



January 9, 2023

Simon Phillips
Biologist
Ausenco Sustainability Inc.
4515 Central Boulevard
Burnaby, BC V5H 0C6

Dear Simon Phillips,

Re: **Vancouver Fraser Port Authority Project Permit No. 20-010-03 - Extension
Vito Shipyard Wharf Repairs**

The Vancouver Fraser Port Authority (the "Port Authority") has received a request from Ausenco Sustainability Inc., on behalf of Carlson Construction Group (the "Permit Holder"), to extend the validity of Project Permit PER No. 20-010-02 (the "Permit"). The Port Authority understands the project has required budget adjustments due to ongoing logistical supply issues related to the COVID-19 pandemic and procurement of materials. Previously proposed works are still required. The works are anticipated to commence upon receipt of a permit extension, appropriate market conditions, and labour and equipment availability. Work activities as described in PER No. 20-010-02 could not be completed prior to December 31, 2022. The Port Authority further understands that there are no changes to the scope of the amended project.

The Port Authority has undertaken and completed a review of the requested extension in accordance with the *Canada Marine Act*, section 5 of the Port Authorities Operations Regulations, and section 82 of the *Impact Assessment Act*.

As part of our review, the Port Authority considered additional information provided in the following:

- Amendment letter submitted by Ausenco Sustainability Inc. on November 23, 2022.

To meet the requirements of the *Impact Assessment Act*, the Port Authority posted a description of the requested extension and notice of public participation to the Canadian Impact Assessment Registry and considered the factors set out in section 84. We concluded that the requested extension is not likely to cause significant adverse environmental effects. We also determined that adverse impacts to Aboriginal or Treaty rights are not expected.

Accordingly, the Port Authority authorizes an amendment to Project Permit PER No. 20-010-02 to extend the expiry date of the Project. The expiry date for this permit is now **December 31, 2023**.

This amendment has been assigned Amendment PER No. 20-010-03. Please quote this reference number in all future correspondence. Should you have any questions regarding this approval, please contact Andrew Otto-Artavia at andrew.otto-artavia@portvancouver.com.

.../2

Simon Phillips
PER No. 20-010-03 Extension
January 09, 2023
Page 2 of 2

Yours truly,

ORIGINAL COPY SIGNED

Chris Bishop
Manager, Project and Environmental Review
Vancouver Fraser Port Authority

cc John Zuk, Vancouver Pile Driving Ltd.
Christine Erikson, Vancouver Fraser Port Authority

encl (2) Amendment PER No. 20-010-02
Amendment PER No. 20-010-01
Project Permit PER No. 20-010

COPY



January 05, 2021

Simon Phillips
Biologist
Hemmera Envirochem Inc.
4515 Central Boulevard
Burnaby, BC V5H 0C6

Dear Simon Phillips,

Re: **Vancouver Fraser Port Authority Project Permit No. 20-010-02 - Extension
Vito Shipyard Wharf Repairs**

The Vancouver Fraser Port Authority (the "Port Authority") has received a request from Hemmera Envirochem Inc., on behalf of Carlson Construction Group, to extend the validity of Project Permit PER No. 20-010-01 (the "Permit"). The Port Authority understands that due to unexpected emergency repairs to critical wharf components of the existing wharf (the Project site), work activities as described in PER No. 20-010-01 could not be completed prior to December 31, 2021. The Port Authority further understands that there are no changes to the scope of the amended Project.

The Port Authority has undertaken and completed a review of the requested extension in accordance with the *Canada Marine Act*, section 5 of the Port Authorities Operations Regulations, and section 82 of the *Impact Assessment Act*.

As part of our review, the Port Authority considered additional information provided in the following:

- Amendment letter submitted by Hemmera Envirochem Inc. on November 24, 2021.

To meet the requirements of the *Impact Assessment Act*, the Port Authority posted a description of the requested extension and notice of public participation to the Canadian Impact Assessment Registry and considered the factors set out in section 84. We concluded that the requested extension is not likely to cause significant adverse environmental effects. We also determined that adverse impacts to Aboriginal or Treaty rights are not expected.

Accordingly, the Port Authority authorizes an amendment to Project Permit PER No. 20-010-01 to extend the expiry date of the Project. The expiry date for this permit is now **January 31, 2023**.

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PER No. 20-010-02 Extension
January 05, 2021
Page 2 of 2

This amendment has been assigned Amendment PER No. 20-010-02. Please quote this reference number in all future correspondence. Thank you for your cooperation throughout our review. Should you have any questions regarding this approval, please contact Andrew Otto-Artavia at andrew.otto-artavia@portvancouver.com.

Yours truly,

ORIGINAL COPY SIGNED

Chris Bishop
Manager, Project and Environmental Review
Vancouver Fraser Port Authority

cc John Zuk, Vancouver Pile Driving Ltd.
Kim Keskinen, Supervisor, Environmental Programs, Vancouver Fraser Port Authority
Nitin Agarwal, Senior Real Estate Specialist, Vancouver Fraser Port Authority

encl (2) Amendment PER No. 20-010-01
Project Permit PER No. 20-010

COPIES

PER No.:	20-010-01
Tenant:	Carlson Construction Group
Project:	Vito Shipyard Wharf Repairs
Project Location:	9425 River Road, Delta BC
Vancouver Fraser Port Authority SID No.:	DEL322
Land Use Designation:	Industrial
Applicant/Permit Holder:	Hemmera Envirochem Inc. on behalf of Carlson Construction Group
Category of Review:	B
Date of Approval:	September 24, 2020
Date of Expiry:	December 31, 2021

1 INTRODUCTION

The Vancouver Fraser Port Authority (the port authority), a federal port authority, manages lands under the purview of the *Canada Marine Act*, which imparts responsibilities for environmental protection. The port authority 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 the port authority's project and environmental review of PER No. 20-010-01: Vito Shipyard Wharf Repairs (the Project) proposed by Hemmera Envirochem Inc. working on behalf of Carlson Construction Group (the Applicant).

This project and environmental review was carried out to address the port authority's responsibilities under the *Canada Marine Act*, and to meet the requirements of the *Impact Assessment Act*, as applicable. The proposed Project is not considered a "designated project" under the *Impact Assessment Act* and an impact assessment as described in the *Impact Assessment Act* is not required. However, the port authority authorization is required for the proposed Project to proceed and in such circumstances, where applicable, Section 82 of *Impact Assessment Act* requires federal authorities to assure themselves that projects will not likely cause significant adverse environmental effects. This review provides that assurance. In addition, the port authority considers other interests, impacts and mitigations through the project and environmental review.

The project and environmental review considered the 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 the port authority and other consultations carried out by the port authority. A full list of information sources germane to the review is provided in the following pages of this report.

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

2 PROJECT DESCRIPTION

Carlson Construction Group proposes to conduct structural wharf repairs and installation of new gantry cranes at their Vito Shipyard located at 9425 River Road, Delta. The structural repairs at the wharf include replacement of the sheet pile wall and installation of a new geotube, which is a geotextile scour protection structure that prevents shoreline erosion from underneath the wharf. Structural repairs to the wharf include the installation of steel support piles and repairs to timber components. Gantry cranes are proposed to be installed inside the existing

fabrication building and require foundation upgrades including installation of micropiles, steel columns, and rail beams on top of the new foundation structure.

2.1 Proposed Works

The proposed works include:

- Replacement of sheet pile wall
 - Excavation of approximately 610 m² of material (gravel/soil) and removal of existing tie rods and tie back wall
 - Installation of new sheet pile wall, tie backs and tie back wall behind the existing sheet pile wall
 - Excavation of soil between the existing and new sheet pile walls to mudline elevation
 - Installation of a new transition slab between the new sheet pile wall and existing concrete deck
 - Backfilling and grading
- Structural repairs to wharf
 - Localized demolition of concrete slab
 - Installation of replacement steel support piles using drilled and grouted micropiles (diameter 8 to 25 cm). Piles will be drilled and grouted using track mounted equipment from inside the existing building.
 - Installation of approximately ten 300 mm timber piles using a small drop hammer or impact hammer via a derrick-based crane
 - Replacement of approximately seven 300 mm existing timber piles and approximate five 300 mm existing timber piles using a small drop hammer or impact hammer via a derrick-based crane
 - Installation of steel cap beams on top of the piles and securing existing concrete and steel deck support structure
 - Repair of timber components of the wharf including timber subcaps at six locations
 - Reinstallation of concrete sections on the decking
- Installation of scour protection
 - Installation of a 98 m long by 1 m diameter geo-tube along the north edge beam of the existing building. The geotube will be filled with grout and will control erosion of sand under the wharf structure.
- Overhead gantry crane foundation:
 - Localized demolition of the floor slab inside existing building
 - Installation of micropiles under each column location
 - Forming and installation of reinforced concrete pile cap on micropiles
 - Installation of steel columns and rail beams on top of foundation structure to support new cranes.

Works will be conducted on the upland or wharf decking as well as from a marine derrick. Micropiles will be installed either under the existing building slab or at the edge of the foundation into existing fill or scour protection material, and therefore are not anticipated to impact the aquatic habitat.

3 VANCOUVER FRASER PORT AUTHORITY INTERNAL REVIEWS

The following port authority 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"/> Public Engagement | <input type="checkbox"/> Transportation |
| <input checked="" type="checkbox"/> Indigenous Consultation | | |

4 INDIGENOUS CONSULTATION

The port authority has reviewed the proposed works and determined that adverse impacts to Indigenous or Treaty rights are not expected.

5 EXISTING POLICIES OR GUIDELINES

The proposed works are considered to be in keeping with port authority Land Use Designation of Industrial. Areas designated Industrial are primarily designated for light to heavy industrial activities in support of port operations and marine support services, including shipping, transportation and the handling of goods, and in some cases including the manufacturing of goods.

6 MUNICIPAL NOTIFICATION

The proposed Project was assessed by the port authority to have potential impacts to municipal interests. A notification letter was sent to the City of Delta on March 11, 2020, notifying them of the proposed Project. The City of Delta had no comments.

6.1 Adjacent Tenant Notification

The proposed Project was assessed by the port authority to have potential impacts to adjacent tenant interests. A notification letter was sent to Gracia Financial Corporation and 0989483 B.C. Ltd. on March 11, 2020, notifying them of the proposed Project. No comments from adjacent tenants were received.

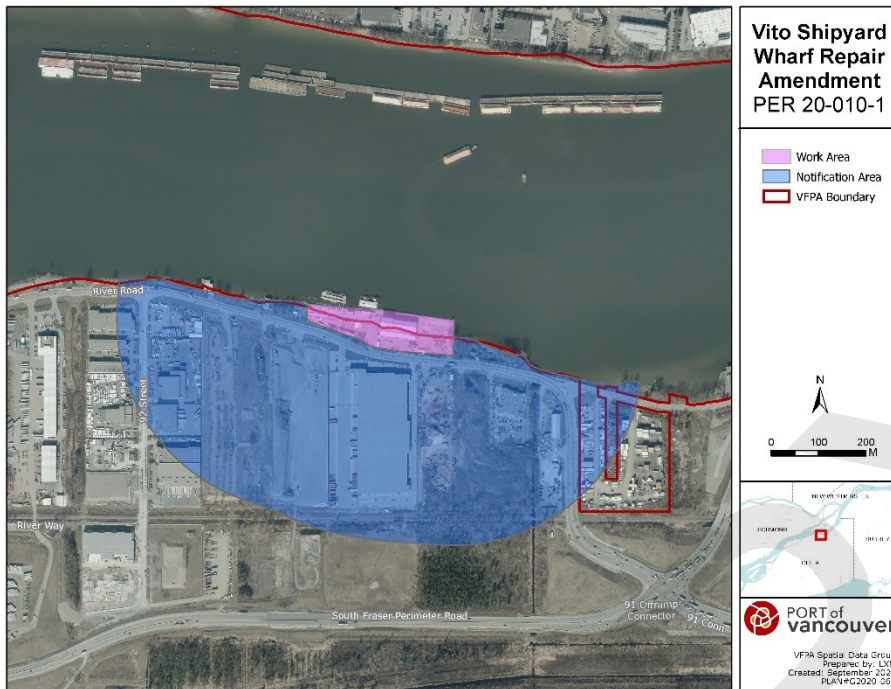
6.2 Public Engagement

To meet requirements of section 86 of the *Impact Assessment Act*, the port authority posted a description of the Project and notice of public participation to the Canadian Impact Assessment Registry to provide the public 30 calendar days to comment on the project and provide community knowledge. No comments were received.

The proposed Project was assessed by the port authority to have potential impacts to community interests during construction. These include potential impacts such as noise from the proposed pipe driving construction activities.

As a result, the Permit Holder is required to send a construction notice to adjacent residents and businesses as indicated on the map below. The notification area is within approximately 400 m from 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 is set out in conditions No. 15 and 16 in the permit.

Map of notification area



7 INFORMATION SOURCES

The port authority has relied upon the following sources of information in its review of the Project.

- Application form and materials submitted by the Applicant on behalf of the tenant on January 17, 2020.
- All Project correspondence from January, 17, 2020 to March 20, 2020
- All plans and drawings provided by the Permit Holder
- “Aquatic Effects Assessment”, January 15, 2020, Hemmera Envirochem Inc.
- Letter titled “VITO shipyard Repairs – VFPA Project and Environmental Review application amendment (Review #20-010)”, July 25, 2015, Hemmera Envirochem Inc.

8 ENVIRONMENTAL REVIEW DECISION

In completing the project and environmental review, the port authority has reviewed and taken into account relevant information available on the proposed project and has considered any adverse impact that the project may have on the rights of the Indigenous peoples, Indigenous knowledge, community knowledge, comments received from the public, and measures that would mitigate any significant adverse environmental effects of the project. We conclude that with the implementation of proposed mitigation measures and conditions described in the project and environmental conditions section below, the Project is not likely to cause significant adverse environmental effects.

ORIGINAL COPY SIGNED

**LISA MCCUAIG on behalf of
MANAGER, ENVIRONMENTAL PROGRAMS**

September 24, 2020

DATE OF DECISION

9 CONCLUSION

In completing the project and environmental review, the port authority 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 PER No. 20-010-01 is approved by:

ORIGINAL COPY SIGNED

LISA MCCUAIG on behalf of
MANAGER, ENVIRONMENTAL PROGRAMS

September 24, 2020

DATE OF APPROVAL

10 PROJECT AND ENVIRONMENTAL CONDITIONS

The port authority 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 82 of the *Impact Assessment Act*.

If at any time the Hemmera Envirochem Inc. working on behalf of Carlson Construction Group (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 the port authority determines that the Permit Holder has provided any incomplete, incorrect or misleading information in relation to the Project, the port authority 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*, the port authority 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 the port authority 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.

All port authority 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.	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 the port authority'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 the port authority 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 the port authority 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 the port authority, 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 the port authority.	
7.	The Permit Holder shall cooperate fully with the port authority in respect of any review by the port authority of the Permit Holder's compliance with this Permit, including providing information and documentation in a timely manner, as required by the port authority. 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.20-010 .	
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 the port authority's satisfaction.	
12.	The port authority shall have unfettered access to environmental compliance documentation and the Project site at all times during construction without notice.	
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 the port authority.	
	CONDITIONS – PRIOR TO COMMENCING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES	SUBMISSION TIMING (business days)
14.	The Permit Holder shall submit signed and sealed drawings in both AutoCAD and Adobe (PDF) format 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
15.	The Permit Holder shall provide a draft construction notice to the port authority's satisfaction in accordance with the port authority's Public Consultation Guidelines.	20 business days before commencing construction or any physical activities

16.	The Permit Holder shall distribute a construction notice to residents and businesses to an area. This shall be completed to the port authority's satisfaction. The Permit Holder shall notify the port authority when such distribution has been completed.	10 business days before commencing construction or any physical activities
17.	For buildings, structures and proposed interior changes to buildings that are reviewable under the National Building Code and National Fire Code, the Permit Holder shall apply for a port authority Building Permit.	40 business days before commencing construction or any physical activities
18.	At least two days prior to commencing any physical activities, the Permit Holder shall notify the Harbour Master and VFPA Environmental Programs, email: Harbour_Master@portvancouver.com and EnvironmentalPrograms@portvancouver.com.	2 business days before commencing construction or any physical activities
19.	Prior to the commencement of any vessel-related activities, the Permit Holder shall contact Canadian Coast Guard (CCG) Marine Communications and Traffic Services (MCTS), (email: NAVWARN.MCTSPRinceRupert@innav.gc.ca ; Phone: 250-627-3070) regarding the issuance of a Navigational Warning (NAVWARN) to advise the marine community of potential hazards associated with the Project.	As per Coast Guard requirements
20.	Prior to the commencement of any vessel-related activities, the Permit Holder shall inform the Fraser River Pilots (email: frp-committee@googlegroups.com) providing them with the following information: (a) staging and construction areas; (b) dates and hours of operations; (c) description of activities taking place; (d) participating equipment and vessels; (e) method of preferred communication.	2 days prior to any vessel-related activities
21.	Prior to the commencement of any vessel-related activities, the Permit Holder must submit a marine construction and staging plan, including the following, to VFPA's satisfaction: (a) staging and construction areas; (b) dates and hours of operations; (c) description of activities taking place; (d) participating equipment and vessels (dimensions and load capacities must be included); (e) Detailed mooring/spudding arrangement of barges; (f) Detailed lighting schematic; (g) Proposed plan to implement and mitigate the potential for barges to break free from moorage; (h) method of preferred communication; and (i) special requests and/or additional information. The Permit Holder shall carry out the Project in accordance with the marine construction and staging plan, including any subsequent amendments completed to VFPA's satisfaction.	30 business days before commencing vessel-related activities
CONDITIONS – DURING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES		
22.	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. To modify these hours the Permit Holder must submit a plan, describing proposed activities and additional mitigation, to VFPA's satisfaction no less than 20 business days prior to the desired start date.	

23.	The Permit Holder shall notify the port authority 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.
24.	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.
25.	The Permit Holder shall ensure that an appropriately qualified archaeological monitor be on the Project site at all times during ground disturbing activities with the potential to intrude into native soils.
26.	<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> <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 the port authority by email and phone.
27.	The Permit Holder may place temporary construction trailers on the Project site while this Permit remains in effect, provided such trailers meet all of the criteria set out in the port authority's Temporary Construction Trailer Criteria, available at: https://www.portvancouver.com/development-and-permits/building-permits/ . Should one or more of the criteria not be met, a port authority Building Permit is required.
28.	<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.
29.	<p>The Permit Holder shall remove piles completely by extracting the entire length of pile from the river/seabed. If physical conditions result in the breakage of piles, the Permit Holder shall remove the remaining pile stubs with the least amount of disturbance of the river/seabed as possible. Should it be impossible to remove the remaining pile stubs, they are to be cut as close as possible to the nominal bed elevation in the immediate area of each pile.</p> <p>In regards to batter piles, If the angle of the pile is such that the construction equipment is unable to extract the pile, then a document from the contractor stating the limitations of the equipment and rationale for not being able to extract the piles is required. If the rationale is reasonable, the piles are to be cut as close as possible to the nominal bed elevation in the immediate area of each pile.</p> <p>Upon successful completion of the pile extraction and installation works, a hydrographic survey of the location is required with survey data and post extraction and new installation drawing provided to VFPA within 30 days.</p>

30.	The Permit Holder shall carry out the Project in accordance with the Aquatic Effects Assessment plan and mitigations provided by the Permit Holder, and any subsequent updates to the plan completed to VFPA's satisfaction.
31.	No dredging shall be conducted as part of the Project. Any proposals to dredge shall be the subject of a separate application to VFPA.
32.	Without limiting the generality of permit condition #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> .
33.	To avoid serious harm to fish during pile installation, peak sound pressure level in-water should not exceed 206 dB at a reference pressure of 1 µPa (equivalent to 30 kPa) and 186 dB accumulated sound exposure level (dB cSEL; re: 1µPa ² sec) within 10 m of the noise source.
34.	The Permit Holder shall not permit barges or other vessels used during the Project to ground on the foreshore or river/seabed or otherwise disturb the foreshore or river/seabed (including disturbance as a result of vessel propeller wash), excepting only such disturbance as is reasonably required resulting from the use of barge spuds.
35.	The Permit Holder shall not disturb the river/seabed outside the Project site.
36.	The Permit Holder shall repair and/or remediate any damage or erosion resulting from disturbance to the intertidal foreshore during the Project.
37.	The Permit Holder shall use an environmentally clean excavator bucket. The bucket and any portion of the excavator arm that will be in contact with or near the water shall be cleaned of any residual hydrocarbons or other contaminants prior to the start of works.
38.	The Permit Holder shall not permit sediment, sediment-laden waters, or other deleterious substances to enter the water during the Project. The Permit Holder shall carry out all physical activities in a manner that prevents induced sedimentation of foreshore and near shore areas and induced turbidity of local waters, and the release of sediment, sediment-laden waters, and turbid waters to the aquatic environment. The Permit Holder shall manage turbidity in compliance with the following water quality criteria: (a) when background is less than or equal to 50 nephelometric turbidity units (NTU), induced turbidity shall not exceed 5 NTU above the background values; and (b) when background is greater than 50 NTU, induced turbidity shall not exceed the background values by more than 10% of the background value. For the purposes of this condition, "background" means the level at an appropriate adjacent reference site (as determined to the satisfaction of VFPA) that is affected neither by physical activities at the project site, nor sediment-laden or turbid waters resulting from physical activities at the project site.
39.	Piles shall be installed by drilling techniques or driven with a vibratory or drop hammer. Piles shall not be installed using a diesel or hydraulic hammer or other technology such as drilling without review and authorization by VFPA.
40.	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.
41.	The Permit Holder shall cap any exposed hollow pipe piles to prevent wildlife entrapment.
42.	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.

43.	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.	
44.	The Permit Holder shall contain and collect debris and waste material in the immediate working area within the Project site. The Permit Holder shall dispose of waste material at suitable upland locations and maintain records of off-site disposal.	
45.	Without limiting the generality of permit condition #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.	
46.	The Permit Holder shall dispose of any soils excavated from the project site that are not suitable for backfill at appropriate off-site facilities and maintain records of off-site disposal.	
47.	Without limiting the generality of permit condition #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.	
48.	Prior to commencing construction or any physical activities, the Permit Holder shall have in place a spill prevention, containment and clean-up plan for hydrocarbon products (including fuel, oil and hydraulic fluid) and any other deleterious substances. Appropriate spill containment and clean-up supplies shall be available on the Project site at all times and all personnel working on the Project shall be trained on the spill prevention, containment and clean-up plan. The Permit Holder shall carry out the Project in accordance with the spill prevention, containment and clean-up plan.	
49.	The Permit Holder shall maintain equipment in good mechanical condition and free of fluid leaks, invasive species, and noxious weeds.	
50.	During upland construction activities, the Permit Holder shall not conduct refuelling or maintenance activities on nonroad 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.	
51.	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).	
52.	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/).	
	CONDITIONS – UPON COMPLETION	SUBMISSION TIMING (Business Days)
53.	The Permit Holder shall notify the port authority upon completion of the Project.	Upon substantial completion

54.	The Permit Holder shall provide record drawings in accordance with the port authority'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 the port authority, including a Project site plan that clearly identifies the location of works.	Within 40 business days of completion
55.	If the footprint of the wharf is altered, or new marine infrastructure is constructed, 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 Canadian Hydrographic Service charts to be updated. VFPA's Marine Operations department must be carbon copied into the request (navigation.review@portvancouver.com).	within 30 business days of project completion
The port authority reserves the right to rescind or revise these conditions at any time that new information warranting this action is made available to the port authority.		
LENGTH OF PERMIT VALIDITY		
The Project must be completed no later than December 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 the port authority for consideration of an amendment to this Permit. • For an extension to the Expiry Date, the Permit Holder must apply in writing to the port authority no later than 40 days prior to that date. 		
Failure to apply for an extension as required may, at the sole discretion of the port authority, result in termination of this Permit.		

CONTACT INFORMATION

Vancouver Fraser Port Authority
100 The Pointe, 999 Canada Place
Vancouver BC V6C 3T4 Canada

Project & Environmental Review
Tel.: 604-665-9047
Fax: 1-866-284-4271
Email: PER@portvancouver.com
Website: www.portvancouver.com

After normal business hours:

In the event of any land or marine construction incidents or concerns related to works carried out on-site under this permit, please contact the 24/7 Port Operations Centre 604-665-9086. In the event of an emergency requiring 'First Responders', please call 911 first.

PER No.:	20-010
Tenant:	Carlson Construction Group
Project:	Vito Shipyard Wharf Repairs
Project Location:	9425 River Road, Delta BC
Vancouver Fraser Port Authority SID No.:	DEL322
Land Use Designation:	Industrial
Applicant/Permit Holder:	Hemmera Envirochem Inc. on behalf of Carlson Construction Group
Category of Review:	B
Date of Approval:	April 8, 2020
Date of Expiry:	December 31, 2021

1 INTRODUCTION

The Vancouver Fraser Port Authority (the port authority), a federal port authority, manages lands under the purview of the *Canada Marine Act*, which imparts responsibilities for environmental protection. The port authority 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 the port authority's project and environmental review of PER No. 20-010: Vito Shipyard Wharf Repairs (the Project) proposed by Hemmera Envirochem Inc. working on behalf of Carlson Construction Group (the Applicant).

This project and environmental review was carried out to address the port authority's responsibilities under the *Canada Marine Act*, and to meet the requirements of the *Impact Assessment Act*, as applicable. The proposed Project is not considered a "designated project" under the *Impact Assessment Act* and an impact assessment as described in the *Impact Assessment Act* is not required. However, the port authority authorization is required for the proposed Project to proceed and in such circumstances, where applicable, Section 82 of *Impact Assessment Act* requires federal authorities to assure themselves that projects will not likely cause significant adverse environmental effects. This review provides that assurance. In addition, the port authority considers other interests, impacts and mitigations through the project and environmental review.

The project and environmental review considered the 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 the port authority and other consultations carried out by the port authority. A full list of information sources germane to the review is provided in the following pages of this report.

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

2 PROJECT DESCRIPTION

Carlson Construction Group proposes to conduct structural wharf repairs and installation of new gantry cranes at their Vito Shipyard located at 9425 River Road, Delta. The structural repairs at the wharf include replacement of the sheet pile wall and installation of a new geotube, which is a geotextile scour protection structure that prevents shoreline erosion from underneath the wharf. Structural repairs to the wharf include the installation of steel support piles and repairs to timber components. Gantry cranes are proposed to be installed inside the existing

fabrication building and require foundation upgrades including installation of micropiles, steel columns, and rail beams on top of the new foundation structure.

2.1 Proposed Works

The proposed works include:

- Replacement of sheet pile wall
 - Excavation of approximately 610 m² of material (gravel/soil) and removal of existing tie rods and tie back wall
 - Installation of new sheet pile wall, tie backs and tie back wall behind the existing sheet pile wall
 - Excavation of soil between the existing and new sheet pile walls to mudline elevation
 - Installation of a new transition slab between the new sheet pile wall and existing concrete deck
 - Backfilling and grading
- Structural repairs to wharf
 - Localized demolition of concrete slab
 - Installation of replacement steel support piles using drilled and grouted micropiles (diameter 8 to 25 cm). Piles will be drilled and grouted using track mounted equipment from inside the existