

Quebec City, March 31, 2021

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**Re: Laurentia - Deep Sea Container Terminal**  
Additional information re IAAC draft report

Dear Mr. Dubreuil:

As part of the assessment process for the Laurentia project conducted by the Impact Assessment Agency of Canada (IAAC) and following publication of the draft environmental assessment report in November 2020, the Québec Port Authority (QPA) requested time to provide additional information and to hold meetings with organizations and local groups that had raised concerns following publication of the report. One of the report's effects was to raise fears in a community already worried about air quality issues. QPA experts have also produced various technical documents that address specific issues in the draft report on air quality and fish habitat. As a result of these additional consultations and documents, we are now in a position to present an improved project that in our opinion substantially reduces the impacts.

QPA's filings cover three (3) specific areas identified in the report as having significant residual effects:

1. Community dialogue and social acceptability
2. Air quality and human health
3. Fish and fish habitat

Before reviewing each of these issues, it is important to keep in mind that the Laurentia project is of strategic importance for Canada, Quebec, and the greater Quebec City area. The terminal alone represents an investment of nearly \$800 million, mostly financed by private interests. Its business model is unique in that it combines the expertise of two global leaders in large supply chains, CN and Hutchison Ports. The project will go some way to countering the meteoric rise of U.S. east coast ports, which have been draining significant market share from the St. Lawrence River. Laurentia is emerging as a new gateway for eastern Canada, combining proximity to major markets with the water depth required by new global maritime standards. The St. Lawrence—an essential and historic trade corridor—will be poised to regain its market leadership and build resilience and self-sufficiency in eastern Canadian supply chains. In addition, it will spur growth for Quebec companies that export, eliminating millions of kilometres of trucking on Quebec roads each year by adding container capacity close to home.

Laurentia is a ready-to-build investment project for a post-pandemic world that puts us on a road to a greener, more inclusive, more prosperous economy. It will be the most state-of-the-art terminal in North America, using hydroelectric-powered electric and hybrid equipment and providing quality, well-paying jobs available to all. From an economic and environmental perspective, there is no better industrial port project that the Québec Port Authority could have proposed for accelerating modernization efforts and guaranteeing a thriving, sustainable port. Laurentia will diversify Port of Québec operations and further its commercial mission while remaining in full alignment with the Industry Strategy Council's most recent report, which calls for an ambitious growth plan aimed at building a digital economy that is innovative and sustainable.<sup>1</sup>

## 1 DIALOGUE WITH THE COMMUNITY

### 1.1 BACKGROUND AND OBJECTIVES

In response to IAAC's draft report, numerous comments and submissions were made by various groups and organizations and were released by IAAC. QPA carefully examined this feedback and produced an analysis summarizing the main concerns raised. QPA used the information gathered to look closely at residual issues, identify potential new measures, and validate the actions and commitments required to address them. Meetings with various stakeholders were held in order to reach and hear from as many people as possible. QPA sought a constructive approach with the community focused on listening to concerns, discussing project issues, and answering as many questions as possible. Each meeting agenda was specially drawn up to address the concerns of attendees.

This process was reflective of a clear desire on the part of QPA to establish an ongoing dialogue with the community in order to identify opportunities for additional, complementary, or adapted measures that would avoid, attenuate, or compensate for the potential negative effects of Laurentia on the environment and the community.

### 1.2 HIGHLIGHTS

#### ◆ Feedback analysis and community outreach

Analysis of the feedback showed that there were five orders of concern: (1) risks with regard to airborne emissions, (2) justification of the project on the existing port site, (3) risks to the river's ecosystems and biodiversity, (4) risks with regard to nuisance coming from additional rail and road traffic, and (5) risks to Beauport Bay.

Knowing this, QPA held targeted meetings in order to discuss these items in complete transparency and address any other issues raised. This led to additional measures being developed and spurred discussion on new solutions. QPA also committed to further discussions with committees and organizations and to creating the **Laurentia Monitoring Committee** to help meet this objective. The committee is discussed below.

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<sup>1</sup> Industrial Strategy Council - Her Majesty the Queen in Right of Canada, as represented by the Minister of Industry, 2020

For example, several groups and individuals asked QPA to justify the fact that the impacts of the project would be experienced by adjacent Beauport communities, while the benefits would accrue elsewhere. In addition to the well-paid jobs, QPA clearly set out the major economic advantages this project would deliver to Quebec City, Quebec, and all of Canada and its lasting benefit to researchers, business innovators, and local exporters. As an additional measure, QPA has decided to step up its involvement in La Cité-Limoilou by remitting a significant annual monetary grant to be entirely managed by a committee of citizens. The public announcement of this new permanent Community Fund is attached as Appendix A. This announcement is in addition to the nearly \$10 million already announced for improvements to Beauport Bay (Appendix B).

The complete technical note identifying additional measures to address concerns can be found in the document entitled Section 1 - Laurentia - A Better Project Following Public Consultation and Community Dialogue.

### **• On social acceptability**

It is difficult to define social acceptability because it is a collective and evolving process that involves a large number of local and regional stakeholders. Today, unanimous support for large industrial projects (and even public projects) is impossible to achieve, and QPA believes instead in continuous dialogue with the community to seek innovative solutions adapted to the environment and create the conditions needed to achieve social acceptability. It is important to remember that Laurentia will be developed on industrial land managed by the Port of Quebec, but that it is located near densely populated urban areas, like other port cities around the world that have succeeded in combining a variety of uses: Barcelona, Dublin, Genoa, and Rotterdam to name but a few.

Laurentia project opponents were more vocal during the public consultation period. Many comments from the public reflected outright hostility to a market economy and the globalization of trade, meaning that no industrial port development project, regardless of its nature, could be acceptable to them. QPA welcomed all these opinions with openness and interest and worked on concerns and ideas that would allow it to improve on the project and related monitoring and follow-up measures.

With social acceptability an evolving process, QPA has therefore decided to set up the Laurentia Monitoring Committee to create opportunities for dialogue and discussion, first with the project office, then with QPA and its partners during the operations phase. The committee will be a sounding board as the project design evolves and monitoring measures are adapted to issues raised. The committee is one of the ways QPA intends to work with the public to demonstrate its transparency and—importantly—help make Laurentia a better project. The committee will be invited to submit its own independent report to IAAC on efforts by QPA and its partners to limit the impacts of the project and its operations.

Also noteworthy are the exhaustive surveys recently conducted in the greater Quebec City area on Laurentia. The last one, in February 2021, once again revealed broad support for Laurentia—close to 70%—suggesting that a majority of citizens see the merits of this project. It should also be noted that the survey was specific to the Port of Québec and Laurentia and that the sample over-represented residents of La Cité-Limoilou.

## **🌱 Renewed support from the Huron-Wendat First Nation**

Following the election of a new Grand Chief and Council of the Huron-Wendat Nation in the fall of 2020, Laurentia was presented in detail to the newly elected officials. QPA explained the project and its benefits and impacts, prompting the Nation to reiterate its support in full knowledge of the project. (See letter in Appendix C.) QPA is proud of the harmonious relations it has maintained with the Huron-Wendat Nation over the years and wishes to continue the collaborative initiatives underway in support of Laurentia.

Other discussions are also underway to set up working groups for Laurentia project monitoring or other specific types of collaboration, notably with the Maliseet, Abenaki, and Innu First Nations, to ensure attention is paid to impacts in their respective geographic areas.

## **2 AIR QUALITY AND HUMAN HEALTH**

### **2.1 BACKGROUND AND OBJECTIVES**

The project features advanced technology composed of electric and hybrid equipment, all powered by hydroelectricity. It is important to remember that, according to a study submitted to IAAC,<sup>2</sup> Laurentia's innovative technology and optimization of logistics chains for the supply of goods will result in a nearly 20% reduction in GHG emissions compared to today and more than 7 million fewer kilometres driven annually on Quebec roads.

More specifically, QPA wishes to manage the impacts on air quality and human health from an overall perspective. Its strategy is threefold:

1. The use of electric and hybrid equipment will maximize reduction of airborne emissions and GHGs from the container terminal and includes a commitment to carbon neutrality, both during the construction and operations phases.
2. QPA will work with clients and partners to implement an effective emissions and GHG reduction plan for all other port operations.
3. QPA will work actively with the various levels of government to improve air quality in La Cité-Limoilou. It should be noted that QPA is already working with CICEP (Comité intersectoriel sur la contamination environnementale et la qualité de l'air dans l'arrondissement La Cité-Limoilou) and aims to continue its work within CICEP to maintain its leadership as an industrial player.

IAAC's draft report points out the fact that Laurentia project emissions, although not significant, are part of an already saturated environment. QPA's aim is therefore to carry out the Laurentia project under conditions where project emissions are as low as possible. It is important to note that Laurentia offers a real opportunity to accelerate the move to electrification. To aim for this, modelling was carried out under pessimistic and improbable assumptions, to identify situations where worst-case emission conditions could theoretically occur. Through this conservative approach, which even included off-property ground transportation impacts in La Cité-Limoilou, QPA sought to identify hypothetical

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<sup>2</sup> Laurentia Project - Environmental and Economic Study, Deloitte, March 2020

scenarios that presented exceedance risks, in order to plan adequate means to prevent them from occurring. When these conclusions were noticed, some groups and citizens believed that the Port was according itself the right to exceed standards, which is absolutely not the case.

In light of the above, new efforts have been expended (1) to provide more information to properly identify the nature of the actual anticipated impacts and (2) to propose additional measures to make further progress toward a situation with the lowest possible airborne and GHG emissions.

## 2.2 HIGHLIGHTS

### • Sensitivity and uncertainty study

This study by MESIP<sup>3</sup> was designed to better understand the risks to human health. It was conducted through a more detailed analysis of the results of the Tier 1 risk analysis filed with the IAAC.

One of the conclusions by Dr. Loranger of MESIP is clear: Laurentia's contribution to health risks arising from air emissions of gaseous and particulate pollutants can be considered insignificant and negligible. According to the study, Laurentia would not pose a significant risk to the health of the surrounding population.

Despite this reassuring conclusion, QPA will put in place additional measures in the spirit of the threefold strategy mentioned above.

### • Additional measures to improve air quality

- Construction – new clauses to be included in the future construction contract between the owner and the contractor to reduce airborne emissions and GHGs

These measures are designed to mitigate the effects of combustion engines at the source during construction. They include requiring contractors to use mostly group 4<sup>4</sup> heavy equipment, with the option of using hybrid trucks on site. For example, QPA is studying a technology by Effenco Development Inc. that can be installed on certain trucks to allow them to switch from diesel to electric when idling and during stop-and-go manoeuvres. According to the results of the technical note prepared by SNC Lavalin and included in Section 2, this mitigation measure has been demonstrated to have a significant positive impact on NO<sub>2</sub>, PM<sub>2.5</sub>, and formaldehyde emissions.

- Operations – vessels and electrification of new wharf

QPA plans to install the necessary equipment to provide shore-side power so ships can connect to an electrical power supply rather than using diesel generators when docked at the terminal. According to the technical note prepared by SNC Lavalin and included in Section 2, providing electrical power to ships at the dock would reduce the project's contaminant and GHG emissions and reduce the magnitude and frequency of impacts on air quality. It is also important to note that the maritime industry is undergoing

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<sup>3</sup> Final Report - Sensitivity and Uncertainty Analysis of Human Health Risk Calculations, MESIP Inc, Sylvain Loranger, Ph.D., March 2021

<sup>4</sup> Since January 16, 2012, more stringent standards—called Group 4 standards—have been in effect and will lead to further emission reductions for the construction vehicle sector. Emission standards and test procedures are based on those of the United States Environmental Protection Agency (EPA).

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significant change in an effort to reduce its environmental footprint; the use of alternative fuels and/or biofuels are measures being considered to improve its environmental record. The International Maritime Organization (IMO) has committed to reducing total greenhouse gas emissions by at least 50% by 2050 compared to 2008, working to eventually eliminate them completely.

- Operations – enhanced fleet of group 4 locomotives

This commitment was incorporated into the basic assumptions of the air contaminant dispersion study for locomotives directly associated with the terminal (those that shuttle between the train loading area and the Beauport yard).

CN has also confirmed that the number of group 4 intermodal locomotives already in operation in Quebec is greater than the number used in the impact assessment that looked at the average emissions of the 2017 Canadian freight rail fleet. CN has confirmed that 35% of the locomotives in the current intermodal fleet are group 4. SNC Lavalin's technical note shows that some of the impacts on air quality are lower than in the initial conservative model. CN will continue its efforts to reduce emissions and GHGs with more efficient engines and a greater use of biofuels.

- Partnership with COOP Carbone and Propulsion Québec: ground transportation

QPA wishes to be a lead player in electrifying and optimizing transportation in the community. Discussions are underway with partners such as COOP Carbone and Propulsion Québec, who work in transportation electrification and promote sustainable transportation through innovative, community-based approaches. Appendix D contains letters of interest from these two organizations to QPA about pursuing their efforts to identify opportunities, not only for operations at the Laurentia terminal, but for all activities at the Port of Quebec.

#### *A major rail pilot project in Quebec City*

The numerous concerns raised by the public about rail operations in the Quebec City area and about issues surrounding the air quality baseline in La Cité-Limoilou suggest the time is right for an original pilot project. This innovative project—currently at the technical feasibility stage—would see two locomotives powered by high-performance batteries deployed in Quebec City, and specifically La Cité-Limoilou, for silent, contaminant-free operation ideal for an urban setting. A timeline has not yet been determined, but the goal is to have them in operation by the start of Laurentia's operations phase.

This project is unique in Canada. It will be a compelling opportunity for CN to demonstrate the reliability of this advanced technology, even in winter conditions. It would also include a quick-charging terminal for optimal locomotive operation. The project has particular value given its use of "clean" electricity from hydroelectricity. The Government of Quebec has expressed an interest in becoming a partner. A letter of interest from CN is included as Appendix E.

## 🔗 Carbon neutrality in operations phase

QPA is committed to carbon neutrality. It undertakes to offset all residual GHG emissions directly related to the terminal's activities. This strategy may include the purchase of offsets from the regulatory or voluntary market through registered projects, tree planting, or GHG reduction projects for Laurentia and other port operations, including suppliers and project partners. QPA had already announced its commitment to carbon neutral facilities.

We refer you to the technical notes of Section 2 – Air Quality and Human Health for full details on these proposals.

## 🔗 Change to nickel standard - Quebec government announcement

On March 30, the Quebec government announced its intention to review the standard for airborne nickel emissions in the *Regulation respecting the quality of the atmosphere* (RAA). The Port of Québec welcomes this news. This draft regulation is a combined effort of numerous Quebec government ministries, including MELCC (Ministère de l'Environnement et de la Lutte contre les Changements climatiques) and INSPQ (Institut national de santé publique du Québec), as part of the interministerial committee for the review of the nickel standard. This proposal to update the standard has been accepted by Direction de la santé publique de la Capitale-Nationale and is a wise solution in terms of public health protection, the environment, and economic development.

In this regard, QPA has asked its experts to review Laurentia's impact in terms of these new thresholds. The results of our first analysis will be sent to you in the next few days. It should be noted that these results will not take into account additional reduction measures that will be implemented as part of the overall effort to reduce air emissions from Port operations as previously stated.

## 3 FISH AND FISH HABITAT

### 3.1 BACKGROUND AND OBJECTIVES

The IAAC draft report concludes that there are significant impacts on fish and fish habitat and, consequently, on sport, commercial, and traditional fisheries. However, the most recent studies together with information from several sources seem to indicate that the species possibly affected by the project are currently healthy and abundant in the St. Lawrence River. Also, additional efforts have been made recently with authorities to reduce the potential effects of the project and improve mitigation measures and the compensation program. QPA believes these project optimizations should allow the project to go ahead while preserving fish populations and their habitats, particularly special-status species, and ensure the project has no significant negative residual effects in this regard.

### 3.2 HIGHLIGHTS

#### 🔗 Crosswalk summarizing QPA's efforts to resolve the DFO issues presented in its September 4, 2020 Notice

In its September 4, 2020 Notice, Fisheries and Oceans Canada (DFO) raised issues related to the Laurentia project and its impact on fish and fish habitat, special-status species and their habitat, and Aboriginal fisheries, particularly in relation to striped bass, lake sturgeon, Atlantic sturgeon, rainbow

smelt, and American shad (DFO 2020). Since September 2020, QPA has had several discussions and held four (4) workshops with DFO in order to better understand and put in place the necessary means to further mitigate the impacts of the project. Based on this, QPA has put forward:

- significant new mitigation measures, including:
  - a proposed work sequence consistent with the new restriction period set out by DFO and important new measures to eliminate suspended solids in the aquatic environment; and
  - an improved compensation program that offers an overall compensation ratio of 1.4:1 that adequately covers all species according to the experts who worked on it;
- and an exhaustive review of the relevant literature and the expertise of striped bass biologists and researchers in the Canadian Maritime provinces and the United States to deepen our knowledge of this species and validate certain conclusions of the impact study with peers.

The crosswalk in the Ecofish technical note provides a systematic look at each of the issues raised by DFO in its Notice and a succinct and concrete response to each one.

#### 🔗 **Interaction between Laurentia and the striped bass population in the St. Lawrence River under SARA**

QPA remains convinced that Laurentia will not jeopardize the survival or recovery of the St. Lawrence River striped bass, as stipulated under section 73(3) of the *Species at Risk Act* (SARA, GC 2016), for two reasons:

1. The historic St. Lawrence River population identified in Schedule 1 of SARA (GC 2020) has not been considered officially present in the river since 1968 (Cosepac 2019).
2. The new population introduced into the river from the southern Gulf of St. Lawrence population is well established, increasing, and self-sustaining.

However, QPA is determined to work with the federal and provincial governments to ensure the continued success of the new striped bass population in the river for major aquatic project purposes.

QPA is confident that by working to prevent future impacts through concrete avoidance, mitigation, and compensation measures, including improvements to announced measures and the addition of new measures since September 2020, Laurentia will not jeopardize the establishment or survival of the striped bass population introduced into the St. Lawrence. Effects on the species will only be incidental.

#### 🔗 **Additional measures in relation to lake and Atlantic sturgeon**

QPA has made additional efforts to avoid, mitigate, and compensate for Laurentia's impacts on the two sturgeon species in the St. Lawrence River. In particular, QPA has worked to increase confidence in the conclusion that the project will not significantly impact these species of interest through new proposed measures and collaborative efforts with Aboriginal peoples since the DFO's notice was released last September.

The new enhanced compensation plan includes four sturgeon projects, three of which have been newly added since the DFO notice was released. The four projects would provide a total of 17.5 ha of weighted



sturgeon habitat, i.e., a compensation ratio of 2.2:1 for the 8.0 ha weighted area potentially affected by the Laurentia project according to DFO's notice.

One of the four projects in the enhanced program is to fund a research program to fill gaps in knowledge about Atlantic sturgeon. This research would help locate the spawning ground(s) of this species and define critical juvenile habitats in the river corridor in order to better target protection measures. The Council of the Huron-Wendat Nation joined this effort in January 2021 and has developed a new project in collaboration with QPA to carry out two components of this study program.

#### 🔗 **New information on Laurentia and project optimization since January 1, 2021**

Since January 2021 (QPA submitted its brief on December 16), QPA has continued to gather new information and has sought to optimize the Laurentia project in order to resolve the issues raised by DFO. This technical note for Section 3 demonstrates that QPA has continued to make improvements by proposing additional mitigation measures and an enhanced monitoring and follow-up program, including:

- electrification of ships at berth: reduction of underwater noise
- use of bubble curtains to limit total suspended solids in fish habitat
- confirmation of other measures outlined in the December 16 brief and discussed in the workshop with DFO on construction methods:
  - aggregate without particles smaller than 10 mm
  - containment of in-water work
  - revised work sequence in accordance with the restriction period suggested by DFO
- involvement of the Huron-Wendat Nation in compensation projects for Atlantic sturgeon
- side-scan sonar detection of sturgeon
- continued collaboration with Fédération des Chasseurs pêcheurs du Québec

QPA is confident that its improved mitigation measures and other new measures, together with its improved compensation plan, combine to ensure the project will not have significant residual impacts on fish and fish habitat. It should be noted, however, that work will continue with DFO, Aboriginal groups, and the public over the coming months.

We refer you to the technical notes in Section 3 – Fish and Fish Habitat for full details on these proposals.

## **4 CONCLUSION**

The Quebec Port Authority is aware that this project, like any major project, has impacts and is part of an urban dynamic that requires concrete and targeted measures and commitments to make the project acceptable and ensure sustainable economic development in accordance with the priorities of the Government of Canada. In response to the concerns raised by citizens, First Nations, and government authorities, QPA has continually refined and improved its plans. And it is determined to continue its efforts throughout the construction and operations phases of the terminal. We are confident that everything is in place to address all air quality and fish habitat concerns. QPA, its partners, and the experts it has consulted have put in place all the necessary conditions and measures to substantially reduce the negative residual impacts of the project and obtain the necessary authorizations.

The Quebec Port Authority is of the opinion that the information it has submitted will be useful in guiding the upcoming work of IAAC and it remains available to answer your questions and those of your experts.

Yours sincerely,  
<Original signed by>

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