

## **Potential conditions under the *Canadian Environmental Assessment Act, 2012***

The Impact Assessment Agency of Canada is contemplating the following potential conditions in relation to the Roberts Bank Terminal 2 Project (the Designated Project) located in British Columbia for recommendation to the Minister of Environment and Climate Change (the Minister) for inclusion in a Decision Statement issued under the *Canadian Environmental Assessment Act, 2012*. If the Minister decides that the carrying out of the Designated Project is unlikely to cause significant adverse environmental effects as defined under subsections 5(1) and 5(2), or if the Minister decides that the Designated Project is likely to cause significant adverse environmental effects and the Governor in Council decides such effects are justified in the circumstances, the Designated Project would be allowed to proceed, and any conditions established by the Minister under the *Canadian Environmental Assessment Act, 2012* would be legally binding.

Pursuant to section 184 of the *Impact Assessment Act*, a Decision Statement issued by the Minister under subsection 54(1) of the *Canadian Environmental Assessment Act, 2012* is deemed to be a Decision Statement issued under subsection 65(1) of the *Impact Assessment Act*, other than for the purposes of section 70.

### **1 Definitions**

- 1.1 *Agency* means the Impact Assessment Agency of Canada.
- 1.2 *Baseline* means the environmental conditions prior to initiating construction of the Designated Project.
- 1.3 *Construction* means the phase of the Designated Project during which the Proponent undertakes the site preparation, building or installation of any components of the Designated Project and the decommissioning of temporary infrastructure, including periods during which these activities may temporarily cease.
- 1.4 *Construction activity* means any physical activity that is carried out by the Proponent for the purpose of construction of the Designated Project.
- 1.5 *Day* means calendar day.
- 1.6 *Daytime* means from one hour before sunrise to one hour after sunset, as calculated by the National Research Council of Canada for Vancouver (British Columbia).
- 1.7 *Designated Project* means all components and activities associated with the Roberts Bank Terminal 2 Project, which consist of construction and operation of the marine terminal, the widened causeway, and the expanded tug basin, and incidental marine shipping as described in the Designated Project Description (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672) and the implementation of conditions.
- 1.8 *Designated Project area* means the geographic area occupied by the Designated Project as indicated on figure 1 (Project Overview) of the Designated Project Description (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672).

- 1.9 *Environment and Climate Change Canada* means the Department of the Environment as established under subsection 2(1) of the *Department of the Environment Act*.
- 1.10 *Environmental assessment* means “environmental assessment” as defined in subsection 2(1) of the *Canadian Environmental Assessment Act, 2012*.
- 1.11 *Environmental effects* means “environmental effects” as described in section 5 of the *Canadian Environmental Assessment Act, 2012*.
- 1.12 *Environmental impact statement* means the March 27, 2015 document entitled *Roberts Bank Terminal 2 Project, Roberts Bank, Delta, B.C., Environmental Impact Statement* (Canadian Impact Assessment Registry Reference Number 80054, Document Number 181).
- 1.13 *Exclusion zone* means the area within which a marine mammal may be potentially exposed to sound levels from a construction activity that are above injury thresholds for marine mammals or behavioural disturbance thresholds for Southern Resident Killer Whales (*Orcinus orca*) set out in condition 8.1.
- 1.14 *Federal Review Panel Report* means the report submitted on March 27, 2020 by the Federal Review Panel established by the Minister of Environment and Climate Change (Canadian Impact Assessment Registry Reference Number 80054, Document Number 2062).
- 1.15 *Fish* means “fish” as defined in subsection 2(1) of the *Fisheries Act*.
- 1.16 *Fish habitat* means “fish habitat” as defined in subsection 2(1) of the *Fisheries Act*.
- 1.17 *Fisheries and Oceans Canada* means the Department of Fisheries and Oceans as established under subsection 2(1) of the *Department of Fisheries and Oceans Act*.
- 1.18 *Follow-up program* means “follow-up program” as defined in subsection 2(1) of the *Canadian Environmental Assessment Act, 2012*.
- 1.19 *Health Canada* means the *Department of Health* as established under subsection 2(1) of the *Department of Health Act*.
- 1.20 *Heritage value* means the aesthetic, historic, scientific, cultural, social or spiritual importance or significance for past, present or future generations.
- 1.21 *In-water work activities* means any works associated with the Designated Project undertaken in water frequented by fish.
- 1.22 *Indigenous groups* means the following Aboriginal Peoples who will be affected or potentially affected by the Designated Project, including construction and operation of the marine terminal, the widened causeway, and the expanded tug basin and marine shipping within the marine shipping assessment area: Tsawwassen First Nation, Musqueam Indian Band (Musqueam), Cowichan Tribes, Halalt First Nation, Ts’uubaa-asatx Nation, Lyackson First Nation, Malahat First Nation, Pauquachin First Nation, Penelakut Tribe, Semiahmoo First Nation, Stz’uminus First Nation, Tsartlip First Nation, Tsawout First Nation, Tseycum First Nation, and Tseil-Waututh Nation.

- 1.23 *Indigenous groups (Fraser River)* means the following Aboriginal Peoples who will be affected or potentially affected upriver by the Designated Project: S'ólh Téméxw Stewardship Alliance (Chawathil First Nation, Cheam First Nation, Kwaw-Kwaw-Apilt First Nation, Scowlitz First Nation, Skawahlook First Nation, Skwah First Nation, Sumas First Nation, Yale First Nation each on their own behalf, and Aitchelitz First Nation, Shxwhá:y Village, Skowkale First Nation, Soowahlie First Nation, Squiala First Nation, Tzeachten First Nation and Yakweakwoose First Nation), Kwantlen First Nation, Leq'á:mél First Nation, Matsqui First Nation, Shxw'ow'hamel First Nation, Popkum First Nation, and Seabird Island First Nation.
- 1.24 *Indigenous groups (marine shipping)* means the following Aboriginal Peoples who will be affected or potentially affected by the marine shipping within the marine shipping assessment area of the Designated Project only: Scia'new (Beecher Bay) First Nation, Ditidaht First Nation, Esquimalt Nation, Maa-nulth First Nations (Huu-ay-aht First Nation, Ka:'yu:'k't'h'/Che:k'tles7et'h First Nations, Toquaht Nation, Uchucklesaht Tribe and Yuułuʔiłʔatḥ (Ucluelet) Nation), Pacheedaht First Nation, Songhees Nation, and T'sou-ke First Nation.
- 1.25 *Listed species at risk* means a species that is listed on the List of Wildlife Species at Risk set out in Schedule 1 of the *Species at Risk Act*.
- 1.26 *Local assessment area* means the area within which the Designated Project is expected to interact with and potentially cause effects to a component of the environment and are delineated for various components of the environment.
- 1.27 *Marine mammals* means all mammal species, which are morphologically adapted to the marine environment, including cetaceans and pinnipeds.
- 1.28 *Migratory bird* means “migratory bird” as defined in subsection 2(1) of the *Migratory Birds Convention Act, 1994*.
- 1.29 *Mitigation measures* means “mitigation measures” as defined in subsection 2(1) of the *Canadian Environmental Assessment Act, 2012*.
- 1.30 *Natural Resources Canada* means the Department of Natural Resources as established under subsection 3(1) of the *Department of Natural Resources Act*.
- 1.31 *Offsetting plan* means “offsetting plan” as described in Schedule 1 of the Authorizations Concerning Fish and Fish Habitat Protection Regulations.
- 1.32 *Operation* means the phase of the Designated Project during which vessels are accepted for berthing and cargo transfer. This phase includes periods when vessel berthing and vessel cargo transfer may temporarily cease. This phase includes any activities associated with commissioning the marine terminal in whole or in part.
- 1.33 *Participate* means to directly or indirectly assist or support initiatives through the provision of resources, including knowledge, time, data, access and other means that are economically and technically feasible and within the care and control of the Proponent.
- 1.34 *Port of Vancouver* means the lands and waters in the Vancouver Fraser port Authority's Letters Patent as of December 31, 2020.

- 1.35 *Pre-construction survey* means any physical activity that is carried out by the Proponent for the purpose of gathering data to establish existing environmental conditions prior to the commencement of construction, other than any physical activity carried out in relation to a follow-up program that is a requirement of a condition set out in this document or any physical activity required by any other condition set out in this document.
- 1.36 *Proponent* means Vancouver Fraser Port Authority and its successors or assigns.
- 1.37 *Qualified individual* means someone who, through education, experience and knowledge relevant to a particular matter, provides the Proponent with advice within their area of expertise. Knowledge relevant to a particular matter may include community and Indigenous knowledge.
- 1.38 *Qualified professional* means a person who has training, experience and expertise in a discipline relevant to the field of practice set out in the condition, and who is registered with the appropriate professional organization in British Columbia, is acting under that organization's code of ethics and is subject to disciplinary action by that organization.
- 1.39 *Record* means “record” as defined in subsection 2(1) of the *Canadian Environmental Assessment Act, 2012*.
- 1.40 *Relevant authorities* means federal and/or provincial and/or municipal authorities that are in possession of specialist or expert information or knowledge, or that have a responsibility for the administration of a law or regulation, with respect to the subject matter of a condition set out in this document.
- 1.41 *Reporting year* means January 1 of a calendar year through December 31 of the same calendar year.
- 1.42 *Salish sea* means the inland sea east of Juan de Fuca traffic separation scheme light buoy JA, including the Strait of Juan de Fuca, Strait of Georgia and Puget Sound.
- 1.43 *Structure, site or thing of historical, archeological, paleontological or architectural significance* means a structure, site or thing that is determined by a qualified individual, on the basis of heritage value, to be associated with an aspect of the history or culture of the people of Canada, including Indigenous groups.
- 1.44 *Water frequented by fish* means “water frequented by fish” as defined in subsection 34(1) of the *Fisheries Act*.
- 1.45 *Wetland* means land that is saturated with water long enough to promote wetland or aquatic processes as indicated by poorly drained soils, hydrophytic vegetation and various kinds of biological activity which are adapted to a wet environment and as further defined in the Canadian Wetland Classification System.
- 1.46 *Wetland functions* means the natural processes and derivation of benefits and values associated with wetland ecosystems, including economic production, fish and wildlife habitat, organic carbon storage, water supply and purification (e.g. groundwater recharge, flood control, maintenance of flow regimes, shoreline erosion buffering), and soil and water conservation, as well as tourism, heritage, recreational, educational, scientific, and aesthetic opportunities.

## **Potential Conditions**

These conditions may be established for the sole purpose of the Decision Statement issued under the *Canadian Environmental Assessment Act, 2012*. They do not relieve the Proponent from any obligation to comply with other legislative or other legal requirements of the federal, provincial, or local governments. Nothing in this document shall be construed as affecting what may be required of the Proponent to comply with all applicable legislative or legal requirements.

## **2 General conditions**

- 2.1 The Proponent shall ensure that its actions in meeting the conditions set out in this document during all phases of the Designated Project are considered in a careful and precautionary manner, promote sustainable development, are informed by the best information and knowledge, including community and Indigenous knowledge, available at the time the Proponent takes action, are based on methods and models that are recognized by standard-setting bodies, are undertaken by qualified individuals, and have applied the best available technically and economically feasible technologies.
- 2.2 The Proponent shall ensure that its actions in meeting the conditions set out in this document are taken in a way that is consistent with any applicable management plan, recovery strategy and action plan for listed species at risk.

## **Consultation**

- 2.3 The Proponent shall, where consultation is a requirement of a condition set out in this document:
  - 2.3.1 provide a written notice of the opportunity for the party or parties being consulted to present their views and information on the subject matter of the consultation at least 90 days prior to the commencement of the activity or activities to which the consultation pertains;
  - 2.3.2 provide all information available and relevant to the scope and the subject matter of the consultation and a reasonable period of time not less than 30 days, or as otherwise parties agreed upon with the party or parties being consulted, to prepare their views and information;
  - 2.3.3 undertake an impartial consideration of all views and information presented by the party or parties being consulted on the subject matter of the consultation; and
  - 2.3.4 advise as soon as feasible in writing, the party or parties being consulted on how the views and information received have, or have not, been integrated into the subject matter of the consultation by the Proponent, including a rationale for why the views have, or have not, been integrated.
- 2.4 The Proponent shall, where consultation with Indigenous groups, Indigenous groups (marine shipping), and Indigenous groups (Fraser River) is a requirement of a condition set out in this document:

- 2.4.1 discuss with each Indigenous group, Indigenous group (marine shipping), and Indigenous group (Fraser river) separately whether it is interested in being consulted on the condition(s) where indicated. The Proponent shall revisit this every year with each Indigenous group, Indigenous group (marine shipping), and/or Indigenous group (Fraser river) and only conduct consultation requirements referred to in condition 2.3 for the condition(s) of interest to each Indigenous group, Indigenous group (marine shipping), and/or Indigenous group (Fraser river);
- 2.4.2 communicate with each Indigenous group, Indigenous group (marine shipping), and Indigenous group (Fraser river) with respect to the manner to satisfy the consultation requirements referred to in condition 2.3, including:
  - 2.4.2.1 methods of notification;
  - 2.4.2.2 the type of information, resources and the period of time to be provided when seeking input;
  - 2.4.2.3 whether consultation is to be done separately from other parties being consulted;
  - 2.4.2.4 the process to be used by the Proponent to undertake impartial consideration of all views and information presented on the subject of the consultation; and
  - 2.4.2.5 the period of time and the means to advise Indigenous groups of how their views and information were considered by the Proponent.

