



Application for Amendment #1 to Environmental Assessment Certificate #E21-01

RETM-230001-REG-APL-0007

Ridley Island Energy Export Facility Limited Partnership



**Ridley Island Energy Export Facility -
Application for Amendment #1 to
Environmental Assessment
Certificate #E21-01**

November 17, 2023

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Limitations and Sign-off

This document entitled Ridley Island Energy Export Facility - Application for Amendment #1 to Environmental Assessment Certificate #E21-01 (the "Application") was prepared by LK Enterprises – Stantec Joint Venture ("LK-Stantec") c/o Stantec Consulting Ltd. for the account of Ridley Island Energy Export Facility Limited Partnership (the "Client") to support the regulatory review process for the Application. In connection therewith, this document may be reviewed and used by the Environmental Assessment Office and all members of its Technical Advisory Committee participating in the review process in the normal course of its duties. Except as set forth in the previous sentence, any reliance on this document by any other party or use of it for any other purpose is strictly prohibited. The material in it reflects LK-Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between LK-Stantec and the Client. The information and conclusions in the document are based on the conditions existing at the time the document was published and does not take into account any subsequent changes. In preparing the document, LK-Stantec did not verify information supplied to it by the Client or others, unless expressly stated otherwise in the document. Any use which another party makes of this document is the responsibility and risk of such party. Such party agrees that LK-Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other party as a result of decisions made or actions taken based on this document.

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Executive Summary

The Ridley Island Energy Export Facility (REEF or the Project), formerly known as the Vopak Pacific Canada Project, will include the construction and operation of a bulk liquids storage facility, including a new jetty at Ridley Island, near Prince Rupert, British Columbia, Canada. The Project is located within, or near, the territories of the following Indigenous nations: Lax Kw'alaams Band, Metlakatla First Nation, Gitga'at First Nation, Gitxaala Nation, Kitselas First Nation, and Kitsumkalum First Nation.

Ridley Island Energy Export Facility GP Inc., on behalf of Ridley Island Energy Export Facility Limited Partnership, a joint venture partnership between AltaGas Ltd. and Vopak Development Canada Inc., is applying to the Environmental Assessment Office to amend environmental assessment certificate EAC #E21-01, issued on April 20, 2022. The Project is currently in Front End Engineering Design (FEED), which will be completed before a final investment decision, after which Detail Engineering will begin. Selection of equipment will take place during the Detail Engineering phase, and as such, REEF is requesting amendments to EAC #E21-01 to remove details around specific equipment. The objective of this amendment is to provide the Project with flexibility in order to quickly and efficiently execute the Project once design decisions are made, while continuing to reduce environmental and socio-economic effects.

Table ES 1 outlines the requested changes and provides rationale for the changes in Schedule A and Table ES 2 outlines the requested changes in Schedule B.

Table ES 1 Original and Revised Schedule A Certified Project Description and Rationale

Original and Revised Wording of EAC #21-01	Rationale
<p>Vopak Pacific Canada Project <u>Ridley Island Energy Export Facility</u></p>	<p>Ridley Island Energy Export Facility Limited Partnership, a joint venture of AltaGas Ltd. and Vopak Development Canada Inc., was formed to advance this Project. The Project name was changed to Ridley Island Energy Export Facility at that time. The change should be reflected throughout the EAC.</p>



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Original and Revised Wording of EAC #21-01	Rationale
<p>A. Bulk Liquids Tank Storage Facility</p> <p>The Bulk Liquids Tank Storage Facility, as shown on Figure 2, is comprised of permanent components and supporting infrastructure. The permanent components are:</p> <ul style="list-style-type: none"> • Tanks with the capacity to store the following products: <ul style="list-style-type: none"> — One tanks with the capacity to store up to 90,000 cubic metres (m³) of LPG. — Up to eight tanks with the capacity to store up to 260,000 m³ of Light Diesel and gasoline; and — Up to six tanks with the capacity to store up to 220,000 m³ of methanol;. • <u>Facility with the capacity to store up to:</u> <ul style="list-style-type: none"> - <u>98,000 cubic metres (m³) of LPG.</u> - <u>260,000 m³ of light diesel and gasoline; and</u> - <u>220,000 m³ of methanol;</u> 	<p>The change from specific numbers of tanks to total storage capacity allows more flexibility in designing the facility to be economic and operationally efficient.</p> <p>The change to maximum storage capacity of liquified petroleum gas (LPG) simplifies the presentation of the LPG storage capacity but does not change the total storage capacity.</p> <p>The total storage capacity and the types of products being handled is not changing.</p> <p>The removal of “tank” from references to the bulk liquids storage facility is to align the CPD with the requested change from a tank storage facility to a storage facility.</p>
<p>A. Bulk Liquids Tank Storage Facility</p> <p>The permanent supporting infrastructure and facilities are:</p> <ul style="list-style-type: none"> • Two 16.5 megawatt (MW) gas (ethane) turbines for power generation, operating at a combined maximum of 20 MW • <u>Power generation capacity up to a maximum of 20 MW</u> 	<p>This change is requested as the equipment is currently being selected and turbines may not be used for power generation. Total power generation capacity and greenhouse gas (GHG) emissions limits are not changing.</p>
<p>A. Bulk Liquids Tank Storage Facility</p> <p>The permanent supporting infrastructure and facilities are:</p> <p>LPG pressure vessels (e.g., bullets, spheres) with the capacity to store a total of up to 8,000 m³, to hold pressurized LPG that is unloaded from rail cars;</p>	<p>This change is requested to simplify the presentation of the LPG storage capacity. The facility’s total LPG storage capacity is not changing.</p>
<p>A. Bulk Liquids Tank Storage Facility</p> <p><u>Other utilities;</u></p>	<p>This change is requested to incorporate all types of utilities required for the Project, such as a fibre optic cable.</p>
<p>B. Marine Terminal</p> <p>One platform for firewater pumps <u>utility storage</u> located along the jetty</p>	<p>This change is requested because the function of the platform will be changed to facilitate efficient and safe operations.</p>
<p>Figure 2 (<u>Revised</u> Project Layout) of the Certified Project Description</p>	<p>The Project Layout figure requires updating to show the new location of the rail offloading area and adjustment to the bulk liquid storage facility area.</p>
<p>Note: New text is underlined and text to be removed is shown in strikethrough text.</p>	



Table ES 2 Original and Revised Schedule B Table of Conditions and Rationale

Original and Revised Wording of EAC #21-01	Rationale
<p>Definitions</p> <p><u>Scope 1 emissions</u> Direct emissions from owned or controlled sources.</p> <p><u>Scope 2 emissions</u> Indirect emissions from the generation of purchased <u>electricity, steam, heating and cooling consumed by the company.</u></p>	<p>Addition of definitions for greenhouse gas (GHG) scopes 1 and 2 emissions per the GHG Protocol for clarity on proposed changes to condition 11.3.</p>
<p>10.2 The Holder must provide, to the satisfaction of the EAO, a report (“the socio-economic engagement summary report”) on the Holder’s involvement in the CSIC, including a report on the mitigation measures and plans referred to in section 10.1, at the following times:</p> <p>a) On or before January <u>March</u> 31 in each year following the commencement of Construction;</p>	<p>Changing the submission date allows the report to cover activities for the full calendar year (i.e., January to December) and allows for engagement on the report to occur after the holiday season (i.e., December).</p>
<p>11.3 The Plan must:</p> <p>a) Include an estimation of the projected annual GHG emissions, total GHG emissions for Operations and GHG emissions over the Project’s lifetime. The <u>total combined</u> estimated <u>annual</u> Project GHG emissions for <u>scopes 1 and 2</u> must be equal to or lower than <u>102,687 tonnes CO₂e</u> (the estimates provided in Table 5.1-39 of the Application);</p>	<p>Adding the total GHG emissions for scope 1 and 2 to the condition provides clarification without cross referencing to another document. No change in Project GHG is being requested.</p>
<p>Note: New text is underlined and text to be removed is shown in strikethrough text.</p>	

This amendment application follows the environmental assessment process by identifying the following: potential interactions with valued components; mechanisms for interactions with valued components; mitigation measures to reduce potential negative effects; characterizing effects of the proposed changes compared to the EAO’s Assessment Report (EAO 2021); and providing a description of risk and uncertainties associated with the characterization of residual effects. Where residual effects from the Project are predicted and the residual effects of proposed changes have the potential to interact spatially and temporally with the residual effects associated with past, present or reasonably foreseeable projects and activities, a cumulative effects assessment is completed, following similar steps. An assessment of the proposed changes on Indigenous interests and other section 25 matters of the *Environmental Assessment Act* is also completed.

The changes in this amendment application are primarily administrative in nature (e.g., changing the project name, clarifying wording around power generation). For the purpose of this amendment application, the removal of the reference to the number of tanks and change in rail unloading rack location will occur in areas that are assumed to be cleared as these will be located within the footprint of the facility that was considered in the original assessment. The extension of the bulk liquid storage area to the lease boundary will not require further biophysical changes, and it was previously assessed as the rail unloading rack location. This assessment did not identify valued components that required further assessment. Potential effects will be managed through existing management plans (e.g., Construction Environmental Management Plan). The amendment has not identified additional mitigation measures beyond those already identified in the initial application for the Project’s EAC. As no interactions with



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valued components were identified, no additional effects to Indigenous interests are anticipated. No potential effects on section 25 matters were identified as a result of the proposed changes. AltaGas has engaged and will continue to engage with Lax Kw'alaams Band, Metlakatla First Nation, Gitga'at First Nation, Gitxaala Nation, Kitselas First Nation, and Kitsumkalum First Nation.



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Acronyms / Abbreviations

AltaGas	AltaGas Ltd.
BC	British Columbia
CPD	Certified Project Description
EA	Environmental Assessment
EAA	<i>Environmental Assessment Act</i>
EAC	Environmental Assessment Certificate
EAO	Environmental Assessment Office
EEE/Application	Environmental Effects Evaluation / Application for an Environmental Assessment Certificate
FEED	Front End Engineering Design
GHG	Greenhouse Gas
LPG	Liquified Petroleum Gas
m	metre
m ³	cubic metre
mW	megawatt
PRPA	Prince Rupert Port Authority
Project or REEF	Ridley Island Energy Export Facility
RRUC	Ridley Island Road, Rail, and Utility Corridor
SARA	<i>Species at Risk Act</i>
TAC	Technical Advisory Committee
VC	Valued Component
Vopak	Vopak Development Canada Inc.



1 Introduction

The Ridley Island Energy Export Facility (REEF or the Project), formerly known as the Vopak Pacific Canada Project, will include the construction and operation of a bulk liquids storage facility, including a new jetty at Ridley Island, near Prince Rupert, British Columbia, Canada.

Ridley Island Energy Export Facility GP Inc., on behalf of Ridley Island Energy Export Facility Limited Partnership, is a joint venture partnership between AltaGas Ltd. (AltaGas) and Vopak Development Canada Inc (Vopak). The Project will be built and managed day-to-day by Ridley Island Energy Export Facility Limited Partnership, with team members from AltaGas leading the development.

The 190-acre (77 hectare) site where REEF would be developed is land administered by the Prince Rupert Port Authority (PRPA) and the joint venture has executed a long-term lease for the site. These lands are located within an area designated for port-related activities and are adjacent to the existing Ridley Island Energy Propane Export Terminal, successfully developed and operated by AltaGas and Vopak and in operation since 2019.

The Project is within, or near, the territories of the following Indigenous nations: Metlakatla First Nation, Lax Kw'alaams Band, Gitga'at First Nation, Gitxaala Nation, Kitselas First Nation, and Kitsumkalum First Nation.

The Project will handle liquified petroleum gases (LPG), clean petroleum products (e.g., diesel and gasoline), and methanol. The Project received an environmental assessment certificate (EAC) #E21-01 under the *Environmental Assessment Act* (EAA) under its previous name, Vopak Pacific Canada Project on April 20, 2022.

The Project is currently in Front End Engineering Design (FEED), which will be completed before a Final Investment Decision, after which Detail Engineering will begin. Selection of equipment will take place during the Detail Engineering phase, and as such, REEF is requesting amendments to EAC #E21-01 to remove details around specific equipment. The objective of this amendment is to provide the Project with flexibility in order to quickly and efficiently execute the Project once design decisions are made, while continuing to reduce environmental and socio-economic effects.

With submission of this application, AltaGas is seeking an amendment to EAC #21-01 to update the following components of the EAC:

- Change the name of the Project from the Vopak Pacific Canada Project to the Ridley Island Energy Export Facility Project in all sections.
- Change the section describing the product storage tanks to remove the number of tanks and refer to only to the maximum storage capacity of each product.
- Change the wording around power generation to remove the specification of the equipment.
- Add other utilities within the fenceline of the bulk liquid storage facility.
- Clarification that the platform for the firewater pumps should be changed to utility storage.



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- Change the rail unloading rack location within the approved layout from the east side of the lease to the west side of the lease (update to Figure 2: Project Layout)
- Extend the bulk liquid storage area to the lease boundary on the northwest side of the Certified Project Description
- Change the submission date of the socio-economic engagement summary report from January 31 to March 31
- Clarification of condition 11.3 to explicitly state the combined greenhouse gas (GHG) emissions limits are for scope 1 and 2 emissions, as well as adding the definition of scopes 1 and 2.

This application is the first request to amend EAC #E21-01 (Amendment #1) and includes an overview of the proposed changes and the rationale for the requested amendment (Section 2), an assessment of potential changes to effects on valued components (VCs; Section 6.2) and Indigenous Interests (i.e., Indigenous rights, including title and treaty rights) associated with the proposed amendment (Section 6.3), and an assessment of matters specified in section 25 of the EAA (Section 6.4).



2 Proposed Project Changes and Rationale

Ridley Island Energy Export Facility Limited Partnership seeks to update the EAC, including the Certified Project Description (CPD), Project layout (as shown in Figure 2) and Table of Conditions to include the changes described in this application. A rationale for each change and a summary of the requested changes are provided. For this amendment application, it is understood that the entire area identified as the Bulk Liquid Storage Tank Area in Figure 2 of the CPD is planned to be cleared and this establishes the context specific to each of proposed changes are described in the subsections below. Any proposed Project changes that require additional federal approvals, permits or authorizations will be applied for under a separate federal process. A summary of requested changes to the language provided in the EAC is provided in Section 8.

2.1 Change of Project Name

As described further in details in the EAC transfer request, Vopak and AltaGas formed a joint venture to develop and operate the Project in April 2023. As part of the formation of the joint venture, the name was changed from the Vopak Pacific Canada Project to the Ridley Island Energy Export Facility. This new name should be reflected in all sections of the EAC.

2.2 Remove the Reference to Number of Tanks and Refer to Only Total Storage Capacity

The CPD states that the Bulk Liquids Storage Facility will include “*one tank with the capacity to store up to 90,000 cubic metres (m³) of LPG; up to eight tanks with the capacity to store up to 260,000 m³ of Light Diesel and gasoline; and up to six tanks with the capacity to store up to 220,000 m³ of methanol*” and that the permanent supporting infrastructure and facilities include “*LPG pressure vessels (e.g., bullets, spheres) with the capacity to store a total of up to 8,000 m³, to hold pressurized LPG that is unloaded from rail cars*”.

AltaGas is requesting that all references to the number of tanks be removed, and that the reference to LPG pressure vessels be removed. The overall maximum storage capacity will remain unchanged (i.e., a capacity of 98,000 m³ of LPG), as will the type of products handled. The overall Project area would not change. This change would provide the flexibility needed to optimize development costs and operational efficiencies when designing the facility. This change would present the LPG storage capacity in a simpler and more typical manner.

As an example, AltaGas is investigating the use of three LPG accumulators in place of the one 90,000 m³ LPG tank and LPG pressure vessels with 8,000 m³ of capacity. These accumulators are similar in function to LPG bullets but are much larger at approximately 27 metres (m) diameter and 60 m overall length. These storage vessels would be arranged at a similar location within the approved Project footprint. Changing from a single tank to multiple accumulators would allow the facility to efficiently handle LPG products. Regardless of the type of LPG storage selected, equipment will be required to meet Canadian engineering design standards.



This change to LPG storage does not require any new biophysical impacts, as the LPG accumulators will be within the bulk liquid facility identified in Schedule A, which is assumed to be cleared. By utilizing pre-fabricated LPG accumulators, AltaGas is able to improve site safety and mitigate weather-related challenges to construction; however, fewer construction workers would be required as the tanks would no longer be constructed on-site.

This is a permanent change that would be present for the operational life of the Project. Subject to approval of this request, the word “tank” should also be removed from the phrase “bulk liquid tank storage area” within the CPD.

2.3 Change the Wording Around Power Generation to Remove Reference to Specific Equipment

The CPD currently states “*two 16.5-megawatt (MW) gas (ethane) turbines for power generation, operating at a combined maximum of 20 MW*”. AltaGas is requesting the removal of the reference to the two gas turbines but is not requesting a change to the maximum power generation capacity of 20 MW. This change is requested to enable the Project to select a power generation option that will be both operationally practical and efficient in terms of short-term needs and long-term ambitions for tie-in to the grid.

Selection of equipment is subject to change as the design progresses during Detail Engineering. The ongoing efforts around understanding the power generation needs and subsequent equipment selection will not affect the fuel type nor composition. The fuel source remains as originally approved - natural gas with a minor fluctuating blend of ethane.

With respect to GHG emissions, condition 11.3(a) of Schedule B (Table of Conditions) in the current EAC restricts the Project's GHG emissions to those estimated in Table 5.1-39 of the Application. This GHG emissions estimate was established as a limit for the entire Project. Accordingly, Project emission sources and quantification will be updated during Detail Engineering. It should be noted that regardless of the final design decisions, total GHG emissions are will not surpass the limits set out in the EAC.

This amendment requests the removal of the specification of gas turbines as the means of electricity generation but maintain the maximum power generation capacity of 20 MW. The removal of equipment definition allows AltaGas to consider all options for electricity generation for the Project. It is important to note that AltaGas is not requesting a change to fuel gas type (i.e., maintaining a natural gas blend).

Utilization of gas turbines is still being considered; however, other options are also being considered. For example, one of the technology options being considered is a series of natural gas driven reciprocating engines. In considering equipment options, AltaGas recognizes that reciprocating engines offer better overall reliability given the presence of ethane in the fuel gas and better efficiency when servicing periods of lower electrical demand. Additionally, they also reduce the risk of site-wide outages, thus providing operability and safety benefits. The reciprocating units currently being investigated are CAT G3616 natural gas engines with ADEM IV controllers. This technology is advantageous when dealing with a variable BTU fuel source, such as what will be available for REEF. In comparison, turbines would require a derate in horsepower due to the presence of ethane, whereas there is no derate to the G3616 engines.



Multiple reciprocating units enable optimization of fuel consumption by only running individual units depending on the required site power demand.

2.4 Add Other Utilities to the Bulk Liquid Storage Facility

AltaGas is requesting the addition of previously unidentified utilities to the CPD, within the permanent supporting infrastructure and facilities section of the Bulk Liquids Storage Facility description within Schedule A. This change would allow for Project optimization as Detail Engineering progresses. All previously unidentified utilities would be located within the bounds of the Project footprint.

As an example, AltaGas is anticipating the need for a fibre optic line for communication. The fibre optic line would be located within the bounds of the Project footprint and may consist of both aboveground and belowground portions. Exact locations for potential interconnections are still being developed. Utility connections will be evaluated through value engineering in the FEED process.

The addition of other utilities would allow for Project optimization and does not require any biophysical changes, as the other utilities will be within the bulk liquid area identified in Schedule A, which is assumed to be cleared. The potential environmental effects associated with above ground and below ground infrastructure was previously assessed and mitigation was identified in the Environmental Effects Evaluation / Application for an Environmental Assessment Certificate (EEE/Application).

This is a permanent change that would be present for the operational life of the Project.

2.5 Clarification that the Platform for Firewater Pumps be Changed to Utility Storage

Under the marine terminal section, the CPD currently states “*one platform for firewater pumps located along the jetty*”. AltaGas is requesting that this be changed to one platform for utility storage and that the location remains unchanged. This change is being requested as the function of the platform in question will be changed to facilitate efficient and safe operations. A functional supply of firewater will still be provided by the Project to the main loading platform.

2.6 Rail Unloading Rack Location

The CPD currently shows the rail unloading rack on the east side of the approved CPD footprint, within the Ridley Island Road, Rail, and Utility Corridor (RRUC) footprint. AltaGas is proposing to move the location of the rail unloading rack to the west side of the Project area. As this is within the planned RRUC footprint, there will be no new biophysical disturbance required for the new rail unloading rack area.

This change provides for a “drive through design” that enables fewer rail movements, safer operations, increased track utilization, improved access around the rail corridor (not up against Lot A), elimination of diamond switches, and improved operational efficiency due to rolling storage capacity.



2.7 Extend the Bulk Liquid Storage Area to the Lease Boundary

With the change in the CPD described in Section 2.6, the bulk liquid storage area boundary does not line up with the lease boundary. AltaGas is proposing to extend the boundary of the bulk liquid storage area on the northwest side of the area to the lease boundary.

This area was previously part of the rail unloading rack location and was assessed in the EE/Application. There will be no new biophysical disturbance that has not already been assessed.

2.8 Change the Submission Date of the Socio-Economic Engagement Summary Report

Section 10.2 of the EAC's Table of Conditions states the following:

"The Holder must provide, to the satisfaction of the EAO, a report ("the socio-economic engagement summary report") on the Holder's involvement in the CSIC, including a report on the mitigation measures and plans referred to in section 10.1, at the following times:

- a) *On or before January 31 in each year following the commencement of Construction.*

AltaGas is requesting that the annual report submission date be changed from January 31 to March 31. This change in date allows the report to cover the whole calendar year (i.e., January until December) and allows the engagement period (i.e., 45 days prior to the submission of the report) to occur after the busy holiday season (i.e., December).

2.9 Clarification of Condition 11.3 to Explicitly State the GHG Emissions Limit and Addition of Scopes 1 and 2 Definitions

Section 11.3 of the EAC's Table of Conditions states the following:

"The Plan must:

- b) *Include an estimation of the projected annual GHG emissions, total GHG emissions for Operations and GHG emissions over the Project's lifetime. The estimated Project GHG emissions must be equal to or lower than the estimates provided in Table 5.1-39 of the Application."*

AltaGas is requesting that the text be revised to explicitly state that the total combined estimated Project GHG emissions for scopes 1 and 2 must be equal to or lower than 102,687 tonnes of CO₂e (the estimates provided in Table 5.1-39 of the Application). AltaGas is not requesting a change to the overall GHG emissions, but clarity in the condition to reduce the cross-referencing to another document.

The current Table 5.1-39 as presented in the EEE/Application is copied below.



Table 5.1-39 Annual Greenhouse Gas Estimates (Tonnes), All Scopes

Source	CO2	CH4	N2O	CO2e
<i>Gas turbines (generators)¹</i>	92,467	1.20	1.14	102,687
Scope 1 subtotal	92,467	1.20	1.14	102,687
Scope 2 subtotal²	0	0	0	0
<i>LPG at berth³</i>	621	0.06	0.02	627
<i>CPP tanker at berth³</i>	1,510	0.14	0.04	1,525
<i>Methanol tanker at berth³</i>	2,172	0.20	0.06	2,194
<i>LPG in transit³</i>	354	0.03	0.01	357
<i>CPP tanker in transit³</i>	939	0.09	0.02	948
<i>Methanol tanker in transit³</i>	939	0.09	0.02	949
<i>Tugs at berth 2018 model³</i>	114	0.01	0.00	115
<i>Tugs at berth 2007 model³</i>	114	0.01	0.00	115
<i>Tugs transit 2018 model³</i>	227	0.02	0.01	230
<i>Tugs transit 2007 model³</i>	227	0.02	0.01	230
<i>Transit trains³</i>	1,076	0.06	0.40	1,197
<i>Locomotive switching³</i>	1,068	0.06	0.40	1,189
Scope 3 subtotal	9,361	0.79	0.99	9,676
ALL SCOPES TOTAL	101,828	1.99	2.13	112,572

Notes:
¹ Scope 1 emissions.
² Scope 2 emissions. No purchased electricity is expected for the Project.
³ Scope 3 emissions.

Per the GHG protocol (WRI 2015), Scope 1 emissions are direct emissions from owned or controlled sources and Scope 2 emissions are indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the company. Scope 3 emissions are defined as any other indirect emissions that occur in the company's value chain. Due to the nature of Scope 3 emissions, which occur outside the Project's boundaries and direct control, they are considered outside of the Project emissions. For additional clarity, AltaGas is also proposing that the scope 1 and 2 definitions be added to the EAC.

2.10 Summary of Physical Works and Activities

No additional physical works and activities are proposed in the requested amendment compared to the Proposed physical works in the original EEE/Application.

The timeline for construction remains the same as for the original Application (i.e., approximately 24 months).



3 Anticipated Federal Approvals and Permits

No new approvals or permits are required from federal authorities for the changes proposed in this amendment.

4 Amendment Process

An application for an amendment is required when a Certificate Holder proposes to change something within the Project that has not already been authorized by the EAC or an Exemption Order (EAO 2020a). Amending the EAC requires the assessment of potential changes to effects of a project on Indigenous nations and their constitutional rights and interests, and the consideration of the assessment matters presented in Section 25 of the EAA. Based on the EAO's Environmental Assessment Certificate and Exemption Order Amendment Policy (EAO 2020a), AltaGas believes the amendment falls within the "typical amendment" category as proposed changes to the Project will be material but limited in nature. The proposed physical changes are within areas that have been previously approved for disturbance, and the nature of the changes are not outside of the scope of what was previously assessed.

Upon submission of the amendment application, the EAO will accept the amendment assessment by issuing a confirmation letter to AltaGas. Once the amendment application is deemed complete and accepted by the EAO, the EAO will work collaboratively with participating Indigenous nations and Technical Advisory Committee (TAC) members to identify information requirements and develop a work plan, as appropriate, and provide estimates of the time to complete the technical review of the amendment application (EAO 2020b).

During the technical review of the amendment application, AltaGas will track and provide responses to issues and concerns raised by TAC members regarding the amendment assessment. If required, AltaGas will also provide supplemental materials and complete supplementary information requirements for the EAO's and TAC's review. The EAO will then prepare a draft Amendment Assessment Report that will include revised or new conditions as necessary, and that would be reviewed by EAO Compliance, members of the TAC, and AltaGas. Upon completion of the review, the Amendment Assessment Report and the conditions will be finalized and referred to the EAO's Executive Director for a decision on whether to issue the amendment (EAO 2020a).



5 Assessment Methods

The amendment assessment identifies VCs previously assessed in the EAO Assessment Report for the Vopak Pacific Canada Project (EAO 2021) that have the potential to interact with the proposed changes to the Project (Section 6). Table 6.1 identifies VCs, their potential interactions with the Project and rationale for their inclusion or exclusion as VCs in the amendment assessment. Where there is the potential for proposed changes to interact with a VC, these interactions are carried forward in the assessment. The assessment will evaluate whether the proposed changes will change the residual or cumulative effects and conclusions presented in the EAO's Assessment Report (EAO 2021). The effects assessment follows the approach outlined in the EAO's Effects Assessment Policy (EAO 2020a).

The effects assessment evaluates the following:

- Mechanism: a description of how the proposed changes could result in interactions with the VCs
- Mitigation: identification of mitigation measures to reduce or eliminate potential negative effects of the proposed changes
- Characterization of Effects: a description of if and how the proposed changes alter the characterization of effects set out in the EAO's Assessment Report (EAO 2021)
- Risks and uncertainties: a description of risks and uncertainties, including the likelihood of positive or adverse residual effects, and results of any interaction between effects will be provided. The level of confidence and potential need for additional risk analysis in case of uncertainty is stated.

For cumulative effects to occur, there must be residual adverse environmental effect and a spatial and temporal overlap of adverse effects from past, present, and reasonably foreseeable projects and activities.

For each VC carried forward in the amendment assessment, a cumulative effects assessment will be conducted if the proposed changes adversely alter the characterization of residual effects from the EAO Assessment Report (e.g., a residual effect changes from being low magnitude to moderate magnitude or from being reversible to being irreversible). Reasonably foreseeable projects and activities are those that: (a) have been publicly announced with a defined project execution period and with sufficient project details that they can be included in the assessment; (b) are currently undergoing an environmental assessment; or (c) are in a permitting process.

Interactions with Indigenous interests that were assessed in the EEO/Application are reviewed to determine whether there will be additional effects to Indigenous interests as a result of the proposed changes (Section 6.3). Finally, the proposed changes are assessed in relation to matters specified in section 25 of the EAA (Section 6.4).



6 Effects Assessment

The following sections provide an analysis of the effects of each proposed change to the Project and whether they alter the conclusions of the EAO's Assessment Report (EAO 2021). This analysis specifically considered whether the proposed changes would induce any new effects, whether they would alter the characterization of the predicted effects (e.g., a change in the magnitude of an effects), or whether any new mitigation measures are needed to prevent a change in the EAO's characterization of the effects.

6.1 Administrative Changes

Several of the changes proposed in this amendment application are administrative in nature and do not interact with VCs; as such, they are not discussed further in the amendment assessment. These changes include:

- Changing the Project name
- Changing the wording around power generation to remove reference to specific equipment.
- Adding other utilities to the bulk liquid storage facility (within the approved fence line of the Project)
- Clarification that the platform for firewater pumps be changed to utility storage.
- Change of the submission date of the socio-economic engagement summary
- Clarification of Condition 11.3 to explicitly state the GHG emissions limit.

6.2 Physical Project Changes

Potential interactions that the proposed changes could have with each of the VCs considered in the EAO Assessment Report (EAO 2021) have been considered here. Table 6.1 outlines the potential interactions between the VCs as defined in the EAO/Application and the proposed physical changes as a result of this amendment application. Rationale for the interactions is described for each valued component in Table 6.2.



Table 6.1 Potential Interactions with Valued Components

Proposed Changes	Air Quality	Greenhouse Gas (GHG) Emissions	Noise	Visual Quality and Ambient Light	Marine Resources	Soil and Terrain ^A	Vegetation and Wetlands ^A	Wildlife and Wildlife Habitat ^A	Freshwater Fish and Fish Habitat	Economic Conditions ^B	Community Services and Infrastructure ^B	Community Well-Being ^B	Marine Use and Navigation ^B	Heritage and Archaeology	Human Health
Remove the reference to number of tanks and refer to only total storage capacity	0	1	1	1	0	0	0	0	0	1	1	1	0	0	0
Change of rail unloading rack location	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Extension of the bulk liquid storage area to the lease boundary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes: 0 = No Valued Component interaction; no further consideration warranted. Rationale is provided in Table 6.2. 1 = Negligible change relative to the potential effects previously assessed; can be appropriately managed via existing mitigation measures and commitments; rationale for exclusion from further assessment discussed in Table 6.2. 2 = Potential interaction with potential to result in changes to previously assessed effects or application of new mitigation or management measures; warrants further consideration and carried forward in the amendment application, as outlined in Table 6.2. A The EAO Assessment Report lumped Soils and Terrain, Vegetation and Wetlands, Wildlife and Wildlife Habitat into Terrestrial Resources. B The EAO Assessment Report lumped Economic Conditions, Community Services and Infrastructure, Community Well-Being, Marine Use and Navigation into Social and Economic Effects.															



Table 6.2 Valued Components to be Included/Excluded in the Amendment Assessment

Valued Component	Interaction Identified	Assessment Approach	Rationale for Inclusion or Exclusion
Air Quality	Negligible interaction	Excluded from further assessment – no change	The change removing the reference to the number of tanks for the products, change in location of rail unloading rack and extension of the bulk liquid storage area to the lease boundary will not increase the air emissions from the Project. It provides engineering design flexibility but does not interact with air quality and the air quality VC is therefore excluded from further assessment.
GHG Emissions	Negligible interaction	Excluded from further assessment – negligible change	There may be a change in GHG emissions as a result of removing the reference to the number of tanks if there is a change of type or quantity of construction materials. This could be a reduction in construction GHG emissions if the originally assessed concrete tank is replaced with several steel tanks. Overall, the potential change in GHG emissions as a result of the proposed changes will be negligible from what was previously assessed and will not result in a meaningful change to GHG emissions as a result of construction or operation. As well, the total GHG emissions limit approved for the Project is not changing. The change of rail unloading rack location and extension of the bulk liquid storage area to the lease boundary will not interact with GHG emissions and is therefore excluded from further assessment.
Noise	Negligible interaction	Excluded from further assessment – negligible change	The change of removing the reference to the number of tanks may reduce the construction noise on-site due to offsite construction. Overall, the proposed changes are considered negligible relative to the previously assessed effects and can be managed using best management practices and mitigation measures identified in existing management plans. The change in location of rail unloading rack and extension of the bulk liquid storage area to the lease boundary will not alter the noise levels in Port Edward from what was considered in the Assessment Report (EAO 2021) and is therefore excluded from further assessment.
Visual Quality and Ambient Lighting	Negligible interaction	Excluded from further assessment – negligible change	Visual quality and ambient light may be affected by the change of removing the reference to the number of tanks if the Detail Engineering selects multiple LPG accumulators over a single LPG tank. Potential change in visual quality and ambient light is considered a negligible change as LPG accumulators are a similar height to the large tank. Light trespass and other effects on ambient lighting can be managed through the implementation of existing mitigation measures found in the Light Management Plan. The change in location of the rail unloading rack may affect visual quality and ambient light; however, this is considered a negligible change as the location will change but the lighting associated with the rail unloading racks will not change. It is noted that the Ridley Island and the adjacent waters are respectively zoned for industrial and marine industrial development in the Prince Rupert Port Authority’s updated Land Use Plan (September 2020). REEF is consistent with this planned land use. The extension of the bulk liquid storage area to the lease boundary will not affect visual quality and ambient light as there are currently no plans for development within this area.



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Valued Component	Interaction Identified	Assessment Approach	Rationale for Inclusion or Exclusion
Marine Resources	Negligible interaction	Excluded from further assessment – negligible change	The proposed change of removing the reference to the number of tanks, change of rail unloading rack location and extension of the bulk liquid storage area to the lease boundary will not interact with marine resources is therefore excluded from further assessment.
Soils and Terrain ¹	Negligible Interaction	Excluded from further assessment – no change	Removing reference to the number of LPG storage tanks, the change in rail unloading rack location, and the extension of the bulk liquid storage area to the lease boundary will not interact with soils and terrain because these proposed changes will be in areas that will be disturbed and graded for Project's development and are therefore excluded from further assessment.
Vegetation and Wetlands ¹	Negligible interaction	Excluded from further assessment – no change	Removing reference to the number of LPG storage tanks, the change in rail unloading rack location, and the extension of the bulk liquid storage area to the lease boundary will not interact with vegetation and wetlands because these proposed changes will be in areas that will be disturbed and graded for Project's development and are therefore excluded from further assessment.
Wildlife and Wildlife Habitat ¹	Negligible interaction	Excluded from further assessment – no change	Removing reference to the number of LPG storage tanks, the change in rail unloading rack location, and the extension of the bulk liquid storage area to the lease boundary will not interact with wildlife and wildlife habitat because these proposed changes will be in areas that will be disturbed and graded for Project's development and are therefore excluded from further assessment.
Freshwater Fish and Fish Habitat	Negligible interaction	Excluded from further assessment – no change	Removing reference to the number of LPG storage tanks, the change in rail unloading rack location, and the extension of the bulk liquid storage area to the lease boundary will not interact with freshwater fish and fish habitat because these proposed changes will be in areas that will be disturbed and graded for Project's development and are therefore excluded from further assessment.
Economic Conditions ²	Negligible interaction	Excluded from further assessment – negligible change	Economic conditions may be affected by the change of removing the reference to the number of tanks, as off-site construction may change the number of construction workers required on-site; however, it is assumed that the number of construction workers required will be similar to what was included in the EEE/Application and EAO Assessment Report (EAO 2021). Overall, these changes are considered negligible from what was previously assessed and will not result in a meaningful change to economic conditions. The change of rail unloading rack location and extension of the bulk liquid storage area to the lease boundary will not interact with economic conditions and are therefore excluded from further assessment.
Community Services and Infrastructure ²	Negligible interaction	Excluded from further assessment – negligible change	The change of removing the reference to the number of tanks may require fewer construction workers. The changes will be negligible from what was previously assessed and will not result in a meaningful change to community services and infrastructure. The change in rail unloading rack location and extension of the bulk liquid storage area to the lease boundary will not interact with community services and infrastructure and is therefore excluded from further assessment.



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Valued Component	Interaction Identified	Assessment Approach	Rationale for Inclusion or Exclusion
Community Well-Being ²	Negligible interaction	Excluded from further assessment – negligible change	Community well-being may experience a positive effect or a negative effect from the change of removing the reference to the number of tanks, depending on how many construction workers would be required. Changes will be negligible from what was previously assessed and will not result in a meaningful change to community well-being. The change of rail unloading rack location and extension of the bulk liquid storage area to the lease boundary will not interact with community well-being and is therefore excluded from further assessment.
Marine Use and Navigation ²	Negligible interaction	Excluded from further assessment – negligible change	The change of removing the reference to the number of tanks, change of rail unloading rack location and extension of the bulk liquid storage area to the lease boundary will not interact with marine use and navigation and are therefore excluded from further assessment.
Heritage and Archaeology	Negligible interaction	Excluded from further assessment – negligible change	The change of removing the reference to the number of tanks will not involve ground disturbance outside of areas that will already be disturbed and have been assessed before. Heritage and archaeology is therefore excluded from further assessment. Heritage and archaeological resources or features are unlikely to be affected by the change in rail unloading rack location due to the disturbed nature of the new location. Potential effects on heritage and archaeological resources or features can be managed through the implementation of the Construction Environment Management Plan, Archaeological Resources Management Plan, and the Project's Chance Find Management Procedure. The extension of the bulk liquid storage area to the lease boundary will not interact with heritage and archaeological resources as there are no new disturbances proposed for this area.
Human Health	Negligible interaction	Excluded from further assessment – no change	The change of removing the reference to the number of tanks, change of rail unloading rack location, and extension of the bulk liquid storage area to the lease boundary will not interact with human health and is therefore excluded from further assessment.
<p>Notes:</p> <p>¹ The EAO Assessment Report lumped Soils and Terrain, Vegetation and Wetlands, Wildlife and Wildlife Habitat into Terrestrial Resources.</p> <p>² The EAO Assessment Report lumped Economic Conditions, Community Services and Infrastructure, Community Well-Being, Marine Use and Navigation into Social and Economic Effects.</p>			



6.3 Indigenous Interests

Indigenous interests, as defined by the EAO, include “interests related to an Indigenous nation and their rights recognized and affirmed by Section 35 of the Constitution Act, 1982, including Treaty rights and Aboriginal rights and title, that may be impacted by a proposed project” (EAO 2020c). Table 6.3 below identifies the Indigenous interests that were assessed in the EEE/Application and interactions with the proposed changes. There are no anticipated additional effects to Indigenous interests. Rationale is provided in Table 6.3.

Table 6.3 Indigenous Interests to be Included/Excluded from the Amendment Assessment

Indigenous Interest	Interaction Identified	Assessment Approach	Rationale
Harvesting Rights	No	Excluded – not carried forward in assessment	The proposed changes do not result in additional effects on wildlife, marine resources, or access to harvesting areas, therefore there is no additional anticipated impact to Harvesting Rights.
Sense of Place and Sense of Attachment	No	Excluded – not carried forward in assessment	The proposed changes do not affect the PRPA’s long term development plans for Ridley Island or change the intention of the Project site to be used as an industrial facility, therefore there are no additional anticipated impacts to Sense of Place and Sense of Attachment.
Access and Travel	No	Excluded – not carried forward in assessment	The proposed changes will not alter access to Ridley Island or surrounding areas for harvesting or other traditional practices.
Indigenous Governance Systems	No	Excluded – not carried forward in assessment	The proposed changes will not have additional effects on Indigenous Governance Systems as they will not affect access to traditional foods for harvesting, community social structure, or Indigenous land management objectives.
Cultural Identity	No	Excluded – not carried forward in assessment	The proposed changes will not have additional effects on cultural identity as the intent of the Project remains the same.
Indigenous Health	No	Excluded – not carried forward in assessment	The proposed changes will not have additional effects on human health and therefore there will be no changes to effects on Indigenous health.
Indigenous Socio-economic Conditions	No	Excluded – not carried forward in assessment	The proposed changes will not have additional effects to economic conditions and therefore there will be no changes to effects on Indigenous socio-economic conditions.
Indigenous Physical and Cultural Heritage	No	Excluded – not carried forward in assessment	There is no additional land disturbance required as part of the proposed changes and no additional effects to heritage and archaeological resources, therefore there is no anticipated effects on Indigenous Physical and Cultural Heritage.

Given the conclusions in Table 6.2 and the interactions of the environmental VCs on Indigenous interests, there are no anticipated effects resulting from the proposed Project changes. As such, there are also no residual adverse environmental effects with a spatial and temporal overlap of adverse effects from past, present, and reasonably foreseeable projects and activities.



6.4 Section 25 Matters

As described in Table 6.4, the section 25 assessment matters were considered in the preparation of the amendment application.



Table 6.4 Assessment Matters

Assessment Matters ¹	Consideration in the Amendment Assessment
25 (1) The following will be assessed in the assessment	
<p>The effects of a project on Indigenous nations and rights recognized and affirmed by Section 35 of the <i>Constitution Act, 1982</i></p>	<p>Vopak undertook assessments for the six Indigenous nations with territories overlapping the Port of Prince Rupert. This included Lax Kw'alaams Band, Metlakatla First Nation Gitga'at First Nation, Gitxaala Nation, Kitselas First Nation, and Kitsumkalum First Nation. This information was provided in Part C of the EEE/Application (Vopak 2020). In its Assessment Report (2021), EAO identified the following key issues:</p> <ul style="list-style-type: none"> • cumulative effects of development on Ridley Island, Prince Rupert Harbour and Chatham Sound • rail traffic beyond the scope of the Project • management plans and regulatory oversight • potential effects on marine harvesting rights • potential effects on terrestrial harvesting rights, including freshwater fishing. <p>The EAO Assessment Report (2021) concluded that there may be differences in how Indigenous nations might assess project-specific effects to their interests in light of cumulative effects. Rail traffic beyond the scope of the Project was not scoped into the EEE/Application because rail traffic is regulated and enforced by Transport Canada. At EAO's request, Vopak provided a memo that outlined the engagement process for the development and implementation of the Project's management plans (Vopak 2021). The EAO Assessment Report (2021) concluded that the Project would result in residual effects on marine harvesting rights for all Indigenous nations.</p> <p>The proposed changes are all within the industrially zoned lands on Ridley Island and do not result in physical disturbance to lands outside of Ridley Island. There is no change to the rail traffic required, no potential effects on the marine environment, or the terrestrial environment beyond those previously described in the EAO Assessment Report (EAO 2021). As a result, the effects on Indigenous nations and rights under Section 35 of the <i>Constitution Act, 1982</i> are consistent with the effects identified in the Section 21 of the EAO's Assessment Report and the conclusions as presented in the EAO Assessment Report remain unchanged as a result of the proposed changes. Please refer to Section 7 of this amendment application for more detail.</p>



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Assessment Matters ¹	Consideration in the Amendment Assessment
25 (2) The following matters will be considered in the assessment	
(a) Positive and negative direct and indirect effects of the project, including environmental, economic, social, cultural and health effects and adverse cumulative effects	The original effects assessment primarily focused on adverse effects and mitigation of those effects. Positive and negative direct and indirect effects of the proposed changes are considered in Section 6.2 and Section 6.3 of this amendment application. Economic benefits of the Project were included in Section 2 of the EEE/Application (Vopak 2020) and are anticipated to remain similar with the proposed changes. Potential positive effects were predicted for community well-being as a result in a change in the number of construction workers required for the change from a single LPG tank to multiple LPG accumulators.
(b) Risks and uncertainties associated with those effects, including the results of any interactions between effects	No potential interactions were carried forward for a detailed assessment, therefore risks and uncertainties associated with potential effects are not described for VCs. The risks and uncertainties associated with the proposed changes are consistent with those considered in the original assessment process and can be managed through the mitigation measures in the management plans that will be developed for the Project.
(c) Risk of malfunctions or accidents	The risks of malfunctions or accidents from the Project was included in Section 6 of the original EEE/Application and summarized in Section 15 of the EAO Assessment Report (EAO 2021). There are no changes to the products being held or transferred and there are Canadian engineering design standards for all infrastructure that will be built or installed on site. Therefore, there is no change to the risk of accidents or malfunctions. The proposed changes will not lead to additional risks of malfunctions or accidents from those previously assessed; as such, these matters will not be considered further in this amendment assessment.
(d) Disproportionate effects on distinct human populations, including populations identified by gender	Given the limited nature of the proposed changes and negligible change in construction worker numbers, disproportionate effects on distinct human populations, including populations identified by gender are negligible. A Training Management Plan will be implemented to train Indigenous and other local people for jobs (EAO 2021). Employment and business opportunities as described in the EAO Assessment report remain unchanged (EAO 2021). As a result, these matters will not be considered further in this amendment assessment.
(e) Effects on biophysical factors that support ecosystem function	The proposed changes are in areas that are already disturbed by other projects on Ridley Island (i.e., change in rail unloading rack location to the RRUC), the entire Project footprint is deemed to be cleared, and Ridley Island is designated as industrial land; thus, the potential effects on biophysical factors that support ecosystem function are not assessed further in this amendment assessment.



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Assessment Matters ¹	Consideration in the Amendment Assessment
(f) Effects on current and future generations	<p>Proposed changes to the Project will occur within approved development areas and Ridley Island is designated as industrial land. The proposed changes may result in a negligible change in workforce, which may change the economic opportunities for local workers. If more construction workers are required, the proposed changes may increase positive effects resulting from increases in employment and economic opportunities and may exacerbate potential negative effects with respect to community well-being and community services and infrastructure. Conversely, if fewer construction workers are required due to the proposed changes, the positive effects resulting from increases in construction phase employment and economic opportunities may be slightly smaller in magnitude and potential negative effects with respect to community well-being and community services and infrastructure could be reduced. No changes to operations or decommissioning phase effects on current and future generations are predicted.</p> <p>The Project will continue to meet the GHG targets set out in EAC Condition 11.3, and these changes will not result in increased GHG emissions. The changes proposed in this amendment application are subject to the management plans for the overall Project. The effects of the Project on current and future generations are not expected to change measurably with this amendment. As such, these matters will not be considered further in this amendment assessment. As required by EAC Condition 11.1, REEF will develop a Greenhouse Gas Reduction Plan.</p>
(g) Consistency with any land-use plan of the government or an Indigenous nation if the plan is relevant to the assessment and to any assessment conducted under Section 35 or 73	<p>As outlined in Section 2 of this amendment application, the proposed changes are on federal lands under the jurisdiction of the PRPA, within an area designed for port-related industrial activities. The proposed changes are not being conducted under Section 35 (Regional assessments) or Section 73 (Strategic assessments). As such, these matters will not be considered further in this amendment assessment.</p>
(h) Greenhouse gas emissions, including the potential effects on the province being able to meet its targets under the <i>Greenhouse Gas Reduction Targets Act</i>	<p>Vopak assessed potential GHG emissions in Section 5.1.2 of the EEE/Application (Vopak 2020). The EAO Assessment Report (2021) concluded that GHG emissions from the Project are unlikely to affect provincial emission reduction targets. EAC Condition 11.1 requires the development of a Greenhouse Gas Reduction Plan, and EAC Condition 11.3 provides the annual GHG emissions for scopes 1 and 2 (described in Section 2.9). GHG emissions associated with the proposed changes are considered in Section 2.9. The Project is not requesting a change to the estimated Project GHG emissions in Table 5.1-39 of the Application.</p>
(i) Alternative means of carrying out the project that are technically and economically feasible, including through the use of the best available technologies, and the potential effects, risks and uncertainties of those alternatives	<p>Section 2.6 of the EEE/Application described project design and/or alternative means of carrying out the Project. Alternative means of carrying out the Project was included in the Section 2.2.4 of the EAO Assessment Report (EAO 2021). The proposed changes represent alternative designs to what was considered in the Application (e.g., changing the number of LPG accumulators; changing the location of the rail unloading rack; changing wording around power generation). These matters will not be considered further in this amendment assessment.</p>



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Assessment Matters¹	Consideration in the Amendment Assessment
(j) Potential changes to the reviewable project that may be caused by the environment	<p>Potential effects of the environment on the Project are presented in Section 7 of the EEE/Application (Vopak 2020). Potential effects of the environment included:</p> <ul style="list-style-type: none"> • Extreme weather • Seismic event • Forest fire • Climate change <p>The potential effects of the environment on the Project were included in Section 16 of the EAO Assessment Report (EAO 2021). The proposed changes are in the same area as the rest of the Project, and the potential effects are anticipated to be the same as in the EAO Assessment Report. As such, these matters will not be considered further in this amendment assessment.</p>
(k) Other prescribed matters	Not applicable
<p>Note: ¹ Assessment matters as presented in Section 25 of the <i>Environmental Assessment Act</i> 2018</p>	



7 Summary of Engagement

AltaGas continues to maintain a positive working relationship with the six Indigenous nations engaged on the Project: Lax Kw'alaams Band, Metlakatla First Nation Gitga'at First Nation, Gitxaala Nation, Kitselas First Nation, and Kitsumkalum First Nation. AltaGas endeavored to be transparent about proposed changes to the Project and met with all six nations, primarily in person, to discuss this application for an amendment to the EAC, as detailed in Table 7.1 below. The meetings offered information related to the proposed changes and opportunities for Indigenous nations to express concerns or provide feedback. As detailed below, no substantial issues were identified during discussions. AltaGas will continue to work with Indigenous nations to address key issues during their review of the amendment application.



Table 7.1 Indigenous Engagement Related to the Amendment Application

Meeting	Meeting Summary	Date	Indigenous nation	Key Issues or Information Requests Received	Follow Up	Status
Meeting #1	A meeting was held to provide an update on the Project and the status of the Project design. The purpose of the meeting was to inform Indigenous nations of potential changes to the Project that AltaGas was considering and to seek their initial feedback on the proposed changes. This meeting was an informal discussion, and no Project materials were shared with the Indigenous nations at this time. AltaGas provided a timeline for when the Indigenous nations could expect materials to review.	June 27, 2023	Lax Kw'alaams Band	None.	None.	N/A
		June 27, 2023	Metlakatla First Nation	Requested information on the environmental impacts as a result of the changes.	AltaGas informed Metlakatla First Nation that the environmental effects that may result from the Project changes would be contemplated in the amendment application. AltaGas shared the draft application with Metlakatla First Nation on October 16, 2023.	Resolved on October 16, 2023.
		June 27, 2023	Gitxaala Nation	None.	None.	N/A
		June 28, 2023	Kitselas First Nation	None.	None.	N/A
		June 29, 2023	Kitsumkalum First Nation	None.	None.	N/A
Meeting #2	A meeting was held to communicate key Project milestones, Project changes and regulatory requirements of those changes.	September 6, 2023	Lax Kw'alaams Band	None.	None.	N/A
		September 6, 2023	Metlakatla First Nation	None.	None.	N/A
		September 6, 2023	Gitga'at First Nation	Requested additional information on the differences between butane and propane in terms of emergency response. AltaGas is preparing an information package to respond to the request. Requested information on amendment process and timing.	AltaGas is still in the process of preparing materials related to the differences between butane and propane but will provide the information before the end of 2023. During the meeting, AltaGas informed the nation about its understanding of the amendment process and provided an estimated timeline.	Partially outstanding. Information will be provided on the products before the end of 2023.
		September 18, 2023	Gitxaala Nation	Requested information on amendment process and timing.	During the meeting, AltaGas informed the nation about its understanding of amendment process and provided an estimated timeline.	Resolved.
		August 30, 2023	Kitselas First Nation	None.	None.	N/A
		August 30, 2023	Kitsumkalum First Nation	None.	None.	N/A
Follow up calls	AltaGas followed up with the Indigenous nations via phone call after submitting the amendment application to see if they had any questions or concerns.	October 31, 2023	Lax Kw'alaams Band	Lax Kw'alaams Band expressed concerns over several projects on Ridley Island clearing at the same time. They reiterated concerns about commitments made by Vopak being transferred to REEF.	AltaGas explained that clearing on Ridley Island is typically planned during windows that avoid direct impacts to birds and bats. AltaGas confirmed that commitments made by Vopak will be upheld by REEF.	Resolved.
			Metlakatla First Nation	None.	None.	N/A
			Gitga'at First Nation	None.	None.	N/A
			Gitxaala Nation	None.	None.	N/A
			Kitselas First Nation	None.	None.	N/A
Kitsumkalum First Nation	None.	None.	N/A			
Note: N/A – not applicable						



8 Summary of Requested Changes

Table 8.1 summarizes the requested amendments to the Certified Project Description of EAC #21-01.

Table 8.1 Original and Revised Certified Project Description

Original and Revised Wording of EAC #21-01	Rationale
<p>Vopak Pacific Canada Project <u>Ridley Island Energy Export Facility</u></p>	<p>Ridley Island Energy Export Facility Limited Partnership, a joint venture of AltaGas Ltd. and Vopak Development Canada Inc., was formed to advance this Project. The Project name was changed to Ridley Island Energy Export Facility at that time. The change should be reflected throughout the EAC.</p>
<p>B. Bulk Liquids Tank Storage Facility</p> <p>The Bulk Liquids Tank Storage Facility, as shown on Figure 2, is comprised of permanent components and supporting infrastructure. The permanent components are:</p> <ul style="list-style-type: none"> • Tanks with the capacity to store the following products: <ul style="list-style-type: none"> — One tanks with the capacity to store up to 90,000 cubic metres (m³) of LPG. — Up to eight tanks with the capacity to store up to 260,000 m³ of Light Diesel and gasoline; and — Up to six tanks with the capacity to store up to 220,000 m³ of methanol;. • <u>Facility with the capacity to store up to:</u> <ul style="list-style-type: none"> - <u>98,000 cubic metres (m³) of LPG.</u> - <u>260,000 m³ of light diesel and gasoline; and</u> - <u>220,000 m³ of methanol;</u> 	<p>The change from specific numbers of tanks to total storage capacity allows more flexibility in designing the facility to be economic and operationally efficient.</p> <p>The change to maximum storage capacity of liquified petroleum gas (LPG) simplifies the presentation of the LPG storage capacity but does not change the total storage capacity.</p> <p>The total storage capacity and the types of products being handled is not changing.</p> <p>The removal of “tank” from references to the bulk liquids storage facility is to align the CPD with the requested change from a tank storage facility to a storage facility.</p>
<p>B. Bulk Liquids Tank Storage Facility</p> <p>The permanent supporting infrastructure and facilities are:</p> <ul style="list-style-type: none"> • Two 16.5 megawatt (MW) gas (ethane) turbines for power generation, operating at a combined maximum of 20 MW • <u>Power generation capacity up to a maximum of 20 MW</u> 	<p>This change is requested as the equipment is currently being selected and turbines may not be used for power generation. Total power generation capacity and greenhouse gas (GHG) emissions limits are not changing.</p>
<p>B. Bulk Liquids Tank Storage Facility</p> <p>The permanent supporting infrastructure and facilities are:</p> <p>LPG pressure vessels (e.g., bullets, spheres) with the capacity to store a total of up to 8,000 m³, to hold pressurized LPG that is unloaded from rail cars;</p>	<p>This change is requested to simplify the presentation of the LPG storage capacity. The facility's total LPG storage capacity is not changing.</p>
<p>C. Bulk Liquids Tank Storage Facility</p> <p><u>Other utilities:</u></p>	<p>This change is requested to incorporate all types of utilities required for the Project, such as a fibre optic cable.</p>
<p>D. Marine Terminal</p> <p>One platform for firewater pumps <u>utility storage</u> located along the jetty</p>	<p>This change is requested because the function of the platform will be changed to facilitate efficient and safe operations.</p>



Ridley Island Energy Export Facility - Application for Amendment #1 to Environmental Assessment Certificate #E21-01
Section 8 Summary of Requested Changes
November 17, 2023

Original and Revised Wording of EAC #21-01	Rationale
Figure 2 (<u>Revised</u> Project Layout) of the Certified Project Description	The Project Layout figure requires updating to show the new location of the rail offloading area and adjustment to the bulk liquid storage facility area.
<p>Note: New text is underlined and text to be removed is shown in strikethrough text.</p>	

Table 8.2 Original and Revised Schedule B Table of Conditions and Rationale

Original and Revised Wording of EAC #21-01	Rationale
<p>Definitions</p> <p><u>Scope 1 emissions</u> Direct emissions from owned or controlled sources.</p> <p><u>Scope 2 emissions</u> Indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the company.</p>	<p>Addition of definitions for greenhouse gas (GHG) scopes 1 and 2 emissions per the GHG Protocol for clarity on proposed changes to condition 11.3.</p>
<p>10.3 The Holder must provide, to the satisfaction of the EAO, a report (“the socio-economic engagement summary report”) on the Holder’s involvement in the CSIC, including a report on the mitigation measures and plans referred to in section 10.1, at the following times:</p> <p>a) On or before January <u>March</u> 31 in each year following the commencement of Construction;</p>	<p>Changing the submission date allows the report to cover activities for the full calendar year (i.e., January to December) and allows for engagement on the report to occur after the holiday season (i.e., December).</p>
<p>11.3 The Plan must:</p> <p>a) Include an estimation of the projected annual GHG emissions, total GHG emissions for Operations and GHG emissions over the Project’s lifetime. The <u>total combined estimated annual</u> Project GHG emissions for <u>scopes 1 and 2</u> must be equal to or lower than <u>102,687 tonnes CO₂e</u> (the estimates provided in Table 5.1-39 of the Application);</p>	<p>Adding the total GHG emissions for scope 1 and 2 to the condition provides clarification without cross referencing to another document.</p> <p>No change in Project GHG is being requested.</p>
<p>Note: New text is underlined and text to be removed is shown in strikethrough text.</p>	

The changes to Schedule A (Certified Project Description) and Schedule B (Table of Conditions) of EAC#21-01 are shown in Appendix A and Appendix B, respectively.



9 Conclusion

The Project is located on Ridley Island, in an area designated and zoned for port-related industrial activities. The changes in this amendment application are primarily administrative in nature (e.g., changing the project name, clarifying wording around power generation). For the purpose of this amendment application, the removal of the reference to the number of tanks and change in rail unloading rack location will occur in areas that are assumed to be cleared as these will be located within the footprint of the facility that was considered in the original assessment. The extension of the bulk liquid storage area to the lease boundary will not require further biophysical changes, and it was previously assessed as the rail unloading rack location. This assessment did not identify VCs that required further assessment; potential effects will be managed through existing management plans (e.g., Construction Environmental Management Plan). The amendment has no identified additional mitigation measures beyond those already enabled through the Project's EAC. Negligible interactions with VCs were identified, however, no additional effects to Indigenous interests are anticipated. No potential effects on section 25 matters were identified as a result of the proposed changes. AltaGas has engaged and will continue to engage with Lax Kw'alaams Band, Metlakatla First Nation, Gitga'at First Nation, Gitxaala Nation, Kitselas First Nation, and Kitsumkalum First Nation.



10 References

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Appendix A Schedule A - Certified Project Description



SCHEDULE A

CERTIFIED PROJECT DESCRIPTION

FOR THE

~~VOPAK PACIFIC CANADA~~RIDLEY

ISLAND ENERGY EXPORT FACILITY

PROJECT (PROJECT)

INTERPRETATION

In this Certified Project Description, terms that are capitalized but not defined have the same meaning as those terms defined elsewhere in this Certificate, including in the Table of Conditions.

This Certified Project Description describes the Project authorized by this Certificate but does not obligate the Holder to construct or operate any aspect of the Project unless otherwise stated.

DEFINITIONS

Holder	The person to whom this Certificate has been issued, or, if this Certificate has been transferred in accordance with section 33 of the Act (2018), the person to whom this Certificate has been transferred.
Light Diesel	Fuel having the following properties: <ul style="list-style-type: none">• Density between 820-890 kg/m³• Flash point between 40-130°C• Vapour pressure between 10-500mbar

ACRONYMS AND ABBREVIATIONS

Certificate	Environmental Assessment Certificate
LPG	Liquified petroleum gas, including propane, ethane and butane
PRPA	Prince Rupert Port Authority

1. Project Description and Location

The Ridley Island Energy Export Facility (REEF) Vopak Pacific Canada Project (Project) is a bulk liquids tank storage facility that stores LPG, Light Diesel, gasoline, and methanol.

The Project, which includes an offshore jetty, is located on Ridley Island, British Columbia, and includes marine shipping activities in the waters between the Marine Terminal and Triple Island (Figure 1). The Project is approximately 1.6 kilometres (km) west of Port Edward and 10.5 km south of Prince Rupert.

2. Project Components and Activities

The Project is comprised of the following components:

- Bulk Liquids Tank Storage Facility and supporting infrastructure;
- Marine Terminal and supporting infrastructure;
- Rail car unloading racks;
- Temporary construction-related infrastructure and facilities;
- Marine shipping of products to Triple Island; and
- Rail operations within PRPA boundaries.

These components are more fully described below.

All areas disturbed by construction, operation, and decommissioning activities are within the Project footprint, shown on Figure 2.

A. BULK LIQUIDS TANK STORAGE FACILITY

The Bulk Liquids Tank Storage Facility, as shown on [Figure 2](#), is comprised of permanent components and permanent supporting infrastructure.

The permanent components are:

- Facility Tanks with the capacity to store up to the following products;
 - ~~One tank with the capacity to store up to 980,000 cubic metres (m³) of LPG;~~
 - ~~Up to eight tanks with the capacity to store up to 260,000 m³ of Light Diesel and gasoline; and~~
 - ~~Up to six tanks with the capacity to store up to 220,000 m³ of methanol;~~
- Pipe racks/systems, pumps, and compressors;
- Office buildings, including central control room, and maintenance and utilities buildings; and
- Process control and safety systems to monitor, alarm and shut down facility components in event of emergency.

The permanent supporting infrastructure and facilities are:

- ~~Two 16.5 megawatt (MW) gas (ethane) turbines for pPower generation capacity up to a, operating at a combined maximum of 20 MW;~~
- Electrical substation connected to the BC Hydro power grid;
- ~~LPG pressure vessels (e.g., bullets, spheres) with the capacity to store a total of up to 8,000 m³, to hold pressurized LPG that is unloaded from rail cars;~~

- ❑ LPG cooling equipment and de-ethanizer to separate ethane from the LPG;
- ❑ Methanol removal and dehydration equipment;
- ❑ Gas processing and refrigeration equipment;
- ❑ Emergency ground flare to capture and burn any LPG vapours in case of emergency;
- ❑ Water utilities;
- ❑ Other utilities;
- ❑ Two lagoons for surface water management;
- ❑ Roads;
- ❑ Natural gas connection; and
- ❑ Fencing and site security.

B. MARINE TERMINAL

The Marine Terminal, as shown on [Figure 2](#), is comprised of the following permanent components:

- ❑ A jetty up to 1.2 km long extending from the shoreline to the loading platform, supported by up to 12 piers;
- ❑ Two parallel multi-buoy mooring systems to berth vessels up to 85,000 m³ capacity or 80,000 dead weight tonnes; and
- ❑ One loading platform serving both mooring systems.

The permanent supporting infrastructure and facilities are:

- ❑ Jetty piping, extending from storage facilities to the loading platform, to deliver LPG, Light Diesel, gasoline and methanol to the loading platform;
- ❑ All equipment and systems required for mooring ships at the loading platforms;
- ❑ One platform for ~~firewater pumps~~ utility storage located along the jetty;
- ❑ Protection barriers around the jetty and loading platform; and
- ❑ Process control and safety systems to monitor, alarm and shutdown facility components in event of emergency.

C. RAIL CAR UNLOADING RACKS

The rail car off-loading area, as shown in Figure 2, is comprised of the following components:

- ❑ A total of up to 50 double-sided rail car unloading racks.

The rail car unloading racks transfer a maximum yearly volume of 11,000,000 m³ of LPG, Light Diesel, gasoline and methanol.

D. CONSTRUCTION INFRASTRUCTURE, FACILITIES AND ACTIVITIES

In addition to the components set out above, within the Bulk Liquids Tank Storage Facility (Figure 2) the Project is comprised of the following temporary construction-related infrastructure and facilities:

- Construction-related power, gas and water utilities;
- Laydown areas;
- Soil and rock storage areas;
- Temporary parking area;
- Equipment yard;
- Office and staff trailers;
- Construction and domestic waste storage;
- Construction barges and vessels; and
- Construction fencing and site security.

Construction-related activities include:

- Site excavation, clearing and grading;
- Construction of Project facilities on land;
- Construction of the marine jetty and berths (including piers);
- Disposal of surplus organic soil and waste rock;
- Construction and domestic waste management;
- Post-construction clean-up and on-site ground reclamation; and
- Construction-related accommodation and transportation to and from the site.

E. MARINE OPERATIONS

The Project marine shipping activities are pilotage and tug escort, and product shipping, between the Marine Terminal and the pilot boarding station at or near Triple Island, as partially shown on [Figure 1](#).

F. RAIL OPERATIONS ACTIVITIES

The Project includes operation of nine rail tracks during Operations as shown on [Figure 2](#).



Figure 1: Ridley Island Energy Export Facility Vopak Pacific Canada Project

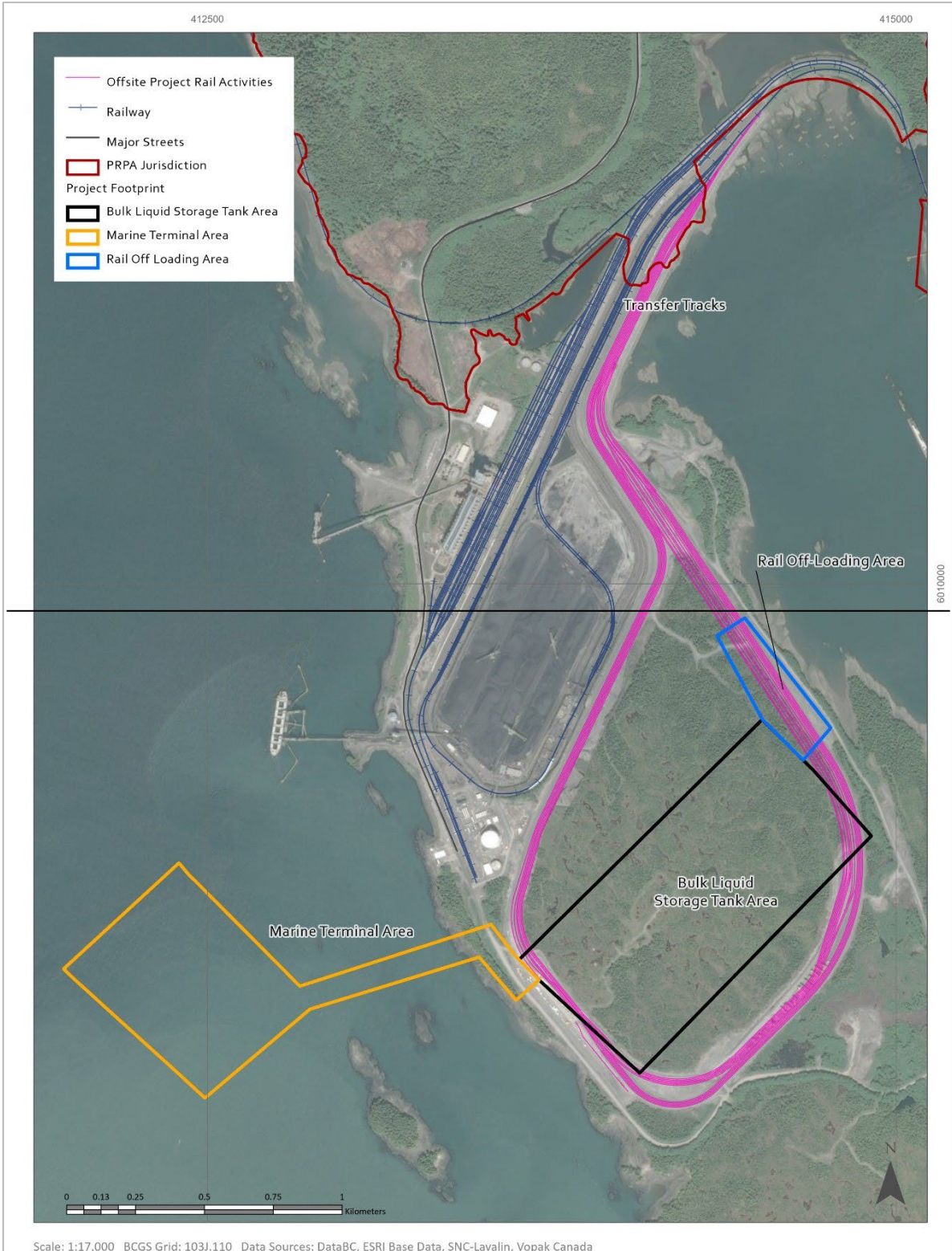


Figure 2: Project Layout

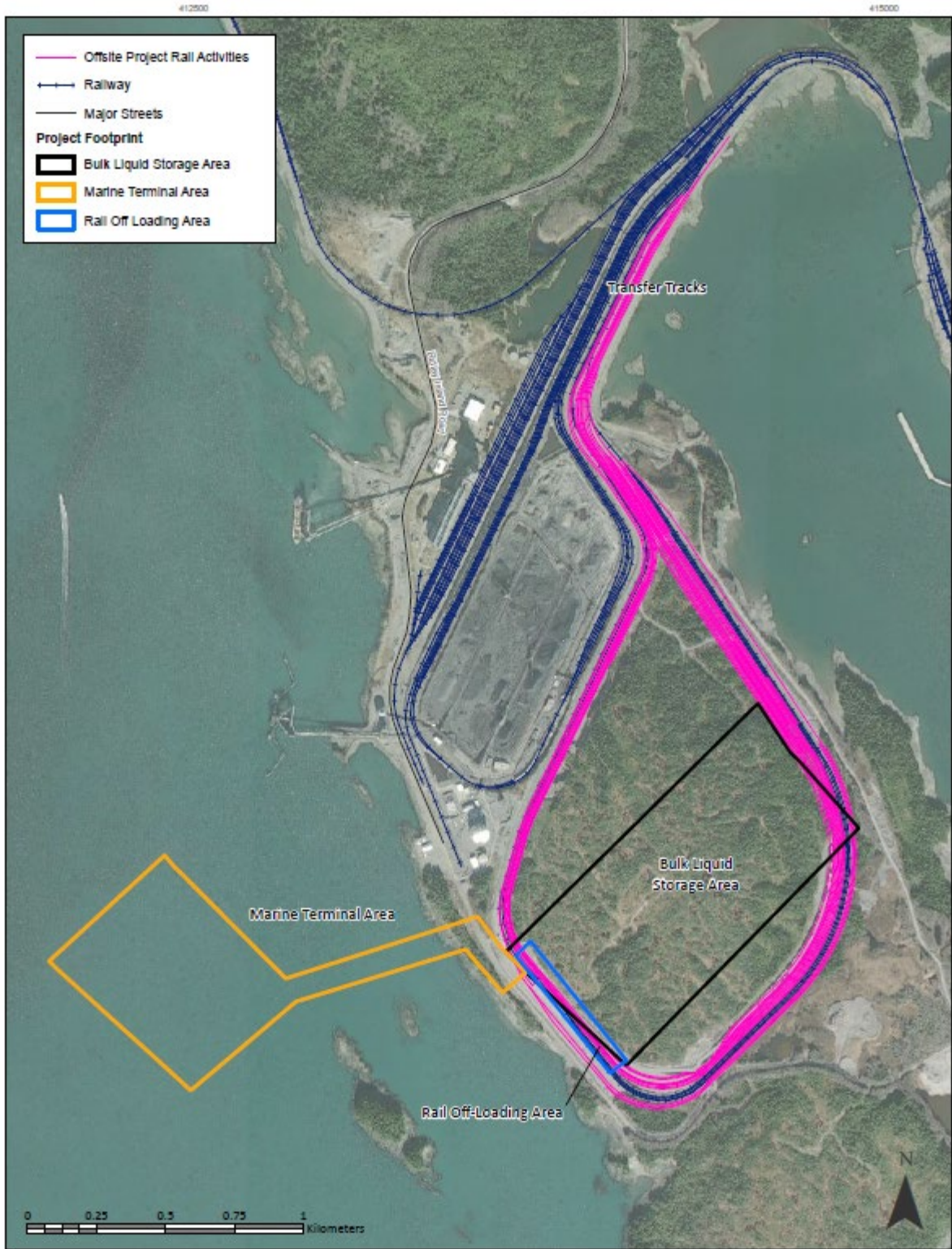


Figure 2: Revised Project Layout

Appendix B Schedule B - Table of Conditions



**VOPAK PACIFIC CANADA RIDLEY ISLAND
ENERGY EXPORT FACILITY PROJECT**

SCHEDULE B

**TABLE OF CONDITIONS
FOR
AN ENVIRONMENTAL ASSESSMENT CERTIFICATE**

ACRONYMS

BC	British Columbia
EAO	Environmental Assessment Office
GHG	Greenhouse Gas

DEFINITIONS

Application	The Application for an EA Certificate submitted by Vopak Development Canada Inc. (Vopak) on November 9, 2020.
Certificate	Environmental Assessment Certificate.
Construction	The phase of the Vopak Pacific Canada Project (Project) during which physical alteration of land, vegetation or any other aspect of the natural environment occurs. For the purposes of this Schedule B, Construction: (i) does not include any activities conducted solely for investigative purposes under a valid permit or authorization, and (ii) includes upgrading, repairing, replacing, or removing, any existing work or infrastructure.
Decommissioning	The phase of the Project where all production and related activities cease. Project facility and infrastructure are decommissioned and/or removed from the site. Reclamation activities are conducted and completed.
Holder	Vopak, if this Certificate has been transferred in accordance with the conditions below, the person to whom this Certificate has been transferred in accordance with such conditions.
Indigenous Nations	Gitga'at First Nation, Gitxaala Nation, Kitselas First Nation, Kitsumkalum First Nation, Lax Kw'alaams Band and Metlakatla First Nation.
Operations	The phase of the Project beginning with the commercial operation date of the Project, which is the date on which any of the activities associated with the Project commence.
<u>Scope 1 emissions</u>	<u>Direct emissions from owned or controlled sources.</u>
<u>Scope 2 emissions</u>	<u>Indirect emissions from the generation of purchased electricity, steam, heating and cooling consumed by the company.</u>

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CONDITIONS

1. Document Review

- 1.1 The requirements within this condition apply to all plans, programs or other documents required under this Certificate except for the terms of engagement required under condition 4.
- 1.2 The EAO may, within 45 days, or another period if a condition in this Table provides otherwise, of receiving a document required by a condition notify the Holder that:
 - a) the Holder may implement the actions in the document with or without revisions; or
 - b) a revised document must be provided for approval of the EAO.
- 1.3 If a notification provided by the EAO to the Holder sets out revisions that are required to the document, the Holder must change the document in accordance with the notification.
- 1.4 If the EAO does not provide a notification to the Holder within the period referred to in subsection 1.2, the Holder may implement the actions in the document, unless a condition in this Table provides otherwise.

2. Document Updates

- 2.1 The requirements within this condition apply to all plans, programs, or other documents required under this Certificate except for the terms of engagement required under condition 4.
- 2.2 The Holder may, or the EAO may require the Holder to, make changes to any document if the EAO determines that the implementation of the document is not:
 - a) meeting one or more objectives set out in the relevant condition of this Certificate or the purpose and objectives set out in the document, as required by paragraph 3.2(a);
 - b) having the effects, set out in the document, that are contemplated or intended; or
 - c) consistent with changes in industry best practices or technology.

3. Plan Development

- 3.1 The requirements within this condition apply to all plans, programs, or other documents required under this Certificate.
- 3.2 At a minimum, documents must include the following information:
 - a) purpose and objectives of document;
 - b) roles and responsibilities of the Holder, project personnel and any contractors employed for the purposes of implementing the plan;
 - c) names and, if applicable, professional certifications and professional stamps, of those responsible for the preparation of the document;

- d) schedule for implementing the actions in the document throughout the relevant project phases;
- e) how the effectiveness of any mitigation measures will be evaluated including the schedule for evaluating effectiveness;
- f) how the Holder will implement adaptive management to address effects of the Project if the monitoring conducted under subsection 3.3 shows that those effects:
 - i. are not being mitigated to the extent contemplated in the Application; or
 - ii. are different than those predicted in the Application;
- g) schedules and methods for the submission of reporting to specific agencies and Indigenous nation(s) and notification to the public, and the form and content of those reports; and
- h) process and timing for updating the document, including any consultation with agencies and Indigenous Nations that would occur in connection with such updates.

3.3 Where a document includes monitoring requirements, the document must include:

- a) a description of baseline information that will be used to support monitoring of the effectiveness of mitigation;
- b) methods, location, frequency, timing and duration of monitoring; and
- c) scope, content and frequency of reporting of the monitoring results.

4. Consultation

4.1 Where a condition of this Certificate requires the Holder to consult a party or parties regarding the content of a document, the Holder must, to the satisfaction of the EAO:

- a) provide written notice to each such party that:
 - i. includes a draft of the document;
 - ii. invites the party to provide its views on the content of the document; and
 - iii. indicates:
 - A) if a timeframe for providing views to the Holder is specified in the relevant condition of this Certificate, that timeframe; or
 - B) if a timeframe for providing views to the Holder is not specified in the relevant condition of this Certificate, a reasonable period during which the party may submit views to the Holder;
- b) undertake a full and impartial consideration of the views and other information provided by a party;
- c) provide a written explanation to each such party that provided views as to:
 - i. how the views and information provided by the party have been considered and addressed in a revised version of the document; or
 - ii. why the views and information have not been addressed in a revised version of the document;
- d) maintain a record of consultation with each party regarding the document; and
- e) provide a copy of the consultation record to the EAO, the relevant party, or both, upon the written request of the EAO or the party no later than 15 days after the Holder receives the request, unless otherwise authorized by the EAO.

5. Compliance Verification and Reporting

- 5.1 The Holder must provide to the EAO any document, data or information requested by the EAO for the purposes of compliance inspection and verification. The Holder must provide any document, data or information requested within the timeframe and in the manner specified by the EAO.
- 5.2 The Holder must submit a report to the EAO on the status of compliance with this Certificate at the following times, unless otherwise authorized by the EAO: at least 30 days prior to each Project phase, followed by every six months during Construction and Decommissioning, and on an annual basis on or before January 31 during Operations.
- 5.3 The report referred to in subsection 5.2 must be in a form satisfactory to the EAO.

6. Project Status Notification

- 6.1 The Holder must notify the EAO in writing that the Project is in Construction, Operations and Decommissioning. The notification must be received by the EAO within 30 days of the commencement of Construction, Operations and Decommissioning.
- 6.2 The Holder must notify the EAO in writing, within 30 after the issuance of this Certificate, of the primary contact for the Project and provide the physical address, email address and phone number(s) of the primary contact.
- 6.3 Should the primary contact for the Project change, the Holder must notify the EAO in writing within 30 days of the change and provide the physical address, e-mail address and phone number(s) of the new primary contact.

7. Compliance Notification

- 7.1 The Holder must notify the EAO as soon as practicable, and in any event no more than 72 hours, after the Holder determines that the Holder has not, or may not have, fully complied with this Certificate.

8. Public Information

- 8.1 The Holder must establish a dedicated Project website or an alternative online medium that provides the same or better access to the Project information as a traditional website. The Holder must make the information required in subsection 8.2 available to the public without online tracking, or the need for registration, credentials or payment.
- 8.2 The Holder must include the following information on the website or alternative online medium:
 - a) Copy of the current version of this Certificate and any amendments thereto;
 - b) A description of the Project and the current Project status;
 - c) The date of the last update of the website or alternative online medium;

- d) Contact information for the Holder;
 - e) A description of how to submit questions or concerns about the Project to the Holder;
 - f) The means by which the Holder will respond to any questions or concerns submitted about the Project;
 - g) Information on any upcoming public engagement activities related to the Project; and
 - h) Descriptions of activities related to each Project phase.
- 8.3 The Holder must establish the website or alternative online medium at least 60 days prior to the planned commencement of Construction. The website or alternative online medium must be maintained throughout all Project phases and updated at least monthly, unless otherwise authorized by the EAO.

9. Cumulative Effects Management

- 9.1 During Construction, Operations and Decommissioning, the Holder must participate in initiatives related to the monitoring, assessment, and management of the Project's cumulative effects, if requested by, and to the satisfaction of, the EAO.

10. Socio-Economic

- 10.1 The purpose of this condition is to create a reporting mechanism with respect to measures developed through the Community Services and Infrastructure Committee (CSIC), referenced in the memo entitled Engagement Process for the Development and Implementation of the Project's Management Plans (July 13, 2021), and that are adopted by the Holder to mitigate potential Project effects related to economic conditions, community services and infrastructure and community well-being, including measures or plans related to health and medical services, economic opportunities, and cultural awareness training.
- 10.2 The Holder must provide, to the satisfaction of the EAO, a report ("the socio-economic engagement summary report") on the Holder's involvement in the CSIC, including a report on the mitigation measures and plans referred to in section 10.1, at the following times:
- a) On or before ~~January~~ March 31 in each year following the commencement of Construction;
 - b) Until two years after the commencement of Operations.
- 10.2 No less than 45 days prior to providing the socio-economic engagement summary report to the EAO, the Holder must provide a draft of the socio-economic engagement summary report to the CSIC for review and comment.
- 10.3 The socio-economic engagement summary report, and any updates made must be developed by the Holder, in consultation with Indigenous Nations, and to the satisfaction of the EAO.

10.4 The EAO may adjust or extend this reporting requirement by providing written notice to the Holder.

11. Greenhouse Gas Reduction Plan

11.1 The Holder must develop a Greenhouse Gas Reduction Plan (the Plan) with respect to greenhouse gas (GHG) emissions from the Project during Operations. The Plan must be prepared in consultation with the Climate Action Secretariat (or successor), Indigenous Nations and the Ministry of Energy, Mines and Low Carbon Innovation. The Plan is subject to approval by the EAO following a technical review of the Plan by the Climate Action Secretariat.

11.2 Following preparation, the Holder must provide a draft Plan to Indigenous Nations, the Climate Action Secretariat, the Ministry of Energy, Mines and Low Carbon Innovation and the EAO a minimum of 60 days prior to the planned commencement of Operations.

11.3 The Plan must:

- (a) Include an estimation of the projected annual GHG emissions, total GHG emissions for Operations and GHG emissions over the Project's lifetime. The total combined estimated annual Project GHG emissions for scopes 1 and 2 must be equal to or lower than 102,687 tonnes CO₂e (the estimates provided in Table 5.1-39 of the Application); and,
- (b) Include a consideration of emission reduction targets and schedules as set out in relevant Provincial statutes and supporting policies.

11.4 The Plan must be updated in consultation with Indigenous Nations, Climate Action Secretariat and the Ministry of Energy, Mines and Low Carbon Innovation at least every five years from the planned commencement of Operations, unless otherwise authorized by the EAO. Each update must:

- (a) Include an analysis of best available technologies and processes to minimize GHG emissions, including the technical and economic feasibility of GHG reductions; and,
- (b) Provide an explanation for the technologies and measures that the Holder intends to implement.