

PER No.:	15-012
Tenant:	Dubai Ports World Vancouver
Project:	Centerm Expansion Project
Project Location:	777 Centennial Road, Vancouver
VFPA SID No.:	VAN 032
Land Use Designation:	Port Terminal
Permit Holder:	Infrastructure Delivery, Vancouver Fraser Port Authority
Applicant Address:	100 The Pointe, 999 Canada Place, Vancouver
Category of Review:	D
Date of Approval:	April 18, 2018
Date of Expiry:	April 30, 2022

PROJECT DESCRIPTION

For the purposes of this project permit, (the Permit), the project is understood to include the following works on Vancouver Fraser Port Authority (VFPA) property:

Marine

- Demolishing the old pile-supported docks at the east end of Centerm
- Removal of the western portion of the Southern Rail dock to facilitate infill
- Expanding the land area at both the west and east ends of the existing terminal into approximately 4.2 hectares (10 acres) of marine area on the west and 4.0 hectares (9 acres) on the east by:
 - Dredging of approximately 390,000 m³ of sediments from an area of 63,630 m² to remove unstable substrates at the eastern and western ends of Centerm and backfill them with competent material (sand). Sediments will be reused or disposed of as follows:
 - Upland disposal at an approved facility of approximately 5,400 m³ of sediments that do not meet applicable Canadian Council of Ministers of Environment (CCME) Soil Quality Guidelines for Industrial Land Use nor Disposal at Sea criteria.
 - Reuse as fill for the terminal's eastern expansion of approximately 58,200 m³ of sediments that meet applicable CCME Soil Quality Guidelines for Industrial Land Use.
 - Disposal by barge at the Point Grey Disposal at Sea site of approximately 326,400 m³ of sediment that meet Disposal at Sea criteria (subject to approval from ECCC).
 - Constructing new rock dykes
 - Infilling areas within the dykes
 - Densification of a zone behind the dyke (e.g., by vibro-densification and dynamic compaction)
 - Installing caissons at the west end of the terminal's berth extension area
 - Dredging of a 3,300 m² area between Centerm and the SeaBus south terminal (navigation turning basin) to provide adequate depth for cruise ships berthing at the East Canada Place cruise ship berth. Approximately 5,950 m³ of sediments meeting applicable CCME Soil Quality Guidelines for Industrial Land Use would be

reused in the reclamation of the eastern expansion area of the terminal and 850 m³ of sediments that do not meet these guidelines will be disposed of on land at an approved facility

Land

- Removing existing warehouse structures and rehabilitating the Ballantyne Pier (while retaining the Ballantyne Pier heritage façade and constructing a new office and operations building)
- Reconfiguring the terminal intermodal yard to extend the existing tracks
- Reconfiguring the terminal container yard
- Establishing new storage facilities, increasing terminal parking
- Reconfiguring the terminal entrance area
- Upgrading terminal control systems and yard equipment
- Replacing two quay cranes with larger versions, installing up to five new electrified rail mounted gantry cranes
- Adding up to 20 new diesel-powered internal transfer vehicles
- Installation of a new Vehicle Access Control (VACS) Gate at Main Street
- Installation of new terminal fences and vehicle gates
- Demolition of the existing DP World office building located within the curved Heatley overpass ramp
- Installation of conduits for the future provision of shore power at Berth 5 (but not including shore power hardware)
- Construction of an equipment shed at the north east corner of the eastern infill area

Off-terminal

- Constructing an overpass to the entrance of the terminal (Centennial Road Overpass or CROP)
- Removing the Southern Railway rail crossing at Centennial Road
- Removing the Heatley Avenue Overpass
- Rail yard modifications to the CP tracks south of the terminal
- Demolition of part of the Canadian Fishing Company boiler building closest to Waterfront Road
- Extension of Waterfront Road
- Reconfiguration of the Mission to Seafarers parking area
- Various utility replacements, extensions, and relocations throughout the work area, including a diversion of the Metro Vancouver Harbour West Interceptor
- Fence installation at the eastern edge of CRAB Park at Portside

Other works proposed but not itemized above include:

- The use of several construction staging areas including the installation of temporary buildings

The Permit does not include certain works, referred to as the DPW Delivery Components, Terminal Outfitting Package. Works not included are limited to Container Yard and Intermodal Yard Gate control systems.

PROJECT AND ENVIRONMENTAL CONDITIONS

The Vancouver Fraser Port Authority (VFPA) has undertaken and completed a review of the Project in accordance with the *Canada Marine Act* and Section 5 of the Port Authorities Operations Regulations and, as applicable, Section 67 of the *Canadian Environmental Assessment Act, 2012*.

If at any time the Permit Holder fails to comply with any of the project and environmental conditions set out in the Permit below, or if VFPA determines that the Permit Holder has provided any incomplete, incorrect or misleading information in relation to the Project, VFPA may, in its sole and absolute discretion, cancel its authorization for the Project or change the project and environmental conditions to which such authorization is subject.

Pursuant to Section 29 of the Port Authorities Operations Regulations, VFPA may also cancel its authorization for the Project, or change the project and environmental conditions to which such authorization is subject, if new information is made available to VFPA at any time in relation to the potential adverse environmental and other effects of the Project.

The following are the project and environmental conditions that must be followed by the Permit Holder to mitigate potential or foreseeable adverse environmental and other effects.

All VFPA Guidelines and Record Drawing Standards referenced in this document can be located at: <https://www.portvancouver.com/development-and-permits/project-and-environmental-reviews/technical-guidelines/>

No.	GENERAL CONDITIONS
1.	This Permit is conditional on a valid tenure agreement with respect to the subject premises being in place. No construction or any other physical activities may commence in the absence of a valid tenure agreement.
2.	This Permit is granted subject to the fulfillment of all other requirements of VFPA, relating to the Project. Furthermore, prior to commencing construction or any other physical activities the Permit Holder shall ensure that it has complied with all other necessary legal requirements and that all necessary regulatory approvals have been obtained.
3.	This Permit in no way endorses or warrants the design, engineering, or construction of the Project and no person may rely upon this Permit for any purpose other than the fact that VFPA has permitted the construction of the Project, in accordance with the terms and conditions of this Permit.
4.	The Permit Holder is responsible for locating all existing site services and utilities including any located underground and to employ best practices and meet applicable code requirements with respect to protection of existing site services and clearance between existing and proposed site services. The Permit Holder is responsible for repair or replacement of any damage to existing site services and utilities, to the satisfaction of VFPA, that result from construction and operation of the Project.
5.	Storage tank removal, installation and operation shall meet the requirements of the Petroleum Products and Allied Petroleum Products Storage Tank Systems Regulations and the CCME Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products.
6.	The Permit Holder shall undertake and deliver the Project to total completion in a professional, timely and diligent manner in accordance with the Application submitted by the Permit Holder and the applicable standards and specifications set out in the sections above entitled Project Description and Information Sources, including the attached plans

	and drawings numbered PER No. 15-012 - A to K . The Permit Holder shall not carry out any other physical activities unless expressly authorized by VFPA.	
7.	The Permit Holder shall strictly comply with all enforcement actions issued by VFPA in response to the Permit Holder's failure to comply with this Permit.	
8.	The Permit Holder shall immediately notify Metro Vancouver of any actual or potential damage to Metro Vancouver infrastructure (including pipelines and outfalls) at: 604-985-1478.	
9.	The Permit Holder shall make available upon request by any regulatory authority with jurisdiction (such as a Fishery Officer) a copy of this Permit.	
10.	Unless otherwise noted, the Permit Holder shall submit all documents required for VFPA approval to email: per@portvancouver.com; fax: 1-866-284-4271 and referencing PER No. 15-012.	
11.	<p>The Permit Holder shall complete and submit a self-report to VFPA demonstrating compliance with permit conditions at each of the following project phases:</p> <ul style="list-style-type: none"> a) Prior to construction (self-report shall be submitted a minimum of 15 business days prior to the commencement of construction, or any physical activities, to a maximum of 90 business days prior to construction, or any physical activities); b) During Construction (self-report shall be submitted at least every 6 months); c) Upon Project Completion (self-report shall be submitted within 60 business days of completion of construction). d) Prior to Operations (self-report shall be submitted 15 business days prior to operation) 	
12.	VFPA shall be entitled to visit and inspect the Project Site at any time and without notice. The Permit Holder shall provide such access to VFPA, and cooperate with VFPA during the course of the visit or inspection.	
13.	The Permit Holder must maintain and retain any records associated with, or produced by, actions or activities undertaken to achieve compliance or that indicate non-compliance with project permit conditions. These records must be made available at the request of VFPA.	
14.	All conditions in this Permit which expressly or by their nature survive expiration or termination of this Permit will remain in effect after the expiration or termination of this Permit.	
15.	The Permit Holder must adhere to commitments made to Aboriginal groups.	
16.	<p>The Permit Holder shall be responsible for any additional costs arising from:</p> <ul style="list-style-type: none"> • Further maneuvering familiarization simulations required by the Pacific Pilotage Authority for cruise ship maneuvers to and from the Canada Place East Berth, post-expansion construction • The use of tugs during the first 12 approaches with cruise vessels greater than PANAMAX size, during certain tidal and wind conditions, as set out in the <i>Manoevring Feasibility Study Berthing and Unberthing Canada Place – Centerm Expansion study</i>, dated April 26, 2016. 	
	CONDITIONS - PRIOR TO COMMENCING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES	SUBMISSION TIMING

		(business days)
17.	<p>The Permit Holder shall provide a Project schedule to VFPA including:</p> <ul style="list-style-type: none"> • The anticipated start dates for all major phases of the Project; • Specific references to construction which is expected to exceed standard construction hours (set out in condition No. 47) including dates, times, and activities contemplated; • Anticipated timing for submission of Issued For Construction drawings; and • Anticipated date of substantial and final completion of construction. <p>The Permit holder shall notify VFPA of any material changes to the Project schedule and shall provide an updated Project schedule should the contents materially change, or upon request.</p>	20 days prior to commencing construction
18.	The Permit Holder shall notify VFPA at PER@portvancouver.com upon commencement of construction, or any physical activities of the Project, such as mobilization to the project site.	1 day prior to commencing construction or mobilization for each phase of works
19.	If there is potential for Project activities to affect birds and/or their active nests and eggs, the Permit Holder shall conduct nest surveys. For any nests identified in surveys, a qualified environmental professional shall confirm that the nest is not occupied by a species protected at that time of year under applicable legislation. To reduce the risk of Project-related harm, the Permit Holder should avoid those activities during the general bird breeding season, which falls between April 1 and July 31, or outside of this time span if occupied nests are present.	Immediately prior to activities with the potential to affect birds and/or their active nests and eggs.
20.	The Permit Holder shall submit an updated Construction Environmental Management Plan (CEMP) to the satisfaction of VFPA. The Permit Holder shall carry out the Project in compliance with the approved CEMP, any sub-plans, and any subsequent approved revisions to the CEMP or sub-plans. Timing of submission of the updated CEMP and outstanding or revised sub-plans shall be as described in the CEMP.	At least 30 days prior to commencing construction
21.	The Permit Holder shall submit an updated Storm Water Pollution Prevention Plan, written in accordance with VFPA Guidelines. The Permit Holder shall carry out the Project in accordance with the updated plan, including any subsequent amendments approved by VFPA.	30 days prior to commencing construction of new storm water infrastructure
22.	The Permit Holder shall develop and implement a Waste Management Plan as part of the updated CEMP with procedures for measuring, minimizing, reusing, recycling, and/or properly disposing of waste generated during construction, excavation, and	30 days prior to commencing construction

	demolition work. The Permit Holder shall maintain records of off-site disposal and submit them to VFPA upon request.	
23.	The Permit Holder shall obtain a Fisheries and Oceans Canada (DFO) Paragraph 35(2)(b) <i>Fisheries Act</i> Authorization (DFO Authorization) prior to conducting works that require this Authorization. A copy of the DFO Authorization shall be submitted to VFPA upon receipt.	Upon receipt of the <i>Fisheries Act</i> Authorization
24.	VFPA shall be copied on the offsetting measures monitoring reports required by the DFO Authorization. VFPA shall be consulted during the development of any contingency plans and any measures in those plans that fall within VFPA jurisdiction.	Upon submission to DFO
25.	The Permit Holder shall notify Translink: <ul style="list-style-type: none"> Mark Henderson, Director, SeaBus at mark.henderson@coastmountainbus.com, or 778-375-7071, in order to allow for the potential adjustment of SeaBus schedules. 	At least 40 days prior to the start of in-water works in proximity to the SeaBus route
	<ul style="list-style-type: none"> Devon Williams, Manager, Service Planning at Coast Mountain Bus Company, at devon.williams@coastmountainbus.com or 778-375-6535, in order to allow for the potential adjustment of bus schedules. 	At least 40 days prior to the start of traffic detours resulting from construction of the Centennial Road Overpass
26.	The Permit Holder shall notify the City of Vancouver 1 year in advance of the removal of the Heatley Overpass, and shall remove piers to a minimum of 3m below finished grade.	1 year in advance of the demolition of the Heatley Overpass
27.	The Permit Holder shall submit signed and sealed drawings for proposed works approved for construction by a professional engineer licensed to practice in the Province of British Columbia.	5 days prior to commencing construction of each phase of work
28.	<p>The Permit Holder shall submit a Construction Communications Plan in accordance with VFPA's Public Consultation Guidelines.</p> <p>The plan shall outline how the Permit Holder will engage and communicate with the public and stakeholders from the date of permit issuance to the completion of construction. The plan shall be updated as necessary and upon request by VFPA to ensure public and stakeholders are provided with relevant information as it becomes available.</p> <p>Included in the plan shall be a reference that the Permit Holder shall notify VFPA of any complaints received from the community and stakeholders during construction and indicate how the Permit Holder has responded to such complaints. VFPA shall be notified within 2 days of receiving any complaint.</p> <p>The Permit Holder shall carry out the Project in accordance with the Plan, and any subsequent amendments approved by VFPA.</p>	20 days prior to commencing construction or any physical activities

29.	<p>The Permit Holder shall distribute a construction notice to residents and businesses as per the notification area map provided to the Permit Holder, describing the works and activities, hours of operation, and contact information, in accordance with an approved Construction Communications Plan.</p> <p>The Permit Holder shall provide a copy of the draft construction notice for VFPA approval. The Permit Holder shall copy VFPA when construction notices are distributed.</p>	<p>DRAFT for review: 10 days prior to distribution</p> <p>Circulation to community: 10 days prior to commencing construction or any physical activities</p>
30.	<p>The Permit Holder shall submit a Construction Traffic Management Plan to the satisfaction of VFPA. The Plan shall ensure that the contractor will maintain access and egress to all tenant properties throughout construction as well as maintain adequate sightlines and safety according to the TAC Geometric Design Guidelines at all intersections, driveways and rail-crossings.</p>	<p>20 days prior to commencing any lane closures or traffic diversions affecting VFPA roadways</p>
31.	<p>The Permit Holder shall provide a new outfall to replace the existing City of Vancouver combined sewer outfall at Ballantyne Pier. The Permit Holder shall provide the General Manager, Engineering Services, City of Vancouver, an opportunity to review the detailed design.</p>	<p>20 days prior to commencing construction of this component</p>
32.	<p>The Permit Holder shall demonstrate, to the satisfaction of VFPA, the need to alter storm sewers at Rogers Street, and should alterations be proposed, provide the opportunity for the City of Vancouver to review the detailed design.</p>	<p>20 days prior to commencing construction on this component</p>
33.	<p>The Permit Holder shall demonstrate that the final roadway design achieves performance equal or better than Level of Service "D" during AM/PM peak periods as well as that agreements are in place with the railways (CN or CP) on any planned rail works that may impact rail operations servicing the South Shore.</p>	<p>30 days prior to commencing construction of road and rail infrastructure</p>
34.	<p>For structures and proposed interior changes that are reviewable under the National Building Code and National Fire Code, the Permit Holder shall apply for a VFPA Building Permit.</p>	<p>40 days prior to commencing construction of any structures reviewable under the Code</p>
35.	<p>The Permit Holder shall submit a Construction Staging Plan, which includes:</p> <ul style="list-style-type: none"> a) staging, laydown, and construction areas; b) dates and hours of operations; c) description of activities taking place; d) for marine only, participating equipment and vessels, including dimensions, and exclusion setback around deep sea vessel berths at the terminal; e) upland construction parking areas, including numbers of vehicles and access points; f) method of preferred communication; and g) special requests and/or additional information. 	<p>30 days prior to commencing construction of each phase of works</p>

<p>36.</p>	<p>The Permit Holder shall establish a marine user communication group for the purposes of communicating relevant in-water work activities to local marine operators, including the following:</p> <ul style="list-style-type: none"> • The Contractor and any sub-contractors constructing marine components of the Project; • BC Coast Pilots; • Cruise Lines International Association; • Translink; • Tymac; • Canfisco; • Seaspan; • Saam SMIT; • Vancouver Police Department Marine Unit; • VFPA Harbour Patrol and Marine Operations; • Vancouver Fire and Rescue Service – Marine Unit; • CBSA – Marine Unit; • Island Tug and Barge; • Trident Marine; • West Coast Marine Response Corporation; • Council of Marine Carriers; • Canadian Coast Guard - Vessel Traffic Services; • Any ferry operators using South Seabus Terminal. <p>The Permit Holder shall consider feedback from and provide relevant updates to the group, specifically concerning the construction staging plan, both before and during in-water construction phases.</p>	<p>30 days prior to commencing in-water construction activities</p>
<p>37.</p>	<p>Prior to the commencement of any vessel-related activities, the Permit Holder shall contact the appropriate Canadian Coast Guard (“CCG”) Marine Communications and Traffic Services (“MCTS”) centre regarding the issuance of a Notice to Shipping (“NOTSHIP”) to advise the marine community of potential hazards associated with the Project.</p>	<p>As per CCG requirements</p>
<p>38.</p>	<p>The Permit Holder shall provide opportunities for interested Aboriginal groups to participate in archaeological monitoring for all project activities impacting deposits associated with the original shoreline.</p>	<p>At least 10 days prior to any project activities impacting deposits associated with the original shoreline.</p>

39.	The Permit Holder shall submit a Chance Find Protocol to the satisfaction of VFPA.	10 days prior to commencing construction
40.	The Permit Holder shall submit a report documenting the evaluation of options and associated recommendations for providing an emergency access lane to mitigate potential blockage conditions at the AGT crossing of Stewart Street, to the satisfaction of VFPA.	30 days prior to commencing construction of upland components
41.	The Permit Holder shall work with area tenants and railways to develop and submit a proposed South Shore Rail Crossing Emergency Access Plan, including protocols, procedures, and potential additional communications infrastructure, to the satisfaction of VFPA. The Permit Holder shall provide the City of Vancouver Fire and Rescue Services and 911 operators an opportunity to review and comment on the draft protocol prior to submitting it to VFPA.	60 days prior to the closure of the Heatley Avenue overpass
CONDITIONS - DURING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES <u>All references to days in submission timing refer to business days.</u>		
42.	The Permit Holder shall manage turbidity in compliance with applicable water quality criteria as described in the final TSS/Turbidity Management Plan to the satisfaction of VFPA.	
43.	The Permit Holder, or their contractor, shall engage a qualified environmental professional to monitor the Project in order to ensure that the works are carried out in compliance with this Permit. Monitoring events shall take place as required by the environmental monitor, the Construction Environmental Management Plan, or VFPA, provided that monitoring will be full time when works are underway that have the potential to adversely affect fish or fish habitat.	
44.	<p>The Permit Holder shall retain a qualified environmental professional to act as an Independent Monitor responsible for reviewing the construction environmental records and on-site construction activities for compliance with the Construction Environmental Management Plan and this Permit. The Independent Monitor shall possess the following qualifications:</p> <ul style="list-style-type: none"> a) Suitable education and knowledge demonstrating that they may be reasonably relied on to provide advice within their area of expertise; b) A minimum of five years of experience monitoring related types of construction activities in similar environments. <p>The Independent Monitor shall not be an employee of the Permit Holder's organization or of a contractor/consultant retained by the Permit Holder to work on the Project in other capacities.</p>	
45.	<p>The Permit Holder shall submit a Monitoring Work Plan. At a minimum, the Monitoring Work Plan shall describe the following:</p> <ul style="list-style-type: none"> a) The role and responsibilities of the Independent Monitor, including the following provisions: <ul style="list-style-type: none"> i. The Independent Monitor shall have unfettered access to environmental compliance documentation and the Project site at all times during 	

	<p>construction without notice.</p> <ul style="list-style-type: none"> ii. The Independent Monitor shall have the authority to direct the Permit Holder to stop a construction activity that is causing an adverse effect. iii. The Independent Monitor shall report directly to VFPA and obtain direction from VFPA on matters that arise during construction that are not described in the project permit and cannot be resolved by discussion with the Permit Holder. iv. The Independent Monitor shall concurrently submit compliance reports directly to the Permit Holder and VFPA within one week of site visits. <p>b) The frequency of site visits by the Independent Monitor, with a higher frequency of site visits to occur during in-water works as compared to those scheduled for land-based construction activities.</p> <p>c) The manner in which notice will be given to the Permit Holder and VFPA for an activity not in compliance with permit conditions or having unforeseen adverse effects.</p> <p>d) The name and qualifications of the Independent Monitor.</p> <p>e) The name(s), role(s) and qualifications of other individuals providing specialized expertise or designated to act as the Independent Monitor during specific construction activities or times.</p> <p>The Permit Holder shall carry out the Project in accordance with the approved Monitoring Work Plan, and any subsequent amendments, to the satisfaction of VFPA.</p>
46.	<p>The Permit Holder shall provide environmental monitoring reports to VFPA as specified in the Construction Environmental Management Plan or more frequently if VFPA requires. In addition, a summary report for the whole monitoring period shall be forwarded to VFPA within 30 days of the conclusion of the monitoring period.</p>
47.	<p>Construction and any physical activities related to the Project may be conducted between Monday to Saturday between the hours of 7:00am to 8:00pm. No construction works shall occur during Sundays or statutory holidays except as follows.</p> <p>Dredging, fill placement, and the construction of the CROP overpass may be conducted 24 hours a day, 7 days a week for the duration of these components only, for the dates defined in the construction schedule required under condition No. 17 and in keeping with a Construction Communications Plan.</p> <p>Hours for all other activities shall not be modified without prior approval from VFPA. To request permission to conduct activities beyond these hours, submit a written request in keeping with VFPA Guidelines, 20 days prior to the desired start date of extended hours.</p>
48.	<p>The Permit Holder shall remove all abandoned utilities. In instances where the Permit Holder has demonstrated, to the satisfaction of VFPA, that the removal of abandoned utilities would be impractical, the Permit Holder shall develop and submit final plans showing any utilities which are proposed to be abandoned in place. This must be completed 20 days prior to the commencement of phase of work in which abandonment is proposed. Any utilities not identified on this plan, both underground and above ground, shall be removed and capped at lease boundaries, to the satisfaction of VFPA.</p>
49.	<p>The Permit Holder shall develop and submit a final lighting design and a lighting-related Energy Study prepared in accordance with the VFPA Lighting Guidelines and Energy Guidelines, to the satisfaction of VFPA. The submission shall include luminaires' specifications and light modelling (including lighting levels and rendering) the lighting</p>

	design and lighting-related Energy Study must be submitted 40 days prior to the installation of permanent outdoor lighting.
50.	Without limiting the generality of permit condition No. 2, the Permit Holder shall decommission any groundwater monitoring wells encountered within the Project footprint in compliance with the requirements set out in Appendix C of VFPA's Construction Environmental Management Plan Guideline.
51.	The Permit Holder shall ensure that an appropriately qualified archaeological monitor be present for all project activities impacting deposits associated with the original shoreline.
52.	<p>If the Permit Holder encounters, expects to encounter, or should expect to encounter an actual or potential archaeological resource, the Permit Holder shall:</p> <ol style="list-style-type: none"> a) Immediately stop any activities that may disturb the archaeological resource or the site in which it is contained ("Site"); b) Not move or otherwise disturb the archaeological resource or other remains present at the Site; c) Stake or flag the Site to prevent additional disturbances; and, d) Immediately notify VFPA by email and phone at the contact numbers indicated at the end of this permit.
53.	The Permit Holder may place temporary construction trailers on site while this permit remains in effect, provided that the Permit Holder shall not connect such trailers to any underground utilities without the prior written consent of VFPA which may include, without limitation and at VFPA's discretion, a VFPA Building Permit.
54.	Without limiting the generality of permit condition No. 2, the Permit Holder shall not, directly or indirectly: (a) deposit or permit the deposit of a deleterious substance of any type in water frequented by fish in a manner contrary to Section 36(3) of the <i>Fisheries Act</i> ; or (b) adversely affect fish or fish habitat in a manner contrary to Section 35(1) of the <i>Fisheries Act</i> .
55.	Trees shall be felled by a qualified professional.
56.	<p>The Permit Holder shall provide a Vegetation Mitigation Plan for the vegetation removal at Clark Drive, to the satisfaction of VFPA. The plan shall include the proposed species, number, and location of trees to be replanted in the Project area, as well as the proposed schedule for replanting and post-planting assessments. The plan shall be submitted 30 days prior to the removal of any vegetation at Clark Drive.</p> <p>Trees must be replanted based on the following criteria:</p> <ul style="list-style-type: none"> • Existing trees of 100 mm - 151 mm in diameter at breast height (dbh) must be replaced by 2 trees (min. height 1.5 m), or, 4 shrubs (for up to 50% of trees being replaced in this range); • Existing trees of 152 mm - 304 mm in dbh must be replaced by 3 trees (min. height 1.5 m); • Existing trees of 305 mm - 456 mm in dbh must be replaced by 4 trees (min. height 2.0 m); and • Existing trees of >457 mm in dbh must be replaced by 6 trees (min. height greater than 2.0 m).

	Should there be no or limited replanting opportunities in the Project Area, the Permit Holder may propose an alternative plan to VFPA which may include donations to an organization with programs designed to increase native vegetation locally.
57.	The Permit Holder shall ensure that all equipment is in good mechanical condition and maintained free of fluid leaks, invasive species, and noxious weeds.
58.	During upland construction activities, the Permit Holder shall not conduct refueling or maintenance activities on non-road equipment within 30 metres of any waterbody, or in an area where run-off may potentially reach surface waterbodies. Fuel and other hydrocarbon inventories shall not be stored in such areas, temporarily or otherwise.
59.	Without limiting the generality of permit condition No. 2, the Permit Holder shall ensure that dredged material that is intended for upland placement complies with all applicable legislation and regulations. The Permit Holder shall appropriately manage any contamination associated with the dredged material and maintain records of off-site disposal.
60.	Without limiting the generality of permit condition No. 2, the Permit Holder shall dredge/load all material intended for disposal at sea under a valid Disposal at Sea Permit pursuant to the provisions of Part 7, Division 3 of the Canadian Environmental Protection Act, 1999.
61.	Air emissions from vehicle/equipment exhaust, dust and vapours shall be minimized and managed to avoid effects on and off the Project site. More detailed guidance is available in Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities prepared for Environment Canada (Cheminfo Services Inc. March 2005).
62.	All non-road diesel equipment in use within VFPA jurisdiction shall be reported as required under the Non-Road Diesel Equipment Program (http://www.portvancouver.com/environment/air-energy-climate-action/cargo-handling-equipment/nrde/).
63.	Without limiting the generality of permit condition No. 2, materials brought onto the project site to be used for backfilling, site preparation, or other uses shall be from sources demonstrated to be clean and free of environmental contamination, invasive species and noxious weeds. The Permit Holder shall maintain records to verify this.
64.	The Permit Holder shall manage invasive plants in a manner that prevents their spread. Invasive plants and potentially affected materials, such as soil, shall be appropriately contained, collected and disposed of.
65.	The Permit Holder shall not dewater excavations unless a dewatering plan has been reviewed and accepted by VFPA. The plan must be submitted 10 days prior to dewatering.
66.	There shall be no dredging during the fisheries sensitive period from March 1 to August 15 , inclusive. Other in and near water activities described in the application are not affected by this restriction.
67.	The Permit Holder shall completely remove piles that are outside the terminal expansion footprint by extracting the entire length of pile from the seabed. If physical conditions result in the breakage of timber piles, the Permit Holder shall remove the remaining pile stubs with the least amount of disturbance of the seabed as possible. Particular effort

	<p>shall be made to extract or reduce the height of pile stubs which may pose a hazard to navigation.</p> <p>If pile stubs are left in place outside the terminal expansion area, the location shall be surveyed and the location coordinates provided to VFPA within 5 days of completion of in-water works.</p>
68.	The Permit Holder shall not operate machinery or equipment on the intertidal foreshore, nor ground barges or other vessels outside the terminal expansion area. All equipment and vessels working on or near the top of bank shall not disturb intertidal areas or the seabed outside the work area (including disturbance as a result of vessel propeller wash), excepting only such disturbance as is reasonably required resulting from the use of barge spuds. The Permit Holder shall repair any damage or erosion resulting from disturbance to the intertidal foreshore during the Project.
69.	The Permit Holder shall carry out all upland activities in a manner that prevents the release of sediment, sediment-laden waters, and turbid waters to the aquatic environment. Sediment and erosion control measures shall be implemented prior to the start of ground disturbance activities and should meet or surpass the standards outlined in the 1992 Fisheries and Oceans Canada (DFO) "Land Development Guidelines for the Protection of Aquatic Habitat".
70.	The Permit Holder shall conduct all activities involving the use of concrete, cement, mortars and other Portland cement or lime-containing construction materials in a manner that shall not deposit sediments, debris, concrete (cured or uncured), and concrete fines into the aquatic environment, either directly or indirectly. Water that has contacted uncured or partly cured concrete or Portland cement or lime-containing construction materials (such as the water that may be used for exposed aggregate wash-off, wet curing, equipment and truck washing) shall not be permitted to enter the aquatic environment. The Permit Holder shall provide containment facilities at the site for the wash-down water from concrete delivery trucks, concrete pumping equipment, and other tools and equipment, as required.
71.	Re-use of concrete from the Ballantyne Pier and the Marginal Wharf in new, non-structural concrete, asphalt or road base shall meet the requirements described in the CEMP. All other sources and uses of re-used concrete are not permitted.
72.	For each area where concrete has been re-used as fill, the Permit Holder must submit a Groundwater Monitoring Plan to confirm that the fill will not result in groundwater contamination, to the satisfaction of VFPA. The plan must be submitted 60 days prior to completion of the ground works in the subject area.
73.	For the area where dredgeate is re-used as fill, the Permit Holder must submit a Groundwater Monitoring Plan to the satisfaction of VFPA. The plan must be submitted 60 days prior to completion of the ground works in the subject area.
74.	The Permit Holder shall immediately cease work and notify VFPA if the Permit Holder has reasonable grounds to believe that the Project has harmed fish or fish habitat, including observation of distressed, injured, or dead fish. The Permit Holder shall not resume work until authorized by VFPA.
75.	Without limiting the generality of permit condition No. 2, if suspect contaminated materials are encountered, the Permit Holder shall contain, test and dispose of such materials at appropriate licensed off-site facilities and maintain records of off-site

	disposal. VFPA shall be notified of such activities and provided relevant documentation upon completion.	
76.	<p>During any vessel-related activities, the Permit Holder shall:</p> <ul style="list-style-type: none"> a) Position vessels and equipment associated with the Project in such a manner so as not to obstruct line of sight to navigational aids or markers; b) Ensure that vessels associated with the project exhibit the appropriate lights and day shapes at all times, as defined by the <i>Collision Regulations</i>; c) Monitor the VHF channel used for MCTS communications in the respective area at all times and participate as necessary; d) Be familiar with vessel movements in areas affected by the Project; e) Plan and execute the Project in a manner that will not impede navigation or interfere with vessel operations; f) During night hours, unless working 24 hours per day, ensure that the rig and associated equipment is moored outside the navigable channel and lit in accordance with applicable regulations; and g) Ensure that prior to, and during all movements of deep-sea vessels under pilotage (arrivals and departures from Centerm berths #5 and #6), that all vessels related to construction activities be positioned outside of the VFPA defined berth pocket and provide an additional safety exclusion set-back as stipulated in the Construction Staging Plan. 	
77.	<p>Related to in-water works for the safety of navigation and reduction of in-water hazards, the Permit Holder shall ensure:</p> <ul style="list-style-type: none"> a) Any temporary piles, false works, silt curtains, construction material or debris, etc. are to be appropriately marked and sufficiently illuminated at all times during construction; b) All temporary piles, false works, silt curtains, construction material or debris, etc. are to be completely removed from the waterway following construction. 	
	CONDITIONS – UPON COMPLETION	SUBMISSION TIMING (Business Days)
78.	Upon completion of construction, the Permit Holder and terminal operator shall develop a Traffic Management Plan with the input of VFPA Land Operations with respect to traffic operating criteria and system processes for the new gate systems, to mitigate against south shore road congestion and to ensure the overall fluidity and efficiency of roadways, to the satisfaction of VFPA. This plan shall be updated annually, or as needed.	Within 30 days of completion of construction
79.	The Permit Holder shall provide an Air Emissions Management Plan in accordance with VFPA guidelines and confirmed by VFPA. The Permit Holder shall ensure that the Project and terminal operations are carried out in accordance with the plan, including any subsequent amendments approved by VFPA.	<p>Draft submission: within 180 days after permit issuance.</p> <p>The plan must be finalized and approved upon completion of construction.</p>
80.	The permit Holder shall conduct noise monitoring to confirm the predictions of the Environmental Noise Assessment and validate the effects on the surrounding community. The monitoring shall	Within 240 days of completion of the

	<p>capture two weeks of valid noise data and be conducted in accordance with VFPA Environmental Noise Assessment Guidelines. Measurements shall be taken at the following five locations, or a VFPA approved alternate:</p> <ul style="list-style-type: none"> a) 415 Alexander Street b) 487 Alexander Street c) 777 Centennial Road d) 101 West Waterfront Road e) 955 Centennial Road <p>The Permit Holder shall provide the final report to VFPA, and VFPA may require mitigation(s) based on the results.</p>	<p>project or at the direction of VFPA</p>
81.	<p>Without limiting the generality of permit condition No. 2, the Permit Holder shall provide an inventory of all alarms utilized at the facility in order to demonstrate that best industry practices have been observed to limit noise travelling beyond the site boundaries. The inventory should include all alarms associated with processes, stationary equipment, mobile sources, and loading operations, and shall detail location, type, sound level, and sound characteristic for each alarm.</p>	<p>Upon completion of construction</p>
82.	<p>The Permit Holder shall notify VFPA upon completion of the Project.</p>	<p>Within 10 days of completion of construction</p>
83.	<p>The Permit Holder shall provide record drawings, in both AutoCAD and Adobe (PDF) format to VFPA. The record drawings shall be in conformance with the CAN S250-11, and the accuracy of the information shall meet the requirements set out in VFPA Record Drawing Standards.</p> <p>Record drawings are not required for the ship to shore crane, gantry cranes, or other mobile equipment.</p>	<p>Within 40 days of completion of construction</p>
84.	<p>The Permit Holder must send record drawings of all newly constructed and/or demolished marine works to the Database Information Office of the Canadian Hydrographic Service (250-363-6360 or chsdatacentre@dfo-mpo.gc.ca) to arrange for the relevant CHS charts to be updated. VFPA's Marine Operations department must be provided a copy the submission to navigation.review@portvancouver.com</p>	<p>Within 30 days of substantial completion of marine construction</p>
85.	<p>The Permit Holder must decommission the existing fixed navigation lights located on the west mooring dolphin, west corner of berth No. 6, and east corner of berth No. 2. These must be replaced with new fixed navigation lights, at a minimum:</p> <ul style="list-style-type: none"> a) Fixed red light, located on the west corner of berth No. 6, at an elevation above chart datum to be confirmed by Coast Guard Aids to Navigation via VFPA. Nominal range of the light to be 3 nautical miles; b) Fixed green light, located on the east corner of berth No. 2, at an elevation above chart datum to be confirmed by Coast 	<p>Upon completion of construction</p>

	Guard Aids to Navigation via VFPA. Nominal range of the light to be 3 nautical miles.	
86.	Upon completion of the deep-sea berth(s) construction and land fill expansions, the Permit Holder must undertake a hydrographic survey that meets the requirements of a "Special Order" survey with "Type C1" coverage as defined by the Canadian Hydrographic Service (CHS) "Standards for Hydrographic Surveys", to the satisfaction of VFPA. Scope of survey area should be confirmed by VFPA prior to data collection.	Upon completion of construction
VFPA reserves the right to rescind or revise these conditions at any time that new information warranting this action is made available to VFPA.		
LENGTH OF PERMIT VALIDITY		
The construction of the Project must commence by April 30, 2019 (the "Commencement Date") and be complete no later than April 30, 2022 (the "Expiry Date").		
AMENDMENTS		
<ul style="list-style-type: none"> • Details of any material proposed changes to the Project, including days and hours when construction and any physical activities will be conducted, must be submitted to VFPA for consideration of an amendment to this Permit. • For an extension to the Commencement Date, the Permit Holder must apply to VFPA in writing no later than 30 days prior to that date. • For an extension to the Expiry Date, the Permit Holder must apply in writing to VFPA no later than 30 days prior to that date. <p>Failure to apply for an extension as required may, at the sole discretion of VFPA, result in termination of this Permit.</p>		

PROJECT AND ENVIRONMENTAL REVIEW DECISION

Project Permit PER No. 15-012 is approved by:

Original Copy Signed

PETER XOTTA
VICE PRESIDENT, PLANNING & OPERATIONS
CHAIR OF PROJECT AND ENVIRONMENTAL
REVIEW COMMITTEE

April 18, 2018

DATE OF APPROVAL

CONTACT INFORMATION

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