***Follow-up requirements***

- 2.5 The Proponent shall, where a follow-up program is a requirement of a condition set out in this document, determine, as part of the development of each follow-up program and in consultation with the party or parties being consulted during the development, the following information, unless already specified in the condition:
  - 2.5.1 the methodology, location, frequency, timing and duration of monitoring associated with the follow-up program;
  - 2.5.2 the scope, content and frequency of reporting of the results of the follow-up program;
  - 2.5.3 the frequency at which the follow-up program must be updated;
  - 2.5.4 the levels of environmental change relative to baseline that are caused by the Designated Project and that would require the Proponent to implement modified or additional mitigation measure(s), including instances where the Proponent may require Designated Project activities causing the environmental change to be stopped;
  - 2.5.5 the technically and economically feasible mitigation measures to be implemented by the Proponent if monitoring conducted as part of the follow-up program shows that the levels of environmental change referred to in condition 2.5.4 have been reached or exceeded; and
  - 2.5.6 the specific and measureable end points that must be achieved before the follow-up program can end. Those end points should indicate that the accuracy of the

environmental assessment has been verified and/or that the mitigation measures are effective.

- 2.6 The Proponent shall update the follow-up programs, including the information determined for each follow-up program pursuant to condition 2.5, during the implementation of each follow-up program, at the minimum frequency determined pursuant to condition 2.5.3 and in consultation with the party or parties being consulted during the development of each follow-up program.
- 2.7 The Proponent shall provide the follow-up programs, including the information determined for each follow-up program pursuant to condition 2.5, to the Agency and to the party or parties being consulted during the development of each follow-up program prior to the implementation of each follow-up program. The Proponent shall also provide any update made pursuant to condition 2.6 to the Agency and to the party or parties being consulted during the development of each follow-up program within 30 days of the follow-up program being updated.
- 2.8 The Proponent shall, where a follow-up program is a requirement of a condition set out in this document:
  - 2.8.1 implement the follow-up program according to the information determined pursuant to condition 2.5 and any requirements specified in conditions specific to each follow-up program;
  - 2.8.2 conduct monitoring and analysis to verify the accuracy of the environmental assessment as it pertains to the particular condition and/or to determine the effectiveness of any mitigation measure;
  - 2.8.3 determine whether modified or additional mitigation measure(s) are required based on the monitoring and analysis undertaken pursuant to condition 2.8.2;
  - 2.8.4 if modified or additional mitigation measures are required pursuant to condition 2.8.3, develop and implement these technically and economically feasible mitigation measure(s) as soon as feasible and monitor them pursuant to condition 2.8.2. The Proponent shall notify the Agency within 24 hours of any modified or additional mitigation measure being implemented and provide a detailed description of the measure, if not previously submitted to the Agency, within 7 days; and
  - 2.8.5 report all results of the follow-up program including all data collected, analyses, and monitoring reports to the Agency no later than March 31 following any reporting year during which the follow-up program is implemented and, subject to information determined pursuant to 2.5.2, to the party or parties being consulted during the development of the follow-up program.
- 2.9 Where consultation with Indigenous groups, Indigenous groups (marine shipping), and/or Indigenous groups (Fraser River) is a requirement of a follow-up program, the Proponent shall discuss the follow-up program with each group and shall determine, in consultation with each group, opportunities for their participation in the implementation of the follow-up program, including the conduct of monitoring, the analysis and reporting of follow-up results and whether modified or additional mitigation measure(s) are required, as set out in condition 2.8.

## ***Annual reporting***

- 2.10 The Proponent shall prepare an annual report that sets out, for each reporting year:
- 2.10.1 the activities undertaken by the Proponent to comply with each of the conditions set out in this document;
  - 2.10.2 how the Proponent complied with condition 2.1;
  - 2.10.3 for conditions set out in this document for which consultation is a requirement, a summary of any views and information received during or as a result of consultation and how the Proponent considered and addressed the views and information received;
  - 2.10.4 the information referred to in conditions 2.5 for each follow-up program and any update to that information made pursuant to condition 2.6;
  - 2.10.5 a summary of the results of the follow-up program requirements;
  - 2.10.6 any modified or additional mitigation measure implemented or proposed to be implemented by the Proponent, as determined pursuant to condition 2.8;
  - 2.10.7 for any conditions where implementation is specifically stated to be dependent in whole or in part upon economic or technical feasibility, and the Proponent determines it is not economically or technically feasible, the Proponent shall provide a reasonable justification for that determination;
  - 2.10.8 the activities undertaken by the Proponent related to its participation in regional initiatives; and
  - 2.10.9 for any plan that is a requirement of a condition set out in this document, any update(s) to the plan that have been made during the reporting year.
- 2.11 The first reporting year for which the Proponent shall prepare an annual report pursuant to condition 2.10 shall start on the day the Minister of the Environment issues the Decision Statement to the Proponent pursuant to subsection 54 (1) of the *Canadian Environmental Assessment Act, 2012*.
- 2.12 The Proponent shall submit to the Agency the annual report referred to in condition 2.10, including a plain language executive summary in both official languages, no later than March 31 following the reporting year to which the annual report applies.

## ***Information sharing***

- 2.13 The Proponent shall publish on the Internet the annual reports and the executive summaries referred to in conditions 2.10 and 2.12, greenhouse gas reduction plan and monitoring results referred to in conditions 3.2 and 3.3, biofilm follow-up program results referred to in conditions 10.14, the reports related to accidents and malfunctions referred to in conditions 19.6.3 and 19.6.4, the accident and malfunction communication plan referred to in condition 19.7, the schedules referred to in conditions 20.1 and 20.2, and any update or revision to the above documents, upon submission of these documents to the parties referenced in the respective conditions. The Proponent shall keep these documents publicly available for 15 years following



their publication. The Proponent shall notify the Agency and Indigenous groups of the availability of these documents within two business days of their publication.

- 2.14 When the development of any plan is a requirement of a condition set out in this document, the Proponent shall submit the plan to the Agency prior to the commencement of the activity or activities to which the plan pertains, unless otherwise required through the condition.

### ***Change of Proponent***

- 2.15 The Proponent shall notify the Agency and Indigenous groups in writing no later than 30 days after the day on which there is any transfer of ownership or control of the Designated Project in whole or in part.

### ***Change to the Designated Project***

- 2.16 If the Proponent is proposing to carry out the Designated Project in a manner other than described in condition 1.7, the Proponent shall notify the Agency in writing in advance. As part of the notification, the Proponent shall provide:

- 2.16.1 a description of the proposed change(s) to the Designated Project and the environmental effects that may result from the change(s);
- 2.16.2 any modified or additional measure to mitigate any environmental effect that may result from the change(s) and any modified or additional follow-up requirement; and
- 2.16.3 an explanation of how, taking into account any modified or additional mitigation measure referred to in condition 2.16.2, the environmental effects that may result from the change(s) may differ from the environmental effects of the Designated Project identified during the environmental assessment.

- 2.17 The Proponent shall submit to the Agency any additional information required by the Agency about the proposed change(s) referred to in condition 2.16, which may include the results of consultation with Indigenous groups and relevant authorities on the proposed change(s) and environmental effects referred to in condition 2.16.1 and the modified or additional mitigation measures and follow-up requirements referred to in condition 2.16.2.

## **3 Air Quality and Greenhouse Gas Emissions**

- 3.1 The Proponent shall provide and maintain, during operation, electrical power connection(s) so that all container vessels equipped to plug into land-based electrical power while berthed at the marine terminal can do so to reduce the use of diesel powered auxiliary engines.
- 3.2 The Proponent shall develop, in consultation with Indigenous groups, Environment and Climate Change Canada, British Columbia's Ministry of Environment and Climate Change Strategy and Metro Vancouver, greenhouse gas management plans for construction and operation of the marine terminal, the widened causeway, and the expanded tug basin, to improve energy efficiency and reduce greenhouse gas emissions. The Proponent shall develop each plan prior to the relevant phase of the Designated Project and implement each plan throughout the relevant

phase of the Designated Project. The Proponent shall take into account applicable federal, provincial and regional greenhouse gas reduction strategies when developing and implementing the plans. As part of each plan, the Proponent shall:

- 3.2.1 identify the sources of direct and indirect greenhouse gas emissions applicable to each phase of the Designated Project covered by the greenhouse gas management plan;
- 3.2.2 identify the commercially available technologies and practices which have the potential to reduce greenhouse gas emissions from each phase of the Designated Project covered by the greenhouse management plan, including emerging technologies and practices at a sufficiently advanced stage of technological development to become technically and economically feasible over the life of the Designated Project;
- 3.2.3 determine how each technically and economically feasible technology or practice identified pursuant to condition 3.2.2 will be implemented by the Proponent during each phase of the Designated Project, including consideration of when any equipment associated with the Designated Project that contributes to the emission of greenhouse gases will need to be replaced with equipment of lower greenhouse gas intensity;
- 3.2.4 review the Proponent's existing voluntary and incentive-based greenhouse gas reduction programs, as indicated in Table 7-3 of the Federal Review Panel Report, indicate within each plan whether the existing programs could be improved to include mandatory measures, and apply any applicable mandatory measures to the Designated Project;
- 3.2.5 establish greenhouse gas emission reduction targets for specific intervals that aim to reduce overall emissions and that take into account how the Proponent plans to implement the technologies and practices in the manner referred to in condition 3.2.2 and any greenhouse gas reduction programs referred to in condition 3.2.4;
- 3.2.6 review the operational greenhouse gas management plan every five years from the start of operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall take into account the results of the follow-up program referred to in condition 3.3 when reviewing and, if necessary updating the plan. If the Proponent updates the plan, the Proponent shall submit any updated plan to the Agency and to Environment and Climate Change Canada within 30 days of the revision of the plan. As part of the review of the plan, the Proponent shall:
  - 3.2.6.1 review the technologies and practices referred to in condition 3.2.2 and update the plan if it identifies other emerging technologies and practices that are at a sufficiently advanced stage of technological development to become technically and economically feasible over the life of the Designated Project;
  - 3.2.6.2 review the greenhouse gas reduction programs referred to in condition 3.2.4 for any additional improvements; and

3.2.6.3 determine whether the reduction targets referred to in condition 3.2.5 need to be revised in light of the information referred to in condition 3.2.6.1 and, if so, revise the targets.

3.3 The Proponent shall develop, prior to construction, and implement, during all phases of the Designated Project, a follow-up program to determine the effectiveness of the mitigation measures as it pertains to greenhouse gas emissions. The Proponent shall develop and implement the follow-up program in consultation with Indigenous groups, Environment and Climate Change Canada, British Columbia's Ministry of Environment and Climate Change Strategy, and Metro Vancouver and in accordance with conditions 2.5 to 2.9. As part of the implementation of the follow-up program, the Proponent shall:

3.3.1 quantify and report annually, during operation and as part of the annual report referred to in condition 2.10, annual greenhouse gas emissions resulting from operation of the marine terminal, the widened causeway and the expanded tug basin, including the methodology, assumptions and all supporting data;

3.3.2 quantify and report annually, as part of the annual report referred to in condition 2.10, annual greenhouse gas emissions arising from construction activities, transportation activities not directly supporting the operation of the marine terminal, and other types of indirect emissions attributable to the Designated Project, including the methodology, assumptions and all supporting data. The Proponent shall specify if indirect emissions data is unavailable or if estimates have been made based on available information; and

3.3.3 use methods outlined in the *Canada's Greenhouse Gas Quantification Requirements*, as updated, or, where emission source methods are not specified for a certain activity, methods consistent with the *2006 Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories*, to quantify emissions pursuant to conditions 3.3.1 and 3.3.2. The Proponent shall justify the methodology used to quantify emission from any activity not specified in *Canada's Greenhouse Gas Quantification Requirements*.

3.4 The Proponent shall develop, prior to the commencement of activities to which they pertain and in consultation with Environment and Climate Change Canada, British Columbia's Ministry of Environment and Climate Change Strategy, the City of Delta, Metro Vancouver, and Indigenous groups, measures to mitigate adverse environmental effects caused by air emissions emitted from the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin during each phase of the Designated Project. The Proponent shall implement the measures throughout the relevant phase of the Designated Project. As part of these measures, the Proponent shall:

3.4.1 mitigate emissions of dust attributable to the construction of the marine terminal, the widened causeway, and the expanded tug basin, including by:

3.4.1.1 regularly sweeping any paved surface located within the Designated Project area;

3.4.1.2 installing and using a wheel washer;

- 3.4.1.3 regularly using water spray on any unpaved surface and exposed stockpiles within the open storage area located within the Designated Project area;
    - 3.4.1.4 stabilizing any exposed earthwork as soon as possible;
  - 3.4.2 provide incentives to third-party contractors to use zero-emission mobile and stationary off-road equipment required for any physical activity undertaken in relation to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin or, if zero-emission equipment is not available or its use is not technically or economically feasible, provide a rationale for that determination and require third-party contractors to use equipment that:
    - 3.4.2.1 uses diesel engines operating on diesel or low-carbon diesel fuel that meet Tier 4 emissions standards where technically and economically feasible or, at a minimum, Tier 3 emission standards and is equipped with verified diesel particulate filters and for which both the engines and the filters are maintained in accordance with maintenance instructions provided by the manufacturer; or
    - 3.4.2.2 uses low-carbon fuel, which may include natural gas, propane or hydrogen, while meeting Tier 4 emissions standards where technically and economically feasible or, at a minimum, Tier 3 emission standards and being maintained in accordance with maintenance instructions provided by the manufacturer;
  - 3.4.3 ensure emission control technologies are not removed from any diesel-powered equipment, unless removal is necessary for repair and maintenance activities, after which the emission control technologies shall be replaced prior to resuming work; and
  - 3.4.4 require, from the start of operation, on-site cargo handling equipment required for operation of the marine terminal to be zero-emitting through the use of electric, hydrogen fuel cell or other technology, except shuttle carriers. The Proponent shall use low-emission shuttle carriers, until such a time as zero-emitting shuttle carriers are technically and economically feasible.
- 3.5 The Proponent shall develop, prior to construction, and implement, during all phases of the Designated Project, a no-idling policy for all mobile equipment and vehicles within the Designated Project area. The Proponent shall require that all persons abide by this policy, unless not technically feasible or not feasible for health or safety reasons. The Proponent shall submit the policy to the Agency prior to construction.
- 3.6 The Proponent shall develop, prior to each phase of the Designated Project and in consultation with Environment and Climate Change Canada, Health Canada, British Columbia's Ministry of Environment and Climate Change Strategy, British Columbia's Ministry of Health, the City of Delta, Metro Vancouver, and Indigenous groups, and to the satisfaction of a qualified professional, a follow-up program as described in Table C21 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to adverse changes to air quality attributable to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin and related environmental effects on human health. The Proponent shall implement the

follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:

- 3.6.1 determine, for each phase of the Designated Project, the criteria air contaminants and trace organic contaminants to be monitored and reported on, including NO<sub>2</sub>, O<sub>3</sub>, SO<sub>2</sub>, TPM, PM<sub>10</sub> and PM<sub>2.5</sub>, the equipment to be used to obtain air quality concentrations and meteorological data, the frequency of data analysis and reporting requirements, and the human health thresholds to be used for the purpose of condition 3.6.5;
- 3.6.2 conduct, during construction, inventories of emissions of criteria air contaminants and trace organic contaminants determined for the construction phase pursuant to condition 3.6.1 within the Roberts Bank port complex, including emissions from the Deltaport Terminal and Westshore Terminals, as well as the BC Ferries Tsawwassen Terminal, to the extent such information is available to the Proponent;
- 3.6.3 monitor, during construction, criteria air contaminants and trace organic contaminants determined for the construction phase pursuant to condition 3.6.1 at existing air quality monitoring stations operated by Metro Vancouver and at additional air quality monitoring station(s) in locations potentially affected by the construction of the marine terminal, the widened causeway, and the expanded tug basin, as determined in consultation with the parties involved in the development of the follow-up program;
- 3.6.4 monitor, during operation, criteria air contaminants and trace organic contaminants determined for the operation phase pursuant to condition 3.6.1 at existing air quality monitoring stations operated by Metro Vancouver and at additional air quality monitoring station(s) in locations potentially affected by the operation of the marine terminal, the widened causeway, and the expanded tug basin, as determined in consultation with the parties involved in the development of the follow-up program;
- 3.6.5 if the results of the monitoring referred to in conditions 3.6.3 or 3.6.4 demonstrate any exceedance of the most stringent applicable air quality criteria set out in the *Canadian Ambient Air Quality Standards* or *British Columbia Air Quality Objectives* or human health thresholds, notify Metro Vancouver and determine, in consultation with the parties involved in the development of the follow-up program, the source of any such exceedance;
- 3.6.6 for any exceedance determined pursuant to condition 3.6.5 to be attributable to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin, develop and implement modified or additional measures to mitigate air quality emissions, which may include reduction or cessation of one or more construction activities; and
- 3.6.7 share the results of the follow-up program on a regular basis with the parties being involved in the development of the follow-up program, including through meetings and the provision of monthly summaries of measured ambient air quality concentrations.

#### **4 Atmospheric Noise and Vibration**

- 4.1 The Proponent shall develop, prior to the relevant phase of the Designated Project and in consultation with Indigenous groups, Environment and Climate Change Canada, Health Canada, and the City of Delta, measures to mitigate adverse environmental effects of atmospheric noise and vibration emitted from the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall implement the measures during the relevant phase of the Designated Project. As part of these measures, the Proponent shall:
- 4.1.1 use soft start procedures to increase the sound levels emitted by construction equipment gradually before use at full operational power;
  - 4.1.2 use alarms on moving or operating equipment with sound levels that adjust to the surrounding ambient sound levels;
  - 4.1.3 require employees and contractors involved in or responsible for noise-generating activities in the Designated Project area to undertake training related to best practices for noise reduction related to those activities;
  - 4.1.4 use and maintain atmospheric noise-dampening technologies on all vehicles and equipment used in the Designated Project area and keep them in good working order, including through the implementation of a regular inspection program;
  - 4.1.5 install and maintain, to the satisfaction of a qualified professional, acoustic barriers around atmospheric noise-emitting components and activities to shield wildlife and human receptors from noise; and
  - 4.1.6 conduct vibratory hammer and impact pile driving only on weekdays and during daytime hours.
- 4.2 The Proponent shall develop, prior to construction and in consultation with Tsawwassen First Nation and Health Canada, mitigation measures to reduce low-frequency noise during the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall implement these measures during construction and operation and submit these measures to the Agency prior to implementing them.
- 4.3 The Proponent shall develop, prior to each phase of the Designated Project and in consultation with the City of Delta, Health Canada, and Indigenous groups, a follow-up program as described in Table C22 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to adverse environmental effects on human health caused by noise and vibration attributable to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:
- 4.3.1 determine, prior to construction, the data requirements for noise monitoring for all phases of the Designated Project;
  - 4.3.2 consider Health Canada's noise guidance and associated thresholds that are available at the time of construction when determining human health threshold(s) that would require the Proponent to implement modified or additional mitigation measure(s) pursuant to condition 4.3.6;

- 4.3.3 consider the most sensitive human receptors, including potential receptors in the marine environment, when determining the location of noise monitoring;
  - 4.3.4 monitor sound levels, including low-frequency noise, continuously during construction and the first two years of operation at a minimum of two locations on Tsawwassen First Nation lands;
  - 4.3.5 monitor sound levels, including low-frequency noise offshore from the Designated Project at a frequency and location determined in consultation with Indigenous groups; and
  - 4.3.6 develop and implement modified or additional mitigation measures to mitigate the noise contribution of the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin, at source or at any receptor location where sound levels are monitored, if the results of any monitoring conducted as part of the follow-up program demonstrate that noise levels attributable to the Designated Project at any receptor location are higher than noise levels predicted during the environmental assessment and/or are above the relevant human health threshold(s) defined in the follow-up program.
- 4.4 The Proponent shall develop, prior to construction and in consultation with the City of Delta, a protocol for receiving complaints related to human health effects from exposure to noise attributable to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall implement the protocol during construction and operation. The Proponent shall provide the protocol to the Agency prior to construction. As part of the implementation of the protocol, the Proponent shall:
- 4.4.1 communicate, prior to construction, with residents and communities located within the upland noise and vibration study area indicated by the Proponent on figure 9.3-1 of the environmental impact statement, to provide the details of the protocol, including how to record a complaint;
  - 4.4.2 provide notification of noise-generating construction activities prior to carrying them out to the residents and communities referred to in condition 4.4.1;
  - 4.4.3 respond to any noise complaint attributed to any component of the Designated Project within 48 hours of the complaint being received and implement any technically and economically feasible corrective action, if required to reduce exposure to noise to below human health thresholds defined in the follow-up program referred to in condition 4.3, in a timely manner; and
  - 4.4.4 provide, on a quarterly basis, a report to the Agency and residents and communities referred to in condition 4.4.1. The report shall include any corrective actions taken during the reporting period.

## **5 Light**

- 5.1 The Proponent shall develop, prior to the relevant phase of the Designated Project and in consultation with Indigenous groups, Environment and Climate Change Canada, Fisheries and Oceans Canada, Transport Canada, and the City of Delta, measures to mitigate adverse environmental effects caused by light emitted during construction and operation of the marine

terminal, the widened causeway, and the expanded tug basin, while meeting safety, operational, or regulatory requirements. As part of these measures, the Proponent shall:

- 5.1.1 avoid the use of decorative terminal lighting and solid burning or slow pulsing warning lights;
- 5.1.2 orient terminal lights downward and limit light use to areas where Designated Project activities are occurring, including through the use of down-shielded lighting fixtures;
- 5.1.3 control terminal light levels and reduce light intensity;
- 5.1.4 install terminal light fixtures that emit light with wavelengths and/or correlated colour temperatures that are shown to reduce effects to fish, birds and other wildlife;
- 5.1.5 design and install obstruction avoidance lighting on terminal structures that minimize intensity and flashing frequency;
- 5.1.6 design and install nighttime terminal lighting to avoid exceedances of 100 lux on the adjacent sea bed within 50 m of the terminal; and
- 5.1.7 implement measures to reduce effects caused by light emitted from the marine terminal on Brunswick Point.

5.2 The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada, Fisheries and Oceans Canada, the City of Delta, Transport Canada, Tsawwassen First Nation, and other Indigenous groups, a follow-up program as described in Table C20 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to adverse changes to ambient lighting attributable to the construction and operation of the marine terminal, the widened causeway, and/or the expanded tug basin, including in the marine environment. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:

- 5.2.1 monitor light trespass and sky glow at the points of reception POR 1, POR 2, POR 7, POR 11 indicated on figure 7-2 of the Federal Review Panel Report and at the nighttime points of reception N-POR 5 and N-POR 6 indicated on figure 20-1 of the Federal Review Panel Report, and compare monitoring results to the relevant classification from the International Commission on Illumination referred to in Tables 7-8 and 7-9 of the Federal Review Panel Report;
- 5.2.2 establish pre-construction light levels in the marine environment from natural light and artificial light from existing infrastructure, including during the spring-summer period when salmon are present at Roberts Bank;
- 5.2.3 monitor light levels in the marine environment during operation and compare monitoring results to the pre-construction light levels established pursuant to condition 5.2.2; and
- 5.2.4 develop and implement modified or additional mitigation measures if the results of the monitoring referred to in condition 5.2.1 or 5.2.3 demonstrate that modified or additional mitigation measures are required to mitigate light trespass, sky glow, or



marine light levels attributable to the construction and operation of the marine terminal, the widened causeway, and/or the expanded tug basin.

## **6 Marine Environment**

- 6.1 The Proponent shall have a qualified professional design the dykes in a manner to avoid channel formation in the seabed, and shall construct the dykes according to this design.
- 6.2 The Proponent shall construct the northwest corner of the terminal in a manner that reduces the potential for seabed scour and sediment deposition identified on figures IR2020-4-25 and IR2020-4-26 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672).
- 6.3 The Proponent shall not use vibro-replacement techniques for construction of the Designated Project in the marine environment.
- 6.4 The Proponent shall take into account the Canadian Council of Ministers of the Environment's Water Quality Guidelines for the Protection of Aquatic Life and British Columbia's *Approved Water Quality Guidelines: Aquatic Life, Wildlife and Agriculture* when undertaking in-water work activities required for the Designated Project that use concrete, and do so in a manner consistent with the *Fisheries Act* and its regulations. In doing so, the Proponent shall:
  - 6.4.1 use pre-cast concrete or, if the use of pre-cast concrete is not technically or economically feasible, isolate concrete from the receiving environment until properly cured, using concrete tight forms or other equivalent method, unless otherwise authorized under the *Fisheries Act*; and
  - 6.4.2 if using cast-in-place concrete, monitor pH concentrations in the receiving environment, and implement modified or additional mitigations measures if pH concentrations exceed levels outlined in the Canadian Council of Ministers of the Environment's *Water Quality Guidelines for the Protection of Aquatic Life* or British Columbia's *Approved Water Quality Guidelines: Aquatic Life, Wildlife and Agriculture* or otherwise required under the *Fisheries Act*.
- 6.5 The Proponent shall develop, prior to the relevant phase of the Designated Project, in consultation with Indigenous groups and to the satisfaction of a qualified professional, measures to control erosion and sedimentation in the Designated Project area, taking into account future climate change scenarios. The Proponent shall implement the measures during all phases of the Designated Project and submit the measures to the Agency prior to implementing them.
- 6.6 The Proponent shall regularly inspect, subject to safety requirements, all erosion and sediment control measures installed within the Designated Project area pursuant to condition 6.5, including during and following rainfall events, and shall document and repair any defective or damaged control measure in a timely manner.
- 6.7 The Proponent shall collect and treat any storm water from the Designated Project area in a manner consistent with the *Fisheries Act* and its regulations before discharging that water into waters frequented by fish or in any place under any conditions where the deleterious substance

or any other deleterious substance that results from the deposit of the deleterious substance may enter any such water.

- 6.8 The Proponent shall, prior to fill placement, characterize representative samples of all fill material received from an off-site location, including quarry material, Fraser sand, dredged material and other material that may be used as fill, to demonstrate that Designated Project construction activities, including supernatant discharge, will not result in marine pollution as defined in the *London Protocol and Convention* and according to advice received from Environment and Climate Change Canada during the environmental assessment (Canadian Impact Assessment Registry Reference Number 80054, Document Number 1091) and in pollution as defined in subsection 6(4) of British Columbia's *Environmental Management Act* and in consideration of the federally *Recommended Environmental Quality Guidelines for the Protection of Southern Resident Killer Whales and their Prey*. The Proponent shall not use any materials as fill, where the characterization of representative samples indicates a potential for marine pollution, unless additional mitigation measures, such as the collection of supernatant, are implemented to prevent marine pollution.
- 6.9 The Proponent shall not use material dredged from the upper 0.5 metres of the existing tug basin and the tug basin expansion area as fill for land development for the Designated Project unless the Proponent:
- 6.9.1 prevents the discharge of supernatant when using the material as fill; or
  - 6.9.2 ensures that:
    - 6.9.2.1 sediment polychlorinated biphenyl levels in the supernatant do not exceed concentrations protective of Southern Resident Killer Whale (*Orcinus orca*), including those in the federally Recommended *Environmental Quality Guidelines for the Protection of Southern Resident Killer Whales and their Prey* and in the British Columbia's *Working Sediment Quality Guidelines*, prior to discharge; or
    - 6.9.2.2 discharge of supernatant will not increase ambient polychlorinated biphenyl concentrations in Southern Resident Killer Whale (*Orcinus orca*) critical habitat, including in the water column, sediment, and prey species.
- 6.10 The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Indigenous groups, measures to mitigate the release of sediments to the water column during dredging activities, taking into account the *Fraser River Estuary Management Program Dredge Management Guidelines*. As part of these measures, the Proponent shall:
- 6.10.1 minimize the dispersal of sediments when dredging the upper 0.5 metres of sediments from the existing tug basin and tug basin expansion area;
  - 6.10.2 establish site-specific water quality objectives and thresholds, including for turbidity and total suspended solids;
  - 6.10.3 define the perimeter of the work areas around dredging activities within which water quality is monitored;

- 6.10.4 monitor water quality in real-time during dredging activities, including total suspended solids and turbidity at the perimeter of the work areas defined pursuant to 6.10.3; and
  - 6.10.5 implement additional mitigation measures, including temporarily stopping or slowing dredging activities, if water quality monitoring results exceed the water quality objectives and thresholds established pursuant to condition 6.10.2.
- 6.11 The Proponent shall develop, prior to the relevant phase of the Designated Project and in consultation with Fisheries and Oceans Canada, Natural Resources Canada, British Columbia's Ministry of Forests, Lands, Natural Resource Operations and Rural Development and Indigenous groups, a follow-up program as described in Table C2 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to sediment erosion and deposition and any associated eutrophication. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:
- 6.11.1 monitor scour along the northwest corner of the terminal at a frequency and for a duration determined in consultation with the parties involved in the development of the follow-up program;
  - 6.11.2 implement additional mitigation measures if scour and/or environmental effects resulting from scour attributable to the Designated Project are greater than predicted in the environmental assessment unless not warranted in the circumstances as determined in consultation with Fisheries and Oceans Canada;
  - 6.11.3 collect sediment cores in relevant locations surrounding the Designated Project area prior to construction and for at least 10 years following the end of construction to determine changes in sedimentation rates and patterns; and
  - 6.11.4 verify the predictions of the environmental assessment regarding eutrophication by monitoring changes in organic enrichment indicators including on tidal flats.

## **7 Fish and fish habitat**

- 7.1 The Proponent shall investigate the technical and economic feasibility of a causeway breach to allow fish passage. The Proponent shall provide a draft of the feasibility report to Indigenous groups, Fisheries and Oceans Canada, Environment and Climate Change Canada, and tenants at Roberts Bank and provide each with at least 60 days to comment. The Proponent shall provide the Agency with the final feasibility report within six months of the issuance of the Minister's decision statement describing whether and under what conditions a causeway breach would be technically and economically feasible and shall include a description of the feedback received during the consultation on the draft feasibility report.
- 7.2 The Proponent shall install and maintain a breach to allow fish passage through either the existing and proposed widened areas of the causeway, if determined feasible pursuant to condition 7.1, or at the east end of the marine terminal identified on figure IR2020-2.2-1 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672). The Proponent shall determine to the satisfaction of Fisheries and Oceans Canada which breach location to implement if both are technically and economically feasible.

- 7.3 The Proponent shall have a qualified professional develop, prior to construction and in consultation with Indigenous groups, Indigenous groups (marine shipping), Indigenous groups (Fraser River) and Fisheries and Oceans Canada, measures to avoid and mitigate adverse environmental effects of the Designated Project on marine species during in-water work activities during construction. The Proponent shall implement the mitigation measures during construction. As part of the measures, the Proponent shall:
- 7.3.1 conduct in-water work activities in the local assessment area indicated on figure 13-1 of the environmental impact statement during timing windows of least risk for marine species, including those identified in condition 8.1.7 and during the following timing windows:
    - 7.3.1.1 for in-water work activities below -5 metre chart datum, during the timing window of least risk for Dungeness crab (*Cancer magister*) (March 31 - October 15), unless otherwise authorized under the *Fisheries Act*;
    - 7.3.1.2 for in-water work activities above -5 metre chart datum, during the timing window of least risk for juvenile salmon (August 16 - February 28), unless otherwise authorized under the *Fisheries Act*; and
    - 7.3.1.3 any additional timing windows of least risk identified through any authorization under the *Fisheries Act* for the Designated Project;
  - 7.3.2 validate every two years that the timing windows of least risk referred to in condition 7.3.1 are appropriate considering the environmental conditions at the time;
  - 7.3.3 monitor for spawning herring presence during in-water work activities conducted outside the timing window of least risk for juvenile salmon and in mid to late February, in areas that spatially overlap with herring spawning habitats, and use this information to inform the development and implementation of additional mitigation measures; and
  - 7.3.4 determine the means, timing, frequency and location(s) of monitoring in condition 7.3.3.
- 7.4 The Proponent shall conduct dredging during operation, if required, only within the timing window of least risk for juvenile salmon (August 16 - February 28).
- 7.5 The Proponent shall implement underwater noise monitoring during in-water work activities during construction to ensure sound levels remain below 206 decibels at a reference pressure of one micropascal within 10 metres of in-water pile driving for finfish.
- 7.6 The Proponent shall develop and implement, in consultation with Indigenous groups and relevant authorities, a Dungeness crab (*Cancer magister*) salvage program. The Proponent shall develop the program prior to construction and shall implement it prior to the commencement of any in-water work activity that has the potential to cause direct mortality of crab, including dredging. As part of the development of the program, the Proponent shall conduct a test to evaluate the use of baiting as a means to relocate crabs and minimize crab handling. If the Proponent concludes that the use of baiting is not an effective means to relocate crabs and minimize crab handling, the Proponent shall implement alternative salvage protocols.

- 7.7 The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Tsawwassen First Nation, Musqueam, and other Indigenous groups, a follow-up program as described in Table C7 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to the continued establishment and use of juvenile Dungeness crab (*Cancer magister*) nursery habitat. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.
- 7.8 The Proponent shall transplant, prior to construction, a minimum of 10 percent of the orange sea pen colony (*Ptilosarcus gurneyi*) that occurs within the Designated Project area. The Proponent shall determine, prior to transplanting and in consultation with Indigenous groups and relevant authorities, the means by which transplanting will be carried out.
- 7.9 The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program as described in Table C8 of Appendix G in the Federal Review Panel Report to verify the effectiveness of the orange sea pen (*Ptilosarcus gurneyi*) transplant referred to in condition 7.8. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.
- 7.10 The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Indigenous groups (marine shipping), Indigenous groups (Fraser River), and relevant authorities, and implement measures during construction dredging activities to avoid or mitigate effects to marine fish and fish habitat, including:
- 7.10.1 measures to reduce direct mortality of Pacific sand lance (*Ammodytes hexapterus*) during dredging of the berth pocket;
  - 7.10.2 measures to limit disturbance to eulachon (*Thaleichthys pacificus*), including:
    - 7.10.2.1 implementing, during dredging in April, and prior to and during dredging in the dredge basin, hydroacoustic monitoring to detect eulachon in real-time and, where technically and economically feasible, stop dredging activities or guide dredging activities away from eulachon.
- 7.11 The Proponent shall develop, prior to construction, as required by Fisheries and Oceans Canada for authorization under the *Fisheries Act*, and in consultation with Indigenous groups, Indigenous groups (marine shipping), Indigenous groups (Fraser River), Environment and Climate Change Canada and British Columbia's Ministry of Forests, Lands, Natural Resource Operations and Rural Development, any offsetting plan(s) related to the alteration, destruction or disturbance of fish habitat, and death of fish associated with the carrying out of the Designated Project based on the draft offsetting plan (IR2020-1.2, Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672). The Proponent shall implement the plan(s) during construction and operation. The Proponent shall submit any approved offsetting plan(s) to the Agency prior to implementation. The plan shall include:
- 7.11.1 a description of anticipated losses of fish and fish habitat remaining after avoidance, reduction, and other mitigation measures have been implemented;
  - 7.11.2 a description of the amount and type of offsets required and the selection of offsetting sites, including consideration of Indigenous priorities;

- 7.11.3 an assessment of the projected benefits of the offsetting measures, using more than one approach;
  - 7.11.4 a description of how potential eutrophication, anoxia and changes in water drainage have been considered in the design of the offsetting measures; and
  - 7.11.5 offsetting measures to compensate for effects to fish and fish habitat remaining after avoidance, reduction, and other mitigation measures have been implemented.
- 7.12 The Proponent shall, for any fish habitat offsetting measure proposed in any offsetting plan referred to in condition 7.11 that may cause adverse environmental effects not considered in the environmental assessment, develop and implement, prior to construction, following consultation with Indigenous groups, Indigenous groups (marine shipping), Indigenous groups (Fraser River) and relevant authorities, measures to mitigate those effects. The Proponent shall submit these measures to the Agency prior to implementing them.
- 7.13 The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Indigenous groups (marine shipping) and Indigenous groups (Fraser River) and as required by Fisheries and Oceans Canada, a follow-up program in accordance with the requirements of any applicable *Fisheries Act* authorization to determine the effectiveness of the offsetting measures implemented as part of the offsetting plan(s) referred to in condition 7.11. The Proponent shall implement the follow-up program once offsetting habitats have been established and until requirements of the authorization under the *Fisheries Act* have been met. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.
- 7.14 The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Indigenous groups, Indigenous groups (marine shipping), and Indigenous groups (Fraser River), a follow-up program as described in Table C9 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to changes to productivity of juvenile salmon as a result of the Designated Project. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:
- 7.14.1 monitor, prior to, during and after construction, the abundance and distribution of Pacific salmon (*Oncorhynchus*) in the local assessment area indicated on figure 13-1 of the environmental impact statement using a statistically defensible sampling program; and
  - 7.14.2 monitor any effects of the marine terminal and breach for fish passage on the migration patterns of juvenile salmon.
- 7.15 The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Environment and Climate Change Canada and Indigenous groups, a follow-up program as described in Table C3 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to changes in marine vegetation as a result of the Designated Project, including to evaluate the accuracy of the Roberts Bank ecosystem model forecasts. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.

- 7.16 The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada and Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment as it pertains to changes in infauna and marine invertebrate productivity as a result of the Designated Project, including to evaluate the accuracy of the Roberts Bank ecosystem model forecasts. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.
- 7.17 The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada and Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment as it pertains to changes in rockfish and lingcod (*Ophiodon elongates*) productivity as a result of the Designated Project, including to evaluate the accuracy of the Roberts Bank ecosystem model forecasts. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.

## **8 Marine Mammals**

- 8.1 The Proponent shall develop, prior to the relevant phase of the Designated Project and in consultation with Indigenous groups, Fisheries and Oceans Canada and Transport Canada measures to mitigate adverse environmental effects caused by underwater noise emitted from the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall implement the measures during the relevant phase of the Designated Project. As part of these measures, the Proponent shall:
- 8.1.1 use soft start procedures to increase the sound levels emitted by construction equipment gradually before use at full operational power;
  - 8.1.2 minimize impulse noise emitted by construction and operation activities, including by giving preference to the use of vibratory pile-driving over impact pile-driving unless not technically feasible;
  - 8.1.3 sequence in-water work activities to limit underwater noise aggregation to the extent feasible, as determined by a qualified professional;
  - 8.1.4 use sound attenuation method(s) and/or technology(ies) when impact pile-driving underwater;
  - 8.1.5 conduct vibratory hammer and impact pile driving only during daytime hours in order to be able to detect marine mammals;
  - 8.1.6 require all construction vessel operators to implement applicable management measures established by the Government of Canada to protect Southern Resident Killer Whale (*Orcinus orca*) that are in effect, unless not feasible for safety reasons;
  - 8.1.7 avoid, from June 1 or the date Southern Resident Killer Whale (*Orcinus orca*) are confirmed by marine mammal observers to be present in the Salish Sea, whichever is later, to September 30:
    - 8.1.7.1 all vibratory and impact pile driving;
    - 8.1.7.2 vibro-densification of the caisson foundation mattress rock; and
    - 8.1.7.3 removal of the piles for the temporary barge ramps;

- 8.1.8 limit, to the extent feasible as determined by a qualified professional, the number of dredge equipment in use and tug and barge movements required for dredging activities when Southern Resident Killer Whale (*Orcinus orca*) are confirmed present in the Salish Sea by marine mammal observers.
- 8.2 The Proponent shall have a qualified professional develop, prior to construction and in consultation with Indigenous groups and Indigenous groups (marine shipping), a marine mammal detection and response plan to reduce adverse effects to marine mammals caused by construction, consistent with any Fisheries and Oceans authorization under the *Fisheries Act*. The Proponent shall implement the plan during all in-water work activities during construction that pose a risk to marine mammals, and have a qualified professional oversee the implementation of the plan. As part of the marine mammal detection and response plan, the Proponent shall:
- 8.2.1 establish behavioral disturbance threshold(s) for continuous (non-impulse) noise for Southern Resident Killer Whale (*Orcinus orca*) and group-specific injury threshold(s) for impulse and continuous (non-impulse) noise for other marine mammal species, and describe the expected effects to marine mammals above and below the thresholds;
  - 8.2.2 identify the in-water work activities that are predicted to generate impulse and continuous (non-impulse) underwater noise (which shall include pile driving and dredging) during construction;
  - 8.2.3 establish minimum exclusion zone(s) for each activity referred to in condition 8.2.2 corresponding to the distance from each activity at which the underwater noise levels are below the thresholds established pursuant to condition 8.2.1, and implement and maintain these exclusion zones(s) when carrying each of these activities;
  - 8.2.4 monitor underwater noise within and directly outside the injury threshold exclusion zone(s) established pursuant to condition 8.2.3 during activities that generate impulse noise identified pursuant to condition 8.2.2 to validate the size of the exclusion zone(s) based on the injury threshold(s) established pursuant to condition 8.2.1. If underwater noise directly outside the exclusion zone(s) exceeds injury thresholds established pursuant to condition 8.2.1, the Proponent shall implement modified or additional mitigation measures, which may include expanding the exclusion zone;
  - 8.2.5 at the start of each new in-water work activity identified pursuant to condition 8.2.2 that generates continuous noise, validate the exclusion zone(s) established based on the behavioral disturbance threshold(s) for continuous noise for Southern Resident Killer Whale (*Orcinus orca*) referred to in condition 8.2.1 to confirm it is of appropriate size. If the exclusion zone is not of the appropriate size, the Proponent shall expand the exclusion zone;
  - 8.2.6 establish a monitoring buffer zone around the exclusion zone implemented for Southern Resident Killer Whale (*Orcinus orca*) to account for the time needed to initiate stop/modify work procedures before Southern Resident Killer Whale (*Orcinus orca*) enter the applicable exclusion zone;



