

PER No.:	12-066-01
Tenant:	Neptune Bulk Terminals Canada Ltd.
Project:	Neptune Coal Capacity – Amendment – West Quadrant Shiploader
Project Location:	1001 Low Level Road, North Vancouver
VFPA SID No.:	CNV074
Land Use Designation:	Port Terminal
Applicant/Permit Holder:	Stantec Consulting Ltd. on behalf of Neptune Bulk Terminals Canada Ltd.
Category of Review:	Amendment (B)
Date of Approval:	May 7, 2018
Date of Expiry:	August 31, 2021

1 INTRODUCTION

The Vancouver Fraser Port Authority (VFPA), a federal port authority, manages lands under the purview of the *Canada Marine Act*, which imparts responsibilities for environmental protection. VFPA accordingly conducts project and environmental reviews of works and activities undertaken on these lands to ensure that the works and activities will not likely cause significant adverse environmental effects. This project and environmental review report and project permit (the Permit) documents VFPA's project and environmental review of PER No. 12-066-01: West Quadrant Shiploader Amendment (the Project) proposed by Stantec Consulting Ltd. working on behalf of Neptune Bulk Terminals Canada Ltd. (the Applicant).

This project and environmental review was carried out to address VFPA's responsibilities under the *Canada Marine Act*, and to meet the requirements of the *Canadian Environmental Assessment Act, 2012* (CEAA 2012), as applicable. The proposed Project is not a CEAA 2012 "designated project" and an environmental assessment as described in CEAA 2012 is not required. However, VFPA authorization is required for the proposed Project to proceed and in such circumstances, where applicable, Section 67 of CEAA 2012 requires federal authorities to assure themselves that projects will not likely cause significant adverse environmental effects. This review provides that assurance. In addition, VFPA considers other interests, impacts and mitigations through the project and environmental review.

The project and environmental review considered the amendment application along with supporting studies, assessments and consultations carried out or commissioned by the Applicant, as well as other information provided by the Applicant. In addition, this project and environmental review considered other information available to VFPA and other consultations carried out by VFPA. A full list of information sources germane to the review is provided in the following pages of this report.

The scope of this review is limited to the elements of a previously authorized project that have changed since the original authorization under project permit 2012-066 was issued on January 23, 2013. It does not constitute a review of the entire project, or the impacts of the entire project.

This Permit is the authorizing document allowing the Applicant to proceed with the amendment subject to the listed project and environmental conditions.

2 PROJECT DESCRIPTION

Neptune Bulk Terminals Canada Ltd. proposes to modify the scope of works authorized in 2013 under project permit 2012-066. The proposed modifications relate to a redesign of the west quadrant shiploader and include a new upland pivot point and in-water quadrant rail, new berthing moorings and dolphins, and a stern vessel gangway. A total of 72 new in-water steel piles will be installed, rather than the 4 steel piles previously authorized.

The updated shiploader design and associated structures will enable loading the holds on larger cape size bulk carriers without needing to move (warp) the vessel once berthed. In addition, the new shiploader rail and pivot will include upgraded seismic specifications for the loading structures. The revised design is also proposed to address constructability concerns with the original proposal, which would have resulted in more significant down time for the loader during the construction period.

The location of the proposed shiploader affects the terminal employee parking area, displacing approximately 30 parking spaces. Neptune has re-purposed the area formerly used for canola oil tanks and the access road to provide additional parking for over 50 parking spaces. The new parking areas include fence relocations and line painting to delineate the parking area. Parking locations will be slightly modified throughout the construction sequencing based on construction areas and activities, but at a maximum are predicted to include the temporary loss of 30 parking spaces, and following build out and construction completion, less than 20 parking spots.

2.1 Aspects of the west quadrant shiploader system which remain unchanged

- The shiploader capacity and terminal throughput, including vehicular, truck, train and marine vessel traffic, remain unchanged.
- Updates to the shiploader design are limited to the base or support of the shiploader and do not include changes to any of the noise generating components of the shiploader, such as motors and conveyors. As such, noise levels in the community are not expected to change due to the updated design.
- The new shiploader system will connect to existing conveyors, the coal surge bin and coal storage areas.
- The new shiploader will be delivered to site by barge fully pre-assembled.
- The existing west quadrant shiploader will be disassembled and removed prior to the installation of the new shiploader and feed conveyor.

2.2 Proposed changes to previously authorized works

- Due to increased vessel sizes and to improve geometry, the new shiploader will be located on a new pivot point constructed approximately 32 m north-west of the existing pivot point.
- A new pile supported rail mount will be constructed to the west of the existing quadrant beam. The new quadrant beam will be comprised of 26 steel piles of 1067 mm (42 inch) outside diameter (OD), concrete beams and pile caps. The concrete quadrant beams will be precast and tied into the new supports once installed.
- A new mooring comprised of 9 steel piles of 762 mm (30 inch) OD, with a formed 6.5 m by 6.5 m concrete cap to support the mooring and release hook, will be installed in the northwest area of the water lot.
- A new gangway platform, approximately 69 m in length and 6 m in width, supported by 29 steel piles of 610 mm (24 inch) OD and capped with concrete, will be installed.

- A new pile supported berthing dolphin will be constructed within the gangway platform using 8 steel piles of 762 mm (30 inch) OD, with attached fenders, timber pile and capped with concrete to tie into the gangway platform.
- The existing quadrant beam and associated piles (10 steel piles of 914 mm (36 inch) OD) will be removed in stages.
- The existing land-based western mooring will be removed.
- The foundations of the existing shiploader will be removed and recycled or disposed of at appropriate licensed off-site facilities.

2.3 In-water construction

- The shiploader quadrant beam, mooring, dolphin and gangway platform piles will be installed using a vibratory hammer to initiate the pile placement with the final pile set using an impact hammer.
- Pile installation will be staged to accommodate the fisheries sensitive period and operational breaks between vessels.
- In-water construction associated with this amendment is anticipated to commence in August 2018 and continue until February 2021.

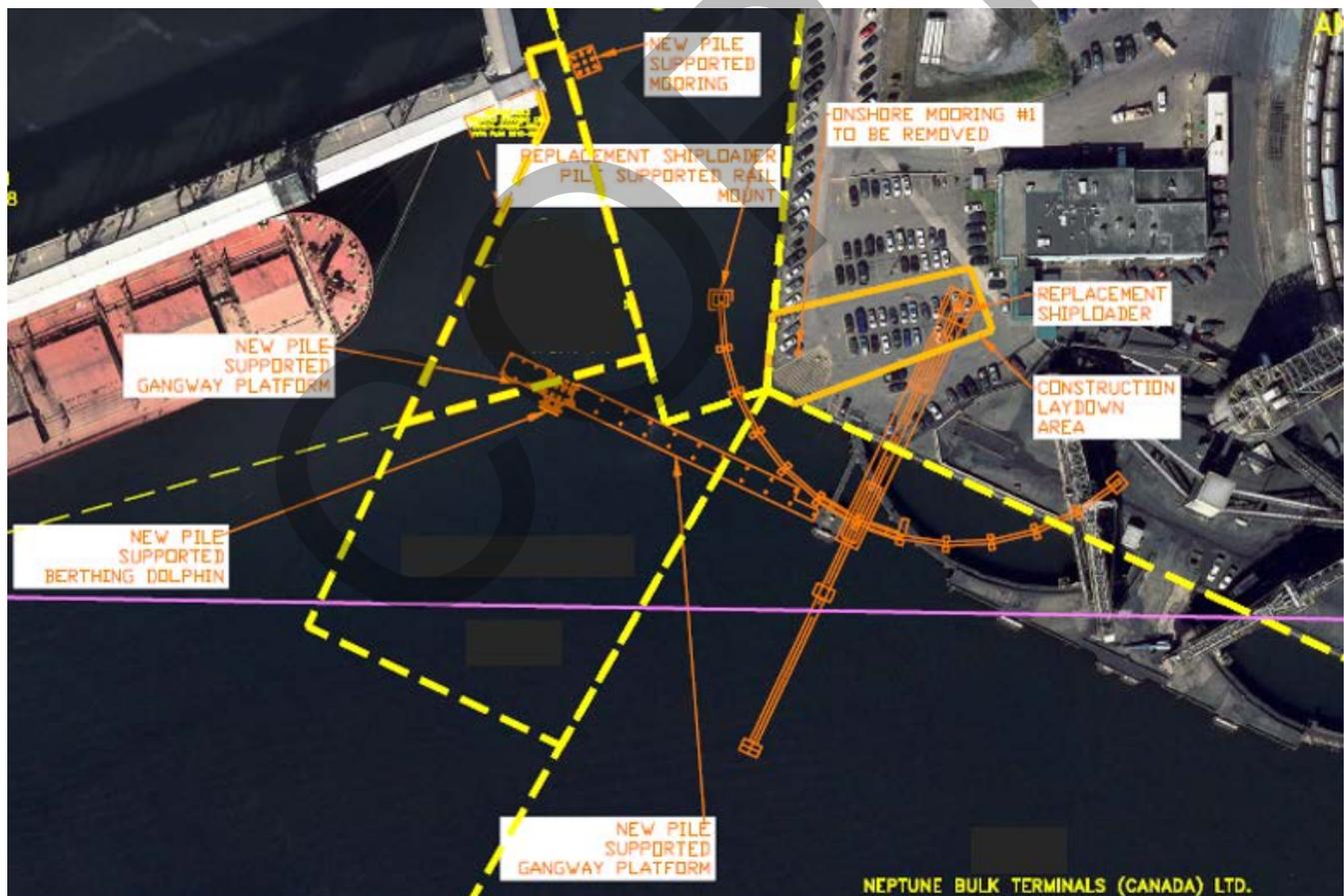


Figure 1. West quadrant shiploader amendment

3 VANCOUVER FRASER PORT AUTHORITY INTERNAL REVIEWS

The following VFPA departments have undertaken and completed a review of these works and confirm that the proposal meets their requirements, subject to the listed project and environmental conditions.

- | | | |
|---|--|---|
| <input checked="" type="checkbox"/> Planning | <input checked="" type="checkbox"/> Environmental Programs | <input checked="" type="checkbox"/> Engineering |
| <input checked="" type="checkbox"/> Marine Operations | <input checked="" type="checkbox"/> Project Communications | |

4 ABORIGINAL CONSULTATION

Aboriginal Affairs reviewed the proposed works and determined that the Project may have the potential to adversely impact Aboriginal or Treaty rights.

Scope of Consultation

The proposed Project falls within the asserted traditional territory of the following Aboriginal groups:

- Musqueam Indian Band
- Tsleil-Waututh Nation
- Squamish Nation
- Sto:lo Nation
- Lake Cowichan First Nation
- Cowichan Tribes
- Penelakut Tribe
- Halalt First Nation
- Stz'uminus First Nation
- Lyackson First Nation

All Aboriginal groups listed above were consulted on the proposed Project.

Overview of Consultation Activities

On January 29, 2018, a referral package was sent to each of the Aboriginal groups listed above. The referral package included:

- A referral letter
- PER application
- Amendment application package
- Chance Find Procedure
- Construction Environmental Management Plan

Comments were requested from Aboriginal groups within 30 business days, by March 12, 2018.

VFPA extended the comment period, at the request of Aboriginal groups, a further 12 business days. Aboriginal groups submitted comments through letters and emails. VFPA responded to comments and concerns from Aboriginal groups via letters and emails.

Summary of Issues

Below is a table summarizing comments received by VFPA and how they were considered as part of the project and environmental review.

Issue	VFPA Considerations	Action Required
Need for a broader consultation process aimed at reconciling existing and future port operations with the interests of Aboriginal groups.	VFPA understand that some Aboriginal groups seek a broader arrangement that is outside of the scope of this amendment review.	None
Significant concerns with the direct and cumulative impact of the proposed project and amendment.	VFPA invited Aboriginal groups to provide comments on how the proposed amendment could impact their Aboriginal rights, either through a meeting or written comments.	None
Consultation for the original project (PP#12-066) was not adequate.	VFPA considered input from Aboriginal groups during the review of the original project (PP#12-066) and addressed those concerns where possible. VFPA is of the view that the duty to consult was met.	None
Request for more info regarding additional mitigation strategies during pile driving.	VFPA responded with a list of the mitigations found in the Applicant's Marine Mammal Plan and in the Construction Environmental Management Plan (Section 5.2 and 5.3).	VFPA added a condition (no. 24) requiring that the Permit Holder carry out the project in accordance with the Construction Environmental Management Plan. VFPA added a condition (no. 25) requiring that the Permit Holder carry out the project in accordance with the Marine Mammal Plan.
Future dredging activities.	The Applicant submitted preliminary materials to VFPA indicating that they will be applying for approval to undertake capital dredging activities in the project area. This will be reviewed as a separate application under VFPA's Project and Environmental Review process.	None.

Issue	VFPA Considerations	Action Required
<p>Request for an assessment on the cumulative health and environmental impacts from air pollutants from the machinery, ships and coal dust of this project.</p>	<p>Potential noise and air quality impacts, such as fugitive dust, were considered during the review of the broader project under project permit 2012-066. Implementation of dust control and noise abatement measures were incorporated into project design and previous permit conditions. The scope of the activities included in this permit amendment are not expected to change potential effects on air quality or health that were assessed as part of the broader permit review.</p> <p>Mitigation measures to reduce potential effects on air quality from construction equipment outlined in the Construction Environmental Management Plan and Marine Mammal Management Plan submitted as part of the permit amendment application will be implemented to reduce potential adverse environmental effects.</p>	<p>VFPA added a condition (no. 24) requiring that the Permit Holder carry out the project in accordance with the Construction Environmental Management Plan.</p> <p>VFPA added a condition (no. 25) requiring that the Permit Holder carry out the project in accordance with the Marine Mammal Management Plan.</p>
<p>Request to edit language in the Chance Find Procedure:</p> <ul style="list-style-type: none"> • Remove "best practice" from Chance Find Procedure, as it implies that there are alternative archaeological management strategies. • Remove "for the purpose of this project" from Chance Find Procedure as it implies that the definition of an archaeological site can change based on the project. • The last sentence should read "If these archaeologists are not available..." 	<p>VFPA forwarded this request on to the Applicant. The Applicant committed to making these changes.</p>	<p>VFPA added a condition (no. 15) requiring the Permit Holder to submit a revised Chance Find Procedure prior to construction.</p> <p>VFPA will share the revised Chance Find Procedure with Aboriginal groups.</p>

Based on the record of consultation, VFPA is of the view that the duty to consult has been met.

5 NOTIFICATIONS

5.1 Municipal Notification

The proposed Project was assessed by VFPA to have potential impacts to municipal interests. A notification letter was sent to the City of North Vancouver on February 28, 2018 notifying them of the proposed Project. The City had no comments.

5.2 Adjacent Tenant Notification

The proposed Project was assessed by VFPA to have potential impacts to adjacent tenant interests. A notification letter was sent to Cargill Limited notifying them of the proposed Project. In addition, Neptune met with Cargill and VFPA to consider the potential impacts of larger vessels calling at the terminal, and any effects of the maneuvering and moorage of those vessels at either terminal. Cargill did not provide any comments.

6.3 Community Notification

The proposed Project was assessed by VFPA to have minimal or no potential impacts to community interests in the surrounding area once the project is completed. Therefore no community consultation was required to be conducted by the Applicant.

The proposed Project was assessed by VFPA to have potential impacts to community interests during construction. These include potential noise and visibility impacts from proposed construction activities.

As a result, the Permit Holder is required to send a construction notice to adjacent residents and businesses in North Vancouver as shown in the map below. The notification area is within approximately four blocks (500 m) of the project site. The construction notice shall be distributed by the Permit Holder at least 10 business days prior to the start of the works. This requirement is described in condition no. 13 and 14.



Figure 2. Map of notification area

6 INFORMATION SOURCES

VFPA has relied upon the following sources of information in its review of the Project.

- Application form and materials submitted by the Applicant on December 22, 2017.
- All Project correspondence from December 22, 2017 to May 4, 2018.

7 ENVIRONMENTAL REVIEW DECISION

In reviewing the amendment application, VFPA has taken into account relevant information available on the proposed project amendment, has considered the information and proposed mitigations provided by the Applicant and other information as listed elsewhere in this document, and determined that the 2013 environmental review decision and conclusions of project permit 2012-066 remain valid.

8 CONCLUSION

In completing the project and environmental review, VFPA concludes that with the implementation of proposed mitigation measures and conditions described in the project and environmental conditions section below, the Project has appropriately addressed all identified concerns.

PROJECT AND ENVIRONMENTAL REVIEW DECISION

Project Permit Amendment PER No. 12-066-01 is approved by:

Original Copy Signed

May 7, 2018

ANDREA MACLEOD
MANAGER, ENVIRONMENTAL PROGRAMS

DATE OF APPROVAL

9 PROJECT AND ENVIRONMENTAL CONDITIONS

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 Stantec Consulting Ltd. working on behalf of Neptune Bulk Terminals Canada Ltd. (the Permit Holder) fails to comply with any of the project and environmental conditions set out in the project permit (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 minimum conditions that must be followed by the Permit Holder to mitigate potential or foreseeable adverse environmental and other effects. These conditions apply to the modified works and activities described in section 2.2 and 2.3. The Permit Holder must adhere to the conditions contained in project permit 2012-066 for the works and activities not listed in this permit amendment which were previously authorized under project permit 2012-066.

No.	GENERAL CONDITIONS
1.	The Permit Holder must have a valid lease, licence, or access agreement for the Project site prior to accessing the Project site or commencing construction or any other physical activities on the Project site. This Permit shall in no way limit any of the Permit Holder's obligations, or VFPA's rights, under such lease, licence, or access agreement.
2.	The Permit Holder shall at all times and in all respects, comply with and abide by all applicable statutes, laws, regulations and orders from time to time in force and effect, including all applicable environmental, labour and safety laws and regulations.
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 shall indemnify and save harmless VFPA in respect of all claims, losses, costs, fines, penalties or other liabilities, including legal fees, arising out of: (a) any bodily injury or death, property damage or any loss or damage arising out of or in any way connected with the Project; and (b) any breach by the Permit Holder of its obligations under this Permit.	
5.	The Permit Holder is responsible for locating all existing site services and utilities including any located underground. 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.	
6.	The Permit Holder shall undertake and deliver the Project to total completion in a professional, timely and diligent manner in accordance with applicable standards and specifications set out in the sections above entitled Project Description and Information Sources. The Permit Holder shall not carry out any other physical activities unless expressly authorized by VFPA.	
7.	The Permit Holder shall cooperate fully with VFPA in respect of any review by VFPA of the Permit Holder's compliance with this Permit, including providing information and documentation in a timely manner, as required by VFPA. The Permit Holder is solely responsible for demonstrating the Permit Holder's compliance with this Permit.	
8.	The Permit Holder shall review the Permit with all employees, agents, contractors, licensees and invitees working on the Project site, prior to such parties participating in any construction or other physical activities on the Project site. The Permit Holder shall be solely responsible for ensuring that all such employees, agents, contractors, licensees and invitees comply with this Permit.	
9.	The Permit Holder shall make available upon request by any regulatory authority (such as a Fishery Officer) a copy of this Permit.	
10.	Unless otherwise specified, the Permit Holder shall provide all plans, documents, and notices required under this Permit to the following email address: per@portvancouver.com and referencing PER No. 12-066-01 .	
11.	Unless otherwise specified, all plans, schedules, and other Project-related documentation that the Permit Holder is required to provide under this Permit must be to VFPA's satisfaction.	
	CONDITIONS – PRIOR TO COMMENCING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES	SUBMISSION TIMING (business days)
12.	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 business days before commencing construction or any physical activities
13.	The Permit Holder shall provide a draft construction notice to VFPA's satisfaction in accordance with VFPA's Public Consultation Guidelines, available at: www.portvancouver.com/development-and-permits/project-and-environmental-reviews/technical-guidelines/	20 business days prior to commencing construction or any physical activities

14.	The Permit Holder shall distribute an approved construction notice to residents and businesses to an area to VFPA's satisfaction. The Permit Holder shall notify VFPA when such distribution has been completed.	10 business days before commencing construction or any physical activities
15.	The Permit Holder shall submit a revised Archaeological Chance Find Procedure for the Project site, to VFPA's satisfaction. The Permit Holder shall carry out the Project in accordance with this Procedure, and any subsequent amendments approved by VFPA.	5 business days before commencing construction or any physical activities
16.	For structures and proposed interior changes to structures that are reviewable under the National Building Code and National Fire Code, the Permit Holder shall apply for a VFPA Building Permit.	40 business days before commencing construction or any physical activities
17.	Prior to the commencement of any vessel-related activities, the Permit Holder must 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.	As per Coast Guard requirements
CONDITIONS – DURING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES		
18.	All general construction and physical activities related to the Project shall be conducted from Monday to Saturday between the hours of 7:00 am and 8:00 pm . No construction and physical activities shall take place on Sundays or holidays. These hours shall not be modified without prior approval of VFPA. To request permission to conduct activities outside these hours, the Permit Holder must submit a written request no less than 20 business days prior to the desired start date.	
19.	The Permit Holder shall notify VFPA within two business days of any complaints received from the community and stakeholders during construction and indicate how the Permit Holder has responded to such complaints.	
20.	The Permit Holder shall remove all abandoned utilities from the project site, both underground and aboveground. At locations of connection to municipal work (i.e., at property lines), the abandoned utilities shall be capped.	
21.	If the Permit Holder encounters, expects to encounter, or should expect to encounter an actual or potential archaeological resource, the Permit Holder shall: <ul 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. 	
22.	The Permit Holder may place temporary construction trailers on the Project site while this Permit remains in effect, provided that the Permit Holder does not connect such trailers to any underground utilities without the prior written consent of VFPA which may require, at VFPA's discretion, a VFPA Building Permit.	

23.	<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) Exhibit the appropriate lights and day shapes at all times; 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; and, f) During night hours, unless working 24 hours per day, ensure that the rig and associated equipment is moored outside the navigation channel and lit in accordance with all applicable regulations.
24.	The Permit Holder shall carry out the Project in accordance with the January 12, 2018 Construction Environmental Management Plan provided by the Permit Holder, and any subsequent amendments accepted by VFPA.
25.	The Permit Holder shall carry out the Project in accordance with the January 22, 2018 Marine Mammal Management Plan provided by the Permit Holder, and any subsequent amendments accepted by VFPA.
26.	The Permit Holder 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, the Marine Mammal Management Plan, or VFPA, provided that monitoring will be full time when works are under way that have the potential to adversely affect fish or fish habitat.
27.	The Permit Holder shall provide environmental monitoring reports to VFPA's satisfaction as specified in the Construction Environmental Management Plan, Marine Mammal Management Plan, or more frequently if VFPA requires. In addition, a summary report for the whole monitoring period shall be forwarded to VFPA within six weeks of the conclusion of the monitoring period.
28.	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.
29.	Sediments contained within piles after driving shall be left in place. If it is determined that they must be removed for engineering reasons, the Permit Holder shall consult VFPA for review and authorization prior to initiating the proposed physical activities.

30.	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.	
	CONDITIONS – UPON COMPLETION	SUBMISSION TIMING (Business Days)
31.	The Permit Holder shall notify VFPA upon completion of the Project.	Upon substantial completion
32.	The Permit Holder shall provide a Plan showing the parking area and fence arrangement proposed once the staging is no longer occupying the north west corner of the site, to VFPA's satisfaction.	Upon completion
33.	The Permit Holder shall provide record drawings in accordance with VFPA's Record Drawing Standards (available at: http://www.portvancouver.com/development-and-permits/project-and-environmental-reviews/technical-guidelines/), in both AutoCAD and Adobe (PDF) format to VFPA, including a Project site plan that clearly identifies the location of works.	Within 40 business days of completion
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 Project must be completed no later than August 31, 2021 (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 Expiry Date, the Permit Holder must apply in writing to VFPA no later than 30 days prior to that date. 		
Failure to apply for an extension as required may, at the sole discretion of VFPA, result in termination of this Permit.		

CONTACT INFORMATION

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