the Project, as well as its likely cumulative environmental effects in combination with other relevant projects and activities that have been or will be carried out.

In understanding and describing the existing environment and the nature and degree of any likely changes to that environment resulting from the Project, the EIS does consider the Project and its potential effects in the context of the overall environmental setting within which it would be developed (see Chapter 3 and each VEC in Volume 2 of the EIS), as well as the presence and effects of other existing and proposed developments in the region (see Section 6.3 of Volume 2, for example). Other ongoing and adjacent projects and activities and their environmental effects were an important and integral consideration in the cumulative effects assessments for all VECs.

The nature, size and layout the Kami Terminal is described in Chapter 2 (Project Description, see Section 2.5 and Figure 2.4 in particular) in Volume 2 of the EIS, including its associated concentrate stockpiles and its relationship to the overall size of, and existing activities at, the Port of Sept-Îles, Québec. The proximity of these existing and proposed development activities to existing communities and residences in the area and to the marine environment, and the potential for dust, noise and other Project-related disturbances and emissions to extend to these areas and affect local residents, was a key focus of the environmental assessment.

The cumulative acoustic effects from current and planned development in addition to the Alderon loading site at Pointe-Noire was examined in the EIS, since the incremental addition of projects in an already industrialized area can alter the desired acoustic environment in surrounding communities beyond what would be detected if assessed on a project-by-project basis. There is the potential for additional mining sites in the region and for increased Pointe-Noire port capacity in the future, both of which could lead to increased rail traffic, port industrial activity, and therefore, increased noise emissions. A cumulative assessment of the acoustic environment must therefore assess current, proposed, and likely future noise emissions from Pointe-Noire and its associated rail infrastructure.

The baseline study inherently incorporates acoustic emissions from existing infrastructure around Pointe-Noire and the Town of Sept-Îles. Ambient noise levels in the vicinity of Sept-Îles

and Val Marguerite were between 37 and 52 dB(A). Computer modeling of the Alderon loading site indicated that negligible increases in noise (less than 1 dB(A)) occurred for nearby sensitive receptors, including Sept-Îles, and residents near Val Marguerite (page 14-51), and imply that the proposed port expansion at Pointe-Noire would generally lead to imperceptible changes in the acoustic environment. The highest change of 6 dB(A) occurred near a community close to the railway due to the increasing rail traffic introduced by the Pointe-Noire loading site. It is important to note that a change of less than 3 dB is difficult to detect in the normal varying ambient environment. A change of 5 dB can be identified, and a change of 10 dB represents, in terms of human perception, a doubling of the sound level. An actual doubling of all sound at any receptor – by doubling the number of industries and the background wind, traffic and other sounds would be an increase of 3 dB. The confinement of development in this area to an already industrial zone that is well separated by distance and topographic shielding from non-industrial areas represents good planning.

Health Canada recommends evaluating noise levels based on the change in percent highly annoyed, which is calculated by:

% HA = 100 / [1+(exp(10.4-0.132*(Ldn)))]

Where Ldn is the day-night noise level calculated in the acoustic model mentioned above, and %HA is the percent highly annoyed from a given noise level. Health Canada Guidelines state that no project should incur a change in the percent highly annoyed greater than 6.5 percent, and should remain below an absolute threshold of 75 dB(A). All noise levels evaluated for the proposed Alderon loading site and rail infrastructure fell well within the above noise guidelines established by Health Canada. The Project also satisfies all Québec noise regulations.

Noise emissions from future planned developments such as mines and port expansions from increased rail activity or industrial activity at the port itself would be expected to further increase noise levels in the surrounding communities. The port site is generally isolated from recreational and residential areas near Sept-Îles and Val Marguerite by both distance and topographic shielding. Based on acoustic modeling of the proposed port site and associated rail traffic, it is anticipated that cumulative noise emissions from industrial activities at Pointe-Noire will not compromise the current or future acoustic environment at Sept-Îles, Val Marguerite, or their surrounding communities. The EIS noise assessment can inform future noise assessments for proposed industrial activities near and within Sept-Îles so that Health Guidelines and Québec regulations may continue to be followed. Baseline and post-commissioning sound level surveys may be appropriate for each project to provide better information to the public on the long-term port development implications.

In addition to predicting and evaluating these potential environmental effects, each VEC section also describes mitigation measures that are designed to help avoid or reduce the potential adverse effects of the Kami Terminal on the biophysical and socio-economic environments, and thus, its potential contribution to any such overall (cumulative) environmental effects. For example, mitigation measures to limit the dispersion of atmospheric emissions resulting from the Kami Terminal include enclosing equipment used for transporting ore and outfitting equipment

such as the conveyor system with dust collectors; using a stacker with an adjustable height; and, performing routine inspections of equipment and dust collectors.

Noise mitigation measures proposed include proper muffler installation on construction machinery and regular maintenance; enforceable low-speed standards on-site, enclosing conveyors and conveyor transfer points; and minimizing the disturbed area to maintain vegetation buffers

The EIS also includes and described a number of environmental monitoring and follow-up programs that Alderon will develop and implement during the Project's construction and/or operations phases to monitoring compliance with relevant regulatory standards and guidelines, and/or to study the environmental effects of the Project and the effectiveness of mitigation. With respect to noise effects, noise monitoring plans will be developed in consultation with regulatory authorities prior to the start of construction as part of the Sustainability Management Framework.

A key priority of Alderon, and important focus of the environmental assessment, has been on identifying, assessing and attempting to mitigate any adverse environmental effects resulting from the Project, including its various components and activities at the Port of Sept-Îles, Québec. The overall nature, scale and pace of current and future development activities at the Port of Sept-Îles, and ensuring that these issues are considered and addressed through appropriate planning and decision-making at the facility, is clearly beyond the ability and responsibility of a single-project Proponent such as Alderon, and falls within the realm of overall management and planning by the Port and municipality. Alderon will, however, continue to work with local and regional planning and management authorities and consult and cooperate with other proponents in that regard, as well as implement appropriate mitigation measures to help ensure that the effects of its Project - and thus, its contribution to any such regional / cumulative effects - are minimized.

4.13.25 PC 13-25

5.2.4. The landscape

Finally, the last aspect that concerns the CRECN with respect to the planned activities at Pointe-Noire in general, and in the context of the Alderon Iron Ore Corp. project in particular, is the appearance of the landscape. Indeed, the accumulation of industrial sites in this area is likely to modify the landscape in a significant way. Although we are aware that this is an industrial zone and that this existing use may sometimes be difficult to reconcile with protection of the landscape, the CRECN would like to reiterate the importance of the Baie de Sept-Iles and its shoreline for the local population and its quality of life. We would also point out that the bay and its landscape are also important assets for the community in its economic diversification efforts, particularly with respect to tourism promotion (proposed Sept-Îles archipelago park, boat tours, visits by international cruise ships, etc.).

We therefore believe that a permanent monitoring project for the Baie de Sept-Îles should include aspects relevant to preservation of the landscape.

Alderon Response to PC 13-25

The Sept-Îles urban plan sets guidelines on the spatial and physical organization of its territory and reflects a global vision of urban land planning. The Kami Terminal is planned in the industrial area of Pointe-Noire. This is in accordance with urban planning and with the planned expansion of the Port of Sept-Îles. More importantly it will be built in an area where the landscape has already been disturbed by port development.

6. Conclusion

In conclusion, the CRECN is concerned about several aspects of the project submitted by Alderon Iron Ore Corp. to the Canadian Environmental Assessment Agency. Central to the organization's concerns are the cumulative impacts of the various projects which are foreseeable in the short and medium terms in the Sept-Îles area. Beyond the anticipated impacts of the Kami project itself, which are discussed in this brief, it is rather the sheer number of industrial projects and their impacts which cause the CRECN to fear a significant decline in quality of life for the residents of the affected communities.

The CRECN also wishes to support the actions taken by various regional stakeholders in order to improve the planning and oversight of development and mitigate the anticipated impacts. On this point, we believe that the most promising measures are those that will make it possible to more effectively take into account the cumulative effects of the various projects (on air quality or monitoring of the status of ecosystems and biodiversity, for example). We reiterate our willingness to use our expertise in support of efforts aimed at attaining these goals.

PC 13 References

GENIVAR 2008a. Construction d'une aciérie à Sept-Îles – Inventaire des espèces d'oiseaux et des plantes menacées et vulnérables – rapport descriptif. 16 p.+ annexes.

GENIVAR 2008b. Projet Minier Du Lac Bloom, Aménagement D'infrastructures De Manutention Du Concentré De Fer, Port De Sept-Îles -Examen environnemental préalable. Projet B111563, Novembre, 2008.

GENIVAR 2010. Agrandissement du terminal de vrac de Pointe-Noire Rapport d'examen préalable réalisé dans le cadre de la Loi canadienne sur les evaluations environnementales (LCÉE). Nº du RCEE 10-01-55490. Version finale, 1er septembre 2010.

Nature Québec / UQCN, 2007. ZICO de Sept-îles : Plan de conservation. 57 p. http://www.natureQuébec .org/uploads/tx_qmiba/planQC081_01.pdf.

4.14 Shabogamo Mining & Exploration Ltd. (PC 14)

4.14.1 PC 14-1

Dear Mr. Brent Keeping
Re: Kami Iron Ore Project Environmental Impact Statement

For Shabogamo Mining & Exploration Ltd (SME) to protect and safeguard its business interests requests the following .

1. **SME to be included in the Kami EIS report**

2. **Alderon Iron Ore Corp submits a new mining/engineering plan that does not impact SME mineral claims.**

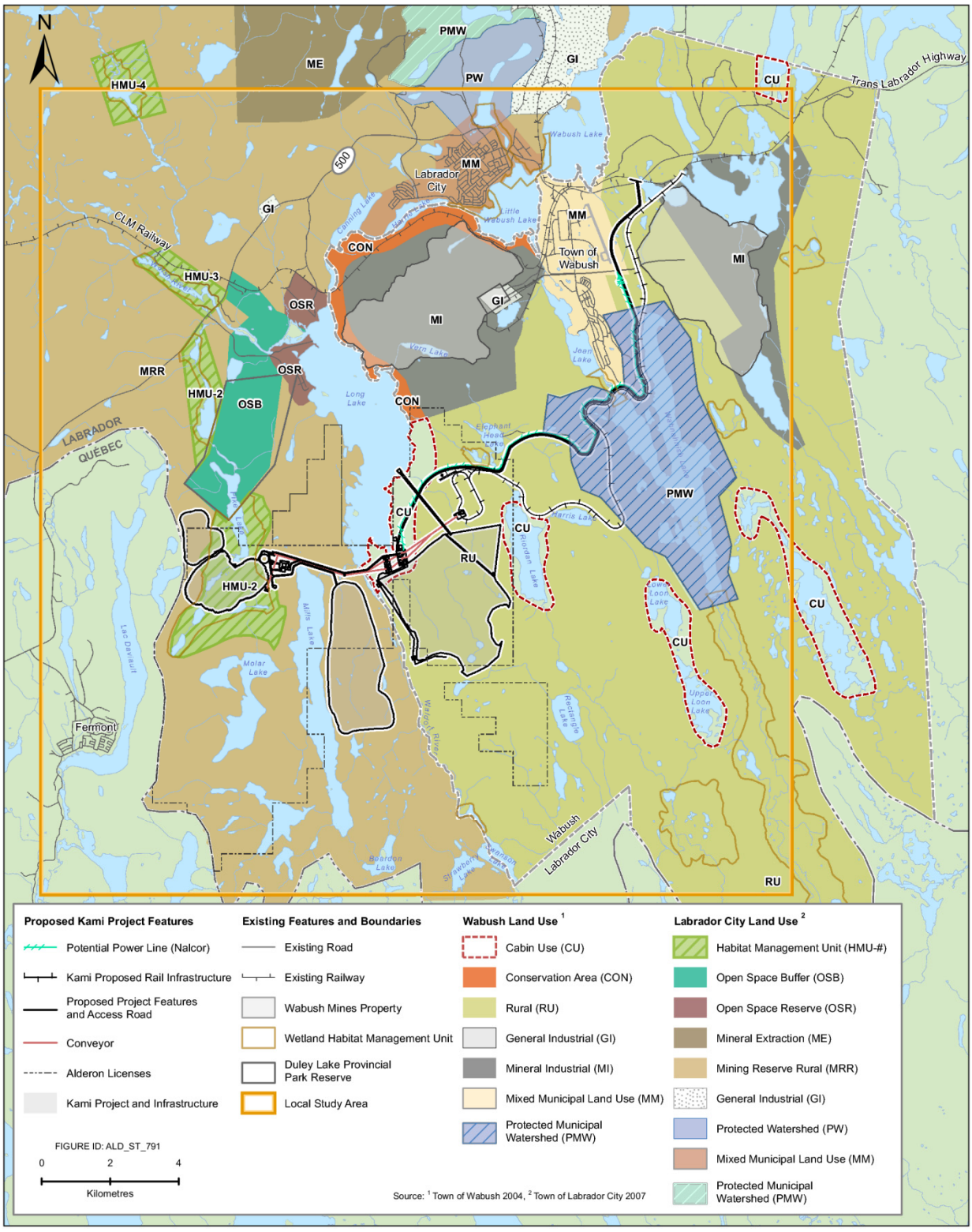
Yours Sincerely
Rehan Malik President Shabogamo Mining & Exploration Ltd

Alderon Response to PC 14-1

Shabogamo Mining and Exploration Ltd. (SME) currently hold a number of mineral claims adjacent to the Kami properties (Figure 4.14.1). In response to concerns expressed by the community of Fermont over the location of the Rose South Waste Rock Disposal Area, Alderon investigated other areas within or in close proximity to the claim blocks held by Alderon. The current proposed location of the waste rock disposal area overlaps a portion of the claims held by SME. Alderon has been in discussions with SME over accessing geological information in order to help determine the commercial value, if any, of the potential mineralization within these portions of the SME claims. To view this discussion, please refer to the two letters presented in Appendix U. Alderon has entered into a non-disclosure agreement with SME to assess the level of mineralization in this area.

In order to advance the Project, Alderon will be required to obtain a mining lease and surface rights from the NLDNR both inside and outside of Alderon's claim blocks. This process is well defined and is initiated after the completion of the environmental assessment process.

Figure 4.14.1 Shabogamo Mining and Exploration Ltd. Mineral Claims Adjacent to the Kami Properties



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