- 8.2.7 monitor for the presence of the applicable marine mammal(s) within their applicable exclusion zone(s) established pursuant to condition 8.2.3 and, also for Southern Resident Killer Whale (*Orcinus orca*) within the buffer zone established pursuant to condition 8.2.6 during all activities identified pursuant to condition 8.2.2. The Proponent shall conduct year-round visual monitoring, using marine mammal observer(s) in combination with non-visual monitoring, in order to observe if a marine mammal enters the exclusion zone. In doing so, the Proponent shall:
- 8.2.7.1 determine minimum training and experience requirements of the marine mammal observer(s) to determine, verify, and monitor exclusion zones and record the location and behaviour of observed marine mammals;
  - 8.2.7.2 develop and implement procedures to adjust location and number of marine mammal observer(s) if Southern Resident Killer Whale (*Orcinus orca*) are approaching the exclusion zone(s) established pursuant to condition 8.2.3 or the buffer zone established pursuant to condition 8.2.6;
  - 8.2.7.3 determine the type and placement of monitoring technologies, including passive acoustic and infrared technologies, to be deployed for detecting marine mammals;
  - 8.2.7.4 develop and implement protocols that specify the conditions under which any non-visual monitoring shall be used, including during periods of low visibility, darkness and fog;
  - 8.2.7.5 develop and implement procedures for marine mammal observer(s) to receive any available information on the presence of cetaceans in the area surrounding the local assessment area from whale sighting networks, and use this information to inform observation requirements in condition 8.2.7;
  - 8.2.7.6 develop and implement protocols to document cetaceans observed as part of the marine mammal detection and response plan, and communicate these observations to British Columbia's Cetacean Sightings Network and Fisheries and Oceans Canada;
- 8.2.8 develop and implement stop work procedures to shut down or modify in-water work activities identified pursuant to condition 8.2.2 when marine mammals exclusion zone(s) are present within their applicable exclusion zone(s) established pursuant to condition 8.2.3, including communication protocols to facilitate stop work procedures. In doing so, the Proponent shall:
- 8.2.8.1 grant stop work authority to marine mammal observer(s);
  - 8.2.8.2 initiate stop work procedures prior to Southern Resident Killer Whales (*Orcinus orca*) entering the exclusion zone(s) established pursuant to condition 8.2.3;
  - 8.2.8.3 start or restart in-water work activities identified pursuant to condition 8.2.2 only once it has been visually confirmed that marine mammal(s) are not present within their applicable exclusion zone(s), or if a minimum of 30 minutes has elapsed since the marine mammal was last sighted within the applicable exclusion zone(s); and

- 8.2.9 if marine mammals are observed in distress notify Fisheries and Oceans Canada. The Proponent shall implement mitigation measures, including stopping, if it is safe to do so, or modifying in-water work activities identified pursuant to condition 8.2.2 to address the situation of marine mammal distress as a result of the Designated Project under the advisement and to the satisfaction of a qualified professional.
- 8.3 The Proponent shall require container vessels calling on the Designated Project to participate in the *Enhancing Cetacean Habitat and Observation Program*, or any future equivalent program, to reduce the potential effects of container vessels calling on the Designated Project on cetacean species. As part of the annual report referred to in condition 2.10, the Proponent shall:
- 8.3.1 provide, or provide the means to access, reporting of the underwater noise levels measured as part of the *Enhancing Cetacean Habitat and Observation Program*, or any future equivalent program, throughout operation; and
- 8.3.2 evaluate, in consultation with Fisheries and Oceans Canada, Transport Canada, Indigenous groups, and Indigenous groups (marine shipping), the effectiveness of the participation of container vessels calling on the Designated Project in the *Enhancing Cetacean Habitat and Observation Program* in mitigating underwater noise and the risk of fatal vessel strikes to humpback whales (*Megaptera novaeangliae*) and Southern Resident Killer Whales (*Orcinus orca*).
- 8.4 The Proponent shall develop, prior to operations, in consultation with Transport Canada and to the satisfaction of Fisheries and Oceans Canada, a plan to address effects to Southern Resident Killer Whale (*Orcinus orca*) due to underwater noise produced as a result of the operations of the Designated Project, including both marine shipping and operations at the marine terminal. The Proponent shall implement the plan in consultation with Transport Canada and to the satisfaction of Fisheries and Oceans Canada during operation. As part of the plan, the Proponent shall:
- 8.4.1 establish a budget for underwater noise for the operation of the Designated Project, specifying the amount, locations, and timing of underwater noise that will be generated, reduced, and/or offset, in order to meet the predicted effects to Southern Resident Killer Whales (*Orcinus orca*) due to underwater noise described in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672);
- 8.4.2 monitor underwater noise levels and conduct analysis in order to ensure that the underwater noise budget established in condition 8.4.1 is being met;
- 8.4.3 implement modified or additional mitigation measures, and report to the Agency, Transport Canada, and Fisheries and Oceans, if the results of the monitoring and modelling referred to in condition 8.4.2 demonstrate that levels of underwater noise are nearing exceedance of the budget established in condition 8.4.1. Measures may include:
- 8.4.3.1 mandatory speed reductions for vessels and/or tugs in addition to those required pursuant to condition 8.3;
- 8.4.3.2 additional offsets for underwater noise in Southern Resident Killer Whale (*Orcinus orca*) critical habitat in the Salish Sea;
- 8.4.3.3 limits on container vessel calls to the Designated Project; and

- 8.4.4 identify measures, out of the care and control of the Proponent, that could be undertaken by relevant authorities in order to achieve the budget for underwater noise established in condition 8.4.1 or to limit effects to Southern Resident Killer Whale (*Orcinus orca*) to those predicted in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672) should the Proponent be of the opinion that measures developed and implemented pursuant to condition 8.4.3 have been exhausted.
- 8.5 The Proponent shall implement, in consultation with Transport Canada and Fisheries and Oceans Canada, technically and economically feasible technologies for reducing underwater noise related to berthing activities. In doing so, the Proponent shall:
- 8.5.1 evaluate, prior to operation, the effectiveness of technologies to reduce underwater noise associated with berthing activities, including the use of electric tugs. The Proponent shall determine, as part of its evaluation, whether the use of the technology would increase the extent to which environmental effects, other than underwater noise, are adverse. The Proponent shall submit the evaluation to the Agency one year prior to the start of operation and shall include the sources of information and methodology used;
  - 8.5.2 upon completion of the initial evaluation referred to in condition 8.5.1, conduct a review every three years in order to identify and evaluate any new and emerging underwater noise reduction technologies for berthing activities. The Proponent shall conduct a review until such time that the Proponent has determined, in consultation with Transport Canada and Fisheries and Oceans Canada, that a review is no longer warranted. The results of the review shall be included as part of the annual report referred to condition 2.10; and
  - 8.5.3 implement any technically and economically feasible new or emerging underwater noise reduction technologies for berthing activities determined by the Proponent, as part of a review conducted pursuant to condition 8.5.2, to be effective at reducing underwater noise associated with berthing activities, without increasing the extent to which other environmental effects are adverse, and to meet requirements for safe operations. The Proponent shall submit these measures to the Agency prior to implementing them.
- 8.6 The Proponent shall develop and implement, in consultation with Indigenous groups, Fisheries and Oceans Canada, Canadian Coast Guard, Pacific Pilotage Authority, and other relevant authorities, procedures to delay, where necessary, the daytime departure of container vessels calling on the Designated Project to mitigate effects to Southern Resident Killer Whale (*Orcinus orca*). The procedures shall include communication protocols, monitoring and criteria for determining whale presence, and safety and regulatory requirements. As part of the development of the procedures, the Proponent shall take into account the potential impacts of the implementation of the criteria and procedures on the Proponent's tenants and users of the Proponent's facilities at Roberts Bank.
- 8.7 The Proponent shall distribute, prior to and throughout operation, the marine mammal awareness pamphlet *Marine Mammals of the Roberts Bank Area and Mariner's Guide to Whales*,

*Dolphins, Porpoises of Western Canada*, or any future equivalent document, to marine pilots working within the Port of Vancouver.

- 8.8 The Proponent shall document Indigenous knowledge it has received and how it was considered in the development and implementation of measures to mitigate effects on Southern Resident Killer Whales (*Orcinus orca*) throughout all phases of the Designated Project. The Proponent shall respect Indigenous knowledge protocols and shall keep Indigenous knowledge it has received confidential, if requested, and/or if required by legal and regulatory requirements.
- 8.9 The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Transport Canada, and Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment as it pertains to changes in levels of underwater noise and associated effects to Southern Resident Killer Whale (*Orcinus orca*) as a result of operation of the Designated Project. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:
- 8.9.1 monitor underwater noise using hydrophones prior to construction and during operations and conduct modelling of effects of underwater noise on Southern Resident Killer Whale (*Orcinus orca*). The Proponent shall conduct monitoring, at a minimum, for 60 days in winter and 60 days in summer for every year of monitoring;
  - 8.9.2 evaluate and determine whether meeting the underwater noise budget established pursuant to condition 8.4 is mitigating effects to Southern Resident Killer Whale (*Orcinus orca*) as predicted in IR2020-3 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 141672); and
  - 8.9.3 monitor the effectiveness of any technologies implemented pursuant to condition 8.5.
- 8.10 The Proponent shall sign on, as a party to the *Species at Risk Act Section 11 Conservation Agreement to Support the recovery of the Southern Resident Killer Whale*, to an additional five year term of the agreement, or equivalent, if the other parties of the agreement also agree.
- 8.11 The Proponent shall participate, at the request of a relevant federal authority, in regional initiatives aimed at effective management and recovery of the Southern Resident Killer Whale (*Orcinus orca*), including the Oceans Protection Plan, the Whales Initiative, or equivalent, and any other initiative supporting the recovery objectives for the Southern Resident Killer Whale (*Orcinus orca*) outlined in the *Southern Resident Killer Whale Action Plan*.
- 8.12 The Proponent shall participate, at the request of a relevant federal authority, in regional initiatives aimed at managing underwater noise due to commercial vessel traffic.
- 8.13 The Proponent shall participate, at the request of a relevant federal authority, in regional initiatives aimed at identifying the portions of the Salish Sea where marine shipping overlaps spatially and temporally with Southern Resident Killer Whale (*Orcinus orca*) habitat use.

## 9 Terrestrial Vegetation and Wetlands

- 9.1 The Proponent shall implement site-specific measures to monitor and control invasive plant species prior to and during construction, and for a minimum period of five years following construction of offsetting habitats, including by:
- 9.1.1 limiting, in consultation with British Columbia's Ministry of Forests, Lands, Natural Resource Operations and Rural Development, seed dispersal of English cordgrass (*Spartina anglica*) prior to and during construction;
  - 9.1.2 managing and disposing, in consultation with British Columbia's Ministry of Forests, Lands, Natural Resource Operations and Rural Development, of existing English cordgrass (*Spartina anglica*) within the Designated Project area; and
  - 9.1.3 managing and disposing of invasive plant species found within offsetting habitats constructed as part of the Designated Project.
- 9.2 The Proponent shall develop, prior to construction, and in consultation with Environment and Climate Change Canada, British Columbia's Ministry of Forests, Lands, Natural Resource Operations and Rural Development, and Indigenous groups, a wetland compensation plan, which shall consider the principles outlined in Environment and Climate Change Canada's *Operational Framework for Conservation Allowances* and meet the objective of no net loss of the Federal Policy on *Wetland Conservation on Federal Lands* (Government of Canada, 1991), and include measures to compensate for residual adverse environmental effects on wetland functions caused by the Designated Project that cannot be avoided or minimized and that are not already accounted for as part of the offsetting plan(s) required pursuant to condition 7.11. The Proponent shall begin implementing the compensation plan during construction. As part of the implementation of the compensation plan, the Proponent shall:
- 9.2.1 determine the compensation area required for each wetland and its associated functions remaining after the implementation of the offsetting requirements set out in the offsetting plan(s) referred to in condition 7.11 and that must be included in the wetland compensation plan;
  - 9.2.2 delineate, based on field data, all wetland habitat that will be lost as a result of the Designated Project;
  - 9.2.3 identify habitat suitable to be used as compensation for the lost wetland habitat referred to in 9.2.2, including by prioritizing wetlands within the local assessment area. For wetlands located outside the local assessment area, the Proponent shall favor sites located as close to the Designated Project as possible and that reflect equivalent wetland functions to those that are lost;
  - 9.2.4 prioritize wetland restoration over enhancement and wetland enhancement over creation;
  - 9.2.5 take into account time lags, technical limitations, and uncertainty when meeting the objective of no net loss as per the Federal Policy on *Wetland Conservation on Federal Lands* (Government of Canada, 1991);

- 9.2.6 use wetland plant species native to the Designated Project area, of importance to Indigenous groups, and of value to migratory birds, including plant species salvaged in condition 9.3 if technically feasible; and
  - 9.2.7 include intertidal marsh habitat offsets to promote the growth of native species that would compensate for the loss and degradation of ecological communities listed as red or blue by the British Columbia Conservation Data Centre identified in figure 11-5 of the Federal Review Panel Report resulting from the expanded causeway.
- 9.3 The Proponent shall, in consultation with Indigenous groups, salvage and transplant native plant species, including ecological communities listed as red or blue by the British Columbia Conservation Data Centre and those of interest to Indigenous groups, prior to clearing vegetation within wetland habitats. The Proponent shall relocate salvaged plants to reclaimed areas or compensation habitats referred to in condition 9.2, if technically feasible. The Proponent shall develop, in consultation with Indigenous groups, criteria in order to evaluate the success of the transplantation.
- 9.4 The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada, Natural Resources Canada, British Columbia's Ministry of Forests, Lands, Natural Resource Operations and Rural Development, Tsawwassen First Nation, Musqueam, and other Indigenous groups, a follow-up program to determine the effectiveness of the wetland compensation plan referred to in condition 9.2, and verify the accuracy of the environmental assessment as it pertains to the effects of the Designated Project on wetlands. The Proponent shall consider the implementation of the offsetting conducted pursuant to condition 7.11 and associated follow-up program when implementing the follow-up program and shall implement it in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:
- 9.4.1 establish performance standards for wetland functions, including criteria by which functions will be measured;
  - 9.4.2 monitor, using a qualified professional, wetland compensation habitats, annually from the start of compensation and for five years and every ten years thereafter until performance standards have been met;
  - 9.4.3 monitor the effects of the Designated Project on wetlands predicted to be affected by the Designated project, including:
    - 9.4.3.1 ecological communities listed as red or blue by the British Columbia Conservation Data Centre in the local assessment area predicted to be affected by the Designated Project identified on figure IR-11-22-A in the response to Information Request 11-22 (Canadian Impact Assessment Registry Reference Number 80054, Document Number 1275);
    - 9.4.3.2 the intertidal marsh communities, including at Brunswick Point, predicted to be affected by the Designated Project; and
  - 9.4.4 identify and implement additional or modified mitigation measures should monitoring conducted pursuant to condition 9.4.2 indicates performance standards established pursuant to condition 9.4.1 have not been met or are no longer being met and/or the monitoring conducted pursuant to condition 9.4.3 indicates that

the effects of the Designated Project exceed those predicted in the environmental assessment.

## **10 Avifauna**

- 10.1 The Proponent shall carry out the Designated Project in a manner that protects migratory birds and avoids injuring, killing or disturbing migratory birds, destroying or disturbing their nests or eggs, or taking them. In this regard, the Proponent shall take into account Environment and Climate Change Canada's *Avoidance Guidelines* to reduce the risk to migratory birds. The Proponent's actions when carrying out the Designated Project shall be in compliance with the *Migratory Birds Convention Act, 1994*, the *Migratory Birds Regulations* and with the *Species at Risk Act*.
- 10.2 The Proponent shall document, prior to construction and in consultation with internationally recognized and published experts on biofilm ecology, Indigenous groups, and Environment and Climate Change Canada, methods and best practices to create biofilm habitat, including details about the production of lipids, with specific reference to fatty acids in the Fraser river estuary. The Proponent shall publish a document compiling the results of its research on its website and shall provide it to the Agency prior to construction. The Proponent shall incorporate current knowledge peer-reviewed science in the document and shall update the document at years 2, 5, and 10 following the end of construction based on emerging knowledge and science, including science developed as part of condition 10.14.
- 10.3 The Proponent shall identify, in consultation with Environment and Climate Change Canada, Bird Studies Canada, British Columbia's Ministry of Transportation and Infrastructure, and Indigenous groups, types of and suitable locations for, and install physical barrier(s) within either the local and/or regional assessment areas, shown in figures 15-1 and 15-2 of the environmental impact statement, to mitigate road-associated mortality risk for barn owls (*Tyto alba*) as a result of the Designated Project. The Proponent shall install the barrier(s), prior to operation, in a manner that does not attract other avian species, including barn swallows (*Hirundo rustica*), and shall, where technically feasible, conserve barn owl (*Tyto alba*) roadside grass verge hunting habitat. The Proponent shall maintain the barriers throughout operation and shall consider the lifespan and long-term maintenance requirements when identifying the types and locations of the barrier(s).
- 10.4 The Proponent shall identify, in consultation with Environment and Climate Change Canada and Indigenous groups and to the satisfaction of a qualified professional, the number and locations of artificial nest structures that shall be installed within the regional assessment area to enhance barn owl (*Tyto alba*) habitat. The Proponent shall install at least five nest structures during the first year of construction and shall maintain the nest structures throughout construction and operation.
- 10.5 The Proponent shall contribute to third-party program(s) to establish and maintain barn owl (*Tyto alba*) foraging habitat close to existing or newly installed artificial nest structures.
- 10.6 The Proponent shall cap all hollow steel pipes following their installation in the Designated Project area, and shall maintain capping throughout construction and operation.

- 10.7 The Proponent shall determine, in consultation with Environment and Climate Change Canada, the extent to which the offsetting required pursuant to conditions 7.11 and 9.2 includes great blue heron (*Ardea herodias*) foraging habitat, and shall compensate residual loss to great blue heron (*Ardea herodias*) foraging habitat in the intertidal zone of the local assessment area indicated on figure 15-1 of the environmental impact statement not otherwise compensated.
- 10.8 The Proponent shall determine, in consultation with British Columbia's Ministry of Transportation and Infrastructure and Environment and Climate Change Canada, if the implementation of measures to decrease the potential for bird-vehicle collisions within the local and regional assessment area indicated by the Proponent on figures 15-1 and 15-2 of the environmental impact statement (including reduced speed limits) is technically and economically feasible. If technically and economically feasible, the Proponent shall provide these measures to the Agency prior to construction. The Proponent shall ensure vehicles associated with the Designated Project adhere to these measures during construction and operation within the Designated Project area.
- 10.9 The Proponent shall develop and implement measures to increase awareness among employees, contractors and truck drivers associated with the Designated Project, who may encounter wildlife within the Designated Project area, to reduce collisions between birds and vehicles.
- 10.10 The Proponent shall develop, prior to each phase of the Designated Project, in consultation with Environment and Climate Change Canada and Metro Vancouver and to the satisfaction of a qualified professional, waste management measures to minimize waste generation and to avoid harm to birds. The Proponent shall implement these measures during the relevant phase of the Designated Project and shall provide them to the Agency prior to implementing.
- 10.11 The Proponent shall develop and implement, in consultation with Indigenous groups, protocols to notify Indigenous groups of any bird mortality within the Designated Project area, and allow Indigenous groups access to the Designated Project area so that they may harvest the birds.
- 10.12 The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Indigenous groups, a follow-up program as described in Table C4 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to the abundance and use of foraging habitat, including any created as a result of condition 10.7, by great blue heron (*Ardea herodias*). The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.
- 10.13 The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Environment and Climate Change Canada and Indigenous groups, a follow-up program as described in Table C15 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to salinity changes in the intertidal water column. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. The Proponent shall share results of the follow-up program with researchers in mudflat and biofilm ecology.
- 10.14 The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Indigenous groups, a follow-up program as described in Table C14 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to the effects of the Designated Project on the capability of the local



assessment area to support Western sandpiper (*Calidris mauri*) populations due to potential alterations to distribution and abundance of biofilm and invertebrate prey. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9 and take into account past biofilm studies, most up-to-date research and best practices for sampling and analysis and developing and implementing the follow-up program. As part of the follow-up program, the Proponent shall:

- 10.14.1 implement a before-after-control-impact design study using mudflats off Westham Island, or another suitable location as referenced in Table C14 of Appendix G in the Federal Review Panel Report, as the control site;
  - 10.14.2 collect, during the northern migration period of the Western sandpiper (*Calidris mauri*) prior to and throughout construction and the first three years of operation, fatty acids and carbohydrates of invertebrate prey and biofilm and chlorophyll for biofilm, and record and report as both concentration (measure per m<sup>2</sup>) and content (measure per gram of dry sediment);
  - 10.14.3 conduct total lipid and fatty acid analyses on the invertebrate prey and biofilm collected pursuant to condition 10.14.2 at a laboratory determined in consultation with Environment and Climate Change Canada;
  - 10.14.4 evaluate the potential effects of a compression in the range of variability of salinity experienced at Roberts Bank on polyunsaturated fatty acid production in biofilm; and
  - 10.14.5 submit the follow-up program, including the planned sampling and analysis methodology, before it is implemented for review and approval by an independent tripartite technical review process composed of representatives, who have knowledge or experience relative to biofilm monitoring, sampling and statistical analysis and who have been appointed by the Proponent, Environment and Climate Change Canada and other relevant authorities.
- 10.15 The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada, British Columbia's Ministry of Environment and Climate Change Strategy, City of Delta, City of Richmond and Indigenous groups, a follow-up program as described in Table C16 of Appendix G in the Federal Review Panel Report to determine the effectiveness of mitigation measures as it pertains to the artificial nest structures for barn owl (*Tyto alba*) installed pursuant to condition 10.4 in the local and regional assessment areas. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.
- 10.16 The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada, British Columbia's Ministry of Environment and Climate Change Strategy, British Columbia's Ministry of Transportation and Infrastructure, and Indigenous groups, a follow-up program as described in Table C17 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to barn owl (*Tyto alba*) in the local assessment area. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:

10.16.1 monitor the effectiveness of physical barrier(s) installed to reduce vehicle collision with barn owl (*Tyto alba*) and other avian species, including barn swallow (*Hirundo rustica*) pursuant to condition 10.3.

10.17 The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Indigenous groups, a follow-up program as described in Table C18 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to the abundance, density and diversity of diving birds. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.

10.18 The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Indigenous groups, a follow-up program as described in Table C19 of Appendix G in the Federal Review Panel Report to verify the accuracy of the environmental assessment as it pertains to the effect of artificial light from the Designated Project on coastal bird population viability. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:

10.18.1 conduct surveys of light-induced stranding events of migratory birds aligned with the periods for which light-induced stranding events are expected to occur based on methodology information provided by Environment and Climate Change Canada.

10.19 The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to barn swallow (*Hirundo rustica*) habitat. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9.

## **11 Communication Plan**

11.1 The Proponent shall develop, prior to construction and in consultation Indigenous groups, relevant authorities, and commercial and recreational marine users (including the Area I Crab Fisherman Association and the Lower Fraser Sport Fishing Advisory Committee), a communication plan. The Proponent shall implement the plan during construction and operation. The plan shall include measures applicable to each phase of the Designated Project to provide up-to-date information to Indigenous groups and commercial and recreational marine users about activities related to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin that may adversely affect access within the local assessment area for land and water use indicated on figure 26-1 of the environmental impact statement. As part of the plan, the Proponent shall include the following:

11.1.1 the type of information that will be communicated to Indigenous groups and commercial and recreational marine users about the nature, location, status and progress of planned and unplanned activities associated with the Designated Project, including:

11.1.1.1 information on navigational closure areas implemented during construction or operation of the Designated Project;

- 11.1.1.2 vessel traffic schedules for vessels associated with the Designated Project; and
  - 11.1.1.3 procedures for navigational safety and any other measures implemented by the Proponent to mitigate adverse effects to navigation as a result of the Designated Project.
- 11.1.2 procedures to communicate the information referred to in condition 11.1.1 to Indigenous groups and commercial and recreational marine users, including timing and frequency of distribution of this information;
  - 11.1.3 procedures for Indigenous groups and commercial and recreational marine users to provide feedback to the Proponent on adverse effects related to marine use as result of construction and operation of the marine terminal, the widened causeway, and the expanded tug basin including unanticipated issues and interactions with other users; and
  - 11.1.4 procedures for the Proponent to document and respond in a timely manner to feedback received pursuant to 11.1.3, and to demonstrate how feedback has been addressed.

## **12 Current use of lands and resources for traditional purposes**

- 12.1 The Proponent shall allow access to closure area(s), including navigational closure area(s) that are within the care and control of the Proponent, for the purpose of Indigenous harvesting of crab for domestic or food, social and ceremonial purposes, to the extent that such access is safe. In doing so, the Proponent shall:
  - 12.1.1 consult with Tsawwassen First Nation, Musqueam, and other Indigenous groups on the development and implementation of the closure area(s), including the timing of implementation, location and spatial extent;
  - 12.1.2 provide the final details related to the closure area(s) referred to in condition 12.1.1 to Tsawwassen First Nation, Musqueam, other Indigenous groups, and Fisheries and Oceans Canada prior to implementation, and any update to that information; and
  - 12.1.3 develop and implement measures, in consultation with Tsawwassen First Nation, Musqueam, other Indigenous groups, and Fisheries and Oceans Canada, to address safety concerns and the practicality for members of Tsawwassen First Nation and Musqueam and other Indigenous groups to harvest crab for food, social and ceremonial purposes within the navigational closure area(s).
- 12.2 The Proponent shall, prior to construction, work collaboratively with Musqueam and Tsawwassen First Nation on a stewardship initiative to retrieve and dispose of lost or discarded fishing gear in the Roberts Bank area.
- 12.3 [The Agency is considering additional conditions regarding mitigating effects of the project on current use of lands and resources for traditional purposes commensurate with the proponent's predictions regarding container vessel traffic]

- 12.4 The Proponent shall develop, prior to construction, and implement, throughout the first eight years of operation, a follow-up program in consultation with Tsawwassen First Nation, Musqueam, and other Indigenous groups as it relates to their current use of lands and resources for traditional purposes. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the development of the follow-up program, the Proponent shall identify:
- 12.4.1 parameters to monitor changes in environmental components identified as important for the current use of lands and resources for traditional purposes, including crab and juvenile salmon, and the contribution of the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin to these changes;
  - 12.4.2 how the Proponent will monitor the parameters identified pursuant to condition 12.4.1, including the means, timing and location of monitoring, and how monitoring conducted as part of the other follow-up programs set out in this document for environmental components referred to in condition 12.4.1 will be utilized;
  - 12.4.3 the levels of changes to environmental components referred to in condition 12.4.1 relative to baseline and attributable to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin that would require the Proponent to implement modified or additional mitigation measure(s);
  - 12.4.4 a process for developing and implementing any modified or additional mitigations if the levels of environmental change identified pursuant to condition 12.4.3 are exceeded; and
  - 12.4.5 opportunities for the participation of Tsawwassen First Nation, Musqueam, and other Indigenous groups in monitoring and reporting on the follow-up program.
- 12.5 The Proponent shall participate, at the request of Transport Canada and/or Fisheries and Oceans Canada, in the development and implementation of regional initiatives, including as part of the Oceans Protection Plan, or equivalent, related to effects on current use of lands and resources for traditional purposes as a result of marine shipping.

### **13 Health and Socio-economic conditions**

- 13.1 The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Health Canada, British Columbia's Ministry of Health, Fraser Health Authority and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to the effects of the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin on Indigenous health related to the quality and consumption of marine traditional food. The Proponent shall implement the follow-up program in accordance with conditions 2.5 to 2.9. As part of the follow-up program, the Proponent shall:
- 13.1.1 collect, prior to, during and post in-water construction, samples of marine species consumed by Indigenous groups;
  - 13.1.2 develop a list of potential contaminants of concern to be analyzed;

- 13.1.3 conduct laboratory analysis of tissue samples of the marine species identified pursuant to condition 13.1.1 for the contaminants of concern identified during the development of the follow-up program;
  - 13.1.4 survey Indigenous communities, during and post-in water construction, regarding any changes to levels and patterns of harvesting and consumption of marine traditional foods in the area potentially impacted by the Designated Project; and
  - 13.1.5 conduct analysis of results of the follow-up program using a human health risk assessment prior to, during and post in-water construction.
- 13.2 The Proponent shall participate, at the request of a relevant federal authority, in any regional initiative related to improving the understanding of shellfish quality at Roberts Bank.
- 13.3 The Proponent shall develop, prior to construction and in consultation with Tsawwassen First Nation and the Maa-nulth Nations, a process for Tsawwassen First Nation and the Maa-nulth Nations to report concerns to the Proponent about any adverse environmental effect caused by the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin and incidental marine shipping activities on their commercial ventures. The Proponent shall implement the process during construction and the first five years of operation. As part of the implementation of the process, the Proponent shall:
- 13.3.1 document the concerns received from Tsawwassen First Nation and Maa-nulth Nations, including a description of how these concerns relate to effects of the Designated Project on their commercial ventures;
  - 13.3.2 implement technically and economically feasible modified or additional mitigation measures, in consultation with Tsawwassen First Nation and the Maa-nulth Nations, to address concerns that relate to issues within the Proponent's care and control;
  - 13.3.3 report concerns that relate to issues outside the Proponent's care and control to Transport Canada and the Canadian Coast Guard; and
  - 13.3.4 provide to the Agency, as part of the annual report referred to in condition 2.10, all concerns received during the reporting year and how the Proponent has addressed all concerns related to issues within the Proponent's care and control, including any modified or additional mitigation measure that the Proponent has implemented or plans to implement, or a rationale as to why no modified or additional mitigation measure(s) is/are required to address the concerns received.
- 13.4 The Proponent shall develop, prior to construction and in consultation with the Area I Crab Fisherman Association, Indigenous groups that hold commercial licences to harvest crab within the local assessment area indicated on figure 21-3 of the environmental impact statement, the Lower Fraser Sport Fishing Advisory Committee, and Fisheries and Oceans Canada, measures to mitigate adverse environmental effects on commercial and recreational crab fishery attributable to the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall implement these mitigation measures during construction and operation and shall submit these measures to the Agency prior to implementing them.

- 13.5 The Proponent shall invite commercial crab harvesters, including the Area I Crab Fisherman Association, Indigenous groups that hold commercial licences to harvest crab within the local assessment area indicated by the Proponent on figure 21-3 of the environmental impact statement, and the Lower Fraser Sport Fishing Advisory Committee, to meetings annually during construction and the first five years of operation to discuss:
- 13.5.1 mitigation measures developed pursuant to condition 13.4 including the nature, location, status of relevant Designated Project activities; and
  - 13.5.2 annual monitoring and harvesting landing data referred to in condition 13.6.
- 13.6 The Proponent shall undertake analysis, during construction and the first five years of operation, of landing data of commercial crab harvesting within the local assessment area to the extent that such data is available to the Proponent, to inform activities pursuant to condition 13.5.
- 13.7 The Proponent shall evaluate the feasibility of implementing land use options related to or in support of agriculture, for portions of the land referred as Lot 3 in the Vancouver Fraser Port Authority's 2018 Approved Land Use Plan Amendments that are not required for Designated Project components or activities. The Proponent shall provide the Agency with the results of the evaluation, provide a reasonable justification for options determined not economically or technically feasible, and implement technically and economically feasible land use options related to or in support of agriculture.
- 13.8 The Proponent shall participate, at the request of a relevant authority, in any regional initiative related to the prevention, monitoring and compensation of any adverse environmental effect attributable to the Designated Project on Agricultural Land Reserve properties located adjacent to the Designated Project area.

**14 Physical and cultural heritage and structures, sites or things of historical, archaeological, paleontological or architectural significance**

- 14.1 The Proponent shall develop, prior to construction and in consultation with Tsawwassen First Nation, Musqueam, and other Indigenous groups, and to the satisfaction of a qualified professional, and implement a plan to conduct an inventory of fish trap stakes across the eastern end of the causeway expansion area within the area of moderate archaeological potential indicated by the Proponent on figure 8 of Appendix 28-A of the environmental impact statement. If the Proponent encounters any fish trap stakes during the inventory, it shall expand excavation towards the existing causeway. The Proponent shall implement the procedures developed pursuant to condition 14.3 when encountering any fish trap stake.
- 14.2 The Proponent shall monitor annually, in consultation with Indigenous groups and to the satisfaction of a qualified professional, during construction and for the first five years of operation, erosion of the area of moderate archeological potential indicated by the Proponent on figure 8 of Appendix 28-A of the environmental impact statement and of the historic tidal channel that lies northwest of the terminal, formerly draining Canoe Passage, to identify potential exposure of buried fish trap stakes or other archeological resource(s). The Proponent shall implement procedures developed pursuant to condition 14.3 when encountering any fish trap stake(s) or archeological resource(s).

- 14.3 The Proponent shall develop, prior to construction, in consultation with Indigenous groups and relevant authorities and to the satisfaction of a qualified professional, a Physical Heritage Resources Management Plan for any structure, site, or thing of historical, archaeological, paleontological, or architectural significance or physical heritage resources within the local assessment area indicated on figure 28-1 of the environmental impact statement. The Proponent shall implement the Physical Heritage Resources Management Plan during all phases of the Designated Project. The plan shall include:
- 14.3.1 a description of how Indigenous knowledge and traditional use studies conducted as part of the environmental assessment have been integrated into the development of the plan, while respecting Indigenous knowledge protocols and keeping Indigenous knowledge confidential, if requested;
  - 14.3.2 a description of the predicted impacts of activities associated with the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin on physical heritage resources and structures, sites, or things of historical, archaeological, paleontological or architectural significance within the local assessment area;
  - 14.3.3 protocols with respect to the discovery, handling, recognition, recording, transferring and safekeeping of fish trap stakes identified through the inventory conducted by the Proponent pursuant to condition 14.1 or through monitoring pursuant to condition 14.2;
  - 14.3.4 procedures to record, analyze, and mitigate the adverse environmental effects of the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin on physical heritage resources and structures, sites, or things of historical, archaeological, paleontological or architectural significance;
  - 14.3.5 a process for reporting information about physical heritage resources and structures, sites or things of historical, archaeological, paleontological or architectural significance to Indigenous groups and relevant authorities;
  - 14.3.6 a chance find protocol to apply in the event that previously unidentified physical heritage features or structures, sites or things of historical, archaeological, paleontological or architectural significance are discovered by the Proponent. As part of the chance find protocol, the Proponent shall:
    - 14.3.6.1 as soon as it is safe to do so, halt work at the location of the discovery, except for actions required to be undertaken to protect the integrity of the discovery;
    - 14.3.6.2 delineate an area of at least 30 metres around the discovery as a no-work zone;
    - 14.3.6.3 have a qualified professional, whose expertise pertains to the requirements of British Columbia's *Archaeological Impact Assessment Guidelines* and British Columbia's *Heritage Conservation Act*, conduct an assessment at the location of the discovery; and
    - 14.3.6.4 inform the Agency and Indigenous groups within 24 hours of the discovery, and allow Indigenous groups to monitor archaeological works.

- 14.3.7 a process for qualified individuals to provide training to employees and contractors involved in or overseeing Designated Project construction activities that involve physical disturbance of previously undisturbed ground about:
  - 14.3.7.1 how to identify physical heritage features or structures, sites or things of historical, archaeological, paleontological or architectural significance;
  - 14.3.7.2 how to implement the protocols developed pursuant to conditions 14.3.3 and 14.3.6;
  - 14.3.7.3 the locations of sensitive physical heritage resources and structures, sites or things of historical, archeological, paleontological or architectural significance within the Designated Project area; and
  - 14.3.7.4 cultural sensitivity, confidentiality and heritage values in relation to these sensitive physical heritage resources and structures, sites or things of historical, archeological, paleontological or architectural significance within the Designated Project area.
- 14.4 The Proponent shall develop, in consultation with Indigenous groups, criteria that the Proponent shall apply when retaining the services of the qualified individual(s) and professional(s) referred to in conditions 14.1 through 14.3.
- 14.5 The Proponent shall develop and implement, in consultation with Indigenous groups, additional or modified mitigation measures if the Proponent must conduct any pre-construction survey that may impact any structure, site, or thing of historical, archaeological, paleontological, or architectural significance or physical heritage resources. The Proponent shall implement these measures prior to conducting these surveys, and shall provide these measures to the Agency prior to implementing them. The Proponent shall implement the procedures developed pursuant to condition 14.3 when encountering any structure, site, or thing of historical, archaeological, paleontological, or architectural significance or physical heritage resources during these activities.
- 14.6 The Proponent shall ensure Indigenous monitors referred to in condition 15.1 are on site when archeological works are being undertaken pursuant to conditions 14.1 through 14.3.
- 14.7 The Proponent shall paint the cranes to be used during operation in colours that reduce contrast and enhance blending with the surrounding landscape, determined in consultation with Transport Canada, and shall maintain these colours throughout operation, subject to safety and regulatory requirements.
- 14.8 The Proponent shall develop, prior to construction and in consultation with Tsawwassen First Nation, Musqueam, and Tsleil-Waututh Nation, nation-specific measures to address the effects described in the Federal Review Panel Report caused by the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin on cultural heritage, including tangible and intangible cultural losses. The Proponent shall invite Tsawwassen First Nation, Musqueam, and Tsleil-Waututh Nation to co-lead the development of these measures. The Proponent shall implement the measures during all phases of the Designated Project and shall submit these measures to the Agency prior to implementing them, while ensuring that confidential information is protected. As part of the annual report referred to in condition 2.10, the Proponent shall report its discussions with Tsawwassen First Nation, Musqueam, and Tsleil-



Waututh Nation, including the level of satisfaction of Indigenous groups on the implementation of the measures. As part of the measures, the Proponent shall consider:

- 14.8.1 supporting continued access for cultural practices to the sea such as implementing safe marine access point(s); and
  - 14.8.2 developing or contributing to Indigenous-led programs to preserve and enhance cultural heritage.
- 14.9 The Proponent shall develop, prior to construction and in consultation with Tsawwassen First Nation, Musqueam, and Tseil-Waututh Nation, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects on cultural heritage caused by the construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall invite Indigenous groups to co-lead the development of the follow-up program. As part of the follow-up program, the Proponent shall monitor, during construction and the first 10 years of operation, cultural heritage indicators identified in consultation with Tsawwassen First Nation, Musqueam, and the Tseil-Waututh Nation, and shall establish thresholds for implementing additional mitigation measures, in accordance with conditions 2.5 to 2.9.

## **15 Indigenous Monitors**

- 15.1 The Proponent shall retain, prior to construction, the services of Indigenous monitors to observe, record, and report on the implementation of the conditions set out in this document during construction. Prior to retaining the services of Indigenous monitors, the Proponent shall undertake a collaborative process to determine, in consultation with Indigenous groups, the scope, purpose and objectives of the participation of Indigenous monitors and shall provide that information to the Agency prior to construction. As part of that process, the Proponent shall determine:
- 15.1.1 how each Indigenous monitor shall be involved in monitoring their areas of interest, including the location, frequency, timing and duration of their participation;
  - 15.1.2 how the Proponent shall support the participation of Indigenous monitors, including through the provision of training (including safety or skills certifications), equipment (including personal protective equipment), and access to the Designated Project area;
  - 15.1.3 how Indigenous monitors shall collect information and shall communicate that information to the Proponent, the independent environmental monitor referred to in condition 16.1, the Indigenous Advisory Committee referred to in condition 17.1, and the Agency;
  - 15.1.4 how monitoring conducted by Indigenous monitors shall be informed by and shall inform the monitoring activities conducted by the independent environmental monitor referred to in condition 16.1 and any other monitor associated with the Designated Project;

- 15.1.5 how each Indigenous monitor shall be involved in Proponent initiated stop work and corrective action processes should non-compliance with the conditions set out in this document be identified; and
- 15.1.6 how the Proponent shall consider the information obtained from Indigenous monitors and how the Proponent shall report to Indigenous groups, relevant authorities and the Agency about how information obtained from Indigenous monitors has been considered by the Proponent, including a rationale for why any action recommended by Indigenous monitors has, or has not been taken.

## **16 Independent Environmental Monitor**

- 16.1 The Proponent shall retain, prior to construction, the services of a third-party independent environmental monitor, who is a qualified professional with a minimum of five-years' experience as it pertains to environmental monitoring in British Columbia and who has experience working with Indigenous groups. The Proponent shall make all reasonable efforts to obtain the approval of Tsawwassen First Nation and Musqueam for the retention of the services of the independent environmental monitor.
- 16.2 The Proponent shall require the independent environmental monitor to report to the Proponent, in writing, about the implementation of any condition set out in this document during construction. The Proponent shall also require the independent environmental monitor to recommend to the Proponent, in writing, which action(s) in their view, should be taken by the Proponent in respect to the implementation of conditions set out in this document during construction.
- 16.3 The Proponent shall require the independent environmental monitor to provide directly to the Agency, at a frequency to be determined in consultation with the Agency, the information reported to the Proponent pursuant to condition 16.2.
- 16.4 The Proponent shall consider the information obtained from the independent environmental monitor and shall report to the Agency and relevant authorities about how information obtained from the independent environmental monitor has been considered by the Proponent, including a rationale for why any action recommended by the independent environmental monitor has, or has not been taken.
- 16.5 The Proponent shall require the independent environmental monitor to retain the information reported to the Proponent pursuant to condition 16.2 for five years following submission to the Agency pursuant to condition 16.3.

## **17 Indigenous Advisory Committee**

- 17.1 The Proponent shall establish, prior to construction and in consultation with Indigenous groups, and maintain, throughout construction and operation, an Indigenous Advisory Committee (IAC) to support dialogue and issue resolution between the Proponent and Indigenous groups. The Proponent shall invite Indigenous groups to participate in all IAC activities, and shall consult participating Indigenous groups on the development of Terms of Reference for the IAC. The Proponent shall make reasonable efforts to come to agreement on the Terms of Reference with

participating Indigenous groups. The Proponent shall submit the final Terms of Reference to the Agency prior to construction. As part of the Terms of Reference, the Proponent shall include:

- 17.1.1 the means by which the Proponent and Indigenous groups shall jointly identify issues to be discussed by the IAC and the means by which the Proponent shall document these issues;
- 17.1.2 the frequency, timing and location of IAC meetings during each phase of the Designated Project and the means by which the Proponent shall document meeting minutes and shall seek approval of the meeting minutes by Indigenous groups;
- 17.1.3 the means by which IAC meetings will be chaired, which may be jointly by the Proponent and a representative of the Indigenous groups and/or by a mutually-acceptable third-party facilitator retained by the Proponent;
- 17.1.4 the means by which the Proponent may consult the IAC when consultation with an Indigenous group is a requirement of a condition set out in this document, should it be agreeable to the Indigenous group(s) specified;
- 17.1.5 the means by which the Proponent shall share with the IAC the following information, including when and how this information will be shared:
  - 17.1.5.1 the results of the follow-up programs, including any modified or additional mitigation measure implemented or proposed to be implemented by the Proponent as a result of each follow-up requirement;
  - 17.1.5.2 activities associated with the Proponent's participation in regional initiatives; and
  - 17.1.5.3 other information as determined by the IAC;
- 17.1.6 the means by which the Proponent shall document the activities of the IAC, including:
  - 17.1.6.1 all views and information received through the IAC from Indigenous groups; and
  - 17.1.6.2 how the Proponent has considered all views and information received through the IAC from Indigenous groups;
- 17.1.7 the means by which the Proponent shall document any issue for which IAC members are unable to find a resolution, including a rationale for the lack of resolution, and any solutions for finding a resolution proposed by the IAC;
- 17.1.8 the means by which the Proponent shall share the information documented by the Proponent pursuant to conditions 17.1.6 and 17.1.7 with IAC members and with the Agency, including when and how this information shall be shared; and
- 17.1.9 the means by which the Proponent shall evaluate, in consultation with Indigenous groups, the Terms of Reference throughout construction and operation to determine whether administrative or management improvements are required to increase the efficiency and effectiveness of the IAC.

17.2 The Proponent shall implement the Terms of Reference developed pursuant to condition 17.1 throughout construction and operation, including any revision to the Terms of Reference made pursuant to condition 17.1.9.

## **18 Environmental Monitoring Committee**

18.1 The Proponent shall participate, during all phases of the Designated Project and at the request of relevant federal authorities, in any Environmental Monitoring Committee (EMC), should one be established in relation to the Designated Project.

18.2 The Proponent shall provide to the EMC, upon request, information relating to the mitigation measures and follow-up programs set out in this document to the EMC. If requested by the EMC, the Proponent shall also provide non-proprietary data files of the results of the follow-up programs.

18.3 When provided with a written recommendation by the EMC, the Proponent shall provide a response in writing to the EMC, which set out whether the Proponent accepts the recommendation, and if it does not, the reasons for not accepting the recommendation.

18.4 The Proponent shall report to the Agency as part of the annual report referred to in condition 2.10, or more frequently if required by the Agency, on the Proponent's actions with respect to the EMC and the associated outcomes of the Proponent's actions.

18.5 The Proponent shall allow access to the Designated Project area, to the extent that such access is safe, to any monitor(s) established as part of the EMC. The Proponent shall communicate with monitor(s) regarding coordination of monitoring activities.

## **19 Accidents and malfunctions**

19.1 The Proponent shall take all reasonable measures to prevent accidents and malfunctions associated with the Designated Project that may result in adverse environmental effects and all reasonable measures to mitigate any adverse environmental effect from accidents and malfunctions that do occur. As part of these measures, the Proponent shall:

19.1.1 consider sensitive time periods for vulnerable species found in the vicinity of the Designated Project (including juvenile salmon and migratory birds); and

19.1.2 implement measures for the safe storage, refueling and handling of all substances identified pursuant to condition 19.3.1 in the Designated Project area, including containment specifications and equipment staging, and provide training about these measures to all persons involved in and responsible for safe storage, refueling and handling of these substances. The Proponent shall describe how it will ensure that these persons abide by these measures.

19.2 The Proponent shall consult, prior to construction, Indigenous groups, Indigenous groups (marine shipping) and relevant authorities on the measures referred to in condition 19.1 to be implemented to prevent accidents and malfunctions resulting from the construction and operation of the marine terminal, the widened causeway, and/or the expanded tug basin.

- 19.3 The Proponent shall develop, in consultation with Indigenous groups, Indigenous groups (marine shipping), the City of Delta, British Columbia's Ministry of Environment and Climate Change Strategy, British Columbia's Ministry of Forests, Lands, Natural Resources Operations and Rural Development, Transport Canada, the Canadian Coast Guard, Parks Canada, Environment and Climate Change Canada, Western Canada Marine Response Corporation and other relevant authorities, an Accident and Malfunction Response Plan in relation to the each phase of the Designated Project. The Proponent shall develop each Accident and Malfunction Response Plan prior to the phase to which it pertains, and shall keep it up to date during that phase of the Designated Project. The Proponent shall incorporate and reference established response plans, procedures and organizations, as appropriate, into each Accident and Malfunction Response Plan, so as to avoid duplication with established plans, procedures and organizations. The Proponent shall implement each Accident and Malfunction Response Plan during the phase to which it pertains. As part of the Accident and Malfunction Response Plans, the Proponent shall describe:
- 19.3.1 the types, location, and quantities of all substances expected to be stored within the Designated Project area, other than substances contained in containers passing through or temporarily stored in the marine terminal, that may cause adverse environmental effects in case of a spill;
  - 19.3.2 information on marine and terrestrial wildlife oil spill vulnerability for species, populations, and their habitats that may be affected by a spill attributable to the construction and operation of the marine terminal, the widened causeway, and/or the expanded tug basin, including their spatial and temporal distributions;
  - 19.3.3 the types of accidents and malfunctions that may cause adverse environmental effects during any phase of the Designated Project, including unplanned releases or spills of fuels, oils, concrete, lubricants and other hazardous and noxious substances attributable to the construction and operation of the marine terminal, the widened causeway, and/or the expanded tug basin;
  - 19.3.4 for each type of accident and malfunction identified pursuant to condition 19.3.3, the roles and responsibilities of each relevant party, including Tsawwassen First Nation and Musqueam, involved in the response to the accident or malfunction, including potential limitations associated with responding to an accident or malfunction in an effective and coordinated manner, and proposed solutions to these limitations;
  - 19.3.5 thresholds for reporting and notification to the relevant parties identified pursuant to condition 19.3.4;
  - 19.3.6 for each type of accident and malfunction identified pursuant to condition 19.3.3, the measures, appropriate to the accident or malfunction and under the control of the Proponent, to mitigate any adverse environmental effect caused by the accident or malfunction;
  - 19.3.7 for each type of accident and malfunction identified pursuant to condition 19.3.3, the measures under the control of the Proponent for the long-term monitoring of any adverse environmental effect caused by the accident or malfunction; and
  - 19.3.8 the measures under the control of the Proponent for documenting, reporting, and correcting instances of non-compliance with the Accident and Malfunction Response Plans.

- 19.4 The Proponent shall conduct regular and coordinated training exercises for spill prevention and control of fuels, oils, lubricants and other hazardous and noxious substances that may be released during construction and operation of the marine terminal, the widened causeway, and the expanded tug basin. The Proponent shall document any deficiency observed during these training exercises, update the applicable Accident and Malfunction Response Plan to address these deficiencies, and provide the results of the training exercises and any update to the Accident and Malfunction Response Plan to the parties involved in the development of the plan. The Proponent shall provide opportunities for participation by Indigenous groups in the training exercises.
- 19.5 The Proponent shall participate, at the request of the Canadian Coast Guard, in the development of all applicable integrated response plans to ensure effective and coordinated response to marine shipping accidents that may occur within the Proponent's navigational jurisdiction.
- 19.6 In the event of an accident or malfunction associated with the Designated Project with the potential to cause adverse environmental effects, the Proponent shall, in conjunction with other relevant authorities, immediately implement the measures appropriate to the accident or malfunction referred to in condition 19.3.6, under the control of the Proponent, and shall:
- 19.6.1 implement the communication plan referred to in condition 19.7;
  - 19.6.2 notify, as soon as possible through the means established pursuant to 19.7, Indigenous groups and Indigenous groups (marine shipping) and, through established notification procedures, relevant authorities, of the accident or malfunction, and notify the Agency in writing no later than 24 hours following the accident or malfunction, except where notification is required to be undertaken by another relevant authority. For the notification to Indigenous groups, Indigenous groups (marine shipping) and the Agency, the Proponent shall specify:
    - 19.6.2.1 the date when and location where the accident or malfunction occurred;
    - 19.6.2.2 a summary description of the accident or malfunction; and
    - 19.6.2.3 a list of any substance potentially released into the environment as a result of the accident or malfunction.
  - 19.6.3 submit a written report to the Agency no later than 30 days after the day on which the accident or malfunction occurred. As part of the report, the Proponent shall not include information that, if disclosed, could cause specific harm to the environment or people. The written report shall include:
    - 19.6.3.1 a detailed description of the accident or malfunction and of its adverse environmental effects;
    - 19.6.3.2 a description of the measures that were taken by the Proponent and other relevant authorities to mitigate the adverse environmental effects caused by the accident or malfunction;
    - 19.6.3.3 a description of any residual adverse environmental effect and any modified or additional measures under the control of the Proponent to mitigate residual adverse environmental effects;
    - 19.6.3.4 any view from Indigenous groups and advice from relevant authorities received with respect to the accident or malfunction, its adverse

environmental effects and the measures under the control of the Proponent to mitigate these adverse environmental effects; and

19.6.3.5 details concerning the implementation of the Accident and Malfunction Response Plan referred to in condition 19.3.

19.6.4 submit a written report to the Agency no later than 90 days after the day on which the accident or malfunction occurred that includes a description of the changes made to avoid a subsequent occurrence of the accident or malfunction and of the modified or additional measure(s) under the control of the Proponent to mitigate and monitor residual adverse environmental effects and to carry out any required progressive reclamation, taking into account the information submitted in the written report pursuant to condition 19.6.3. The report shall include all additional views from Indigenous groups and advice from relevant authorities received by the Proponent since the views and advice referred to in condition 19.6.3.4 were received by the Proponent. As part of the report, the Proponent shall not include information that, if disclosed, could cause specific harm to the environment or people.

19.7 The Proponent shall develop, in consultation with Indigenous groups and Indigenous groups (marine shipping), a communication plan for accidents and malfunctions identified pursuant to condition 19.3.3. The communication plan shall not duplicate or conflict with communication aspects of any integrated response plan relevant to the Designated Project. The Proponent shall develop the communication plan prior to construction and shall implement and keep it up to date during all phases of the Designated Project. The plan shall include:

19.7.1 the types of accidents and malfunctions requiring the Proponent to notify the each of the Indigenous groups and Indigenous groups (marine shipping);

19.7.2 the manner by which Indigenous groups Indigenous groups (marine shipping) wish to be notified by the Proponent of an accident or malfunction during each phase of emergency management, including clean-up, and of any opportunity for the Indigenous groups the Indigenous groups (marine shipping) to assist in the response to the accident or malfunction; and

19.7.3 the contact information of the representatives of the Proponent that the Indigenous groups and the Indigenous groups (marine shipping) may contact and of the representatives of each of the Indigenous groups and Indigenous groups (marine shipping) to which the Proponent provides notification.

## **20 Schedules**

20.1 The Proponent shall submit to the Agency a schedule for all conditions set out in this document no later than 60 days prior to the start of the phase of the Designated Project to which they pertain. This schedule shall detail all activities planned to fulfill each condition set out in this document and the commencement and estimated completion month(s) and year(s) for each of these activities.

20.2 The Proponent shall submit to the Agency a schedule outlining all activities required to carry out all phases of the Designated Project no later than 60 days prior to the start of each phase. The

schedule shall indicate the commencement and estimated completion month(s) and year(s) and duration of each of these activities.

- 20.3 The Proponent shall submit to the Agency in writing an update to schedules referred to in conditions 20.1 and 20.2 every year no later than December 31, until completion of all activities referred to in each schedule.
- 20.4 The Proponent shall provide Indigenous groups and the Indigenous groups (marine shipping) with the schedules referred to in conditions 20.1 and 20.2 and any update or revision to the initial schedules made pursuant to condition 20.3 at the same time the Proponent provides these documents to the Agency.

## **21 Record keeping**

- 21.1 The Proponent shall maintain all records relevant to the implementation of the conditions set out in this document. The Proponent shall retain the records and make them available to the Agency for 25 years following their publication. The Proponent shall provide the aforementioned records to the Agency upon demand within a timeframe specified by the Agency.
- 21.2 The Proponent shall retain all records referred to in condition 21.1 at a facility in Canada and shall provide the address of the facility to the Agency. The records may be retained in electronic form. The Proponent shall notify the Agency at least 30 days prior to any change to the physical location of the facility where the records are retained, and shall provide to the Agency the address of the new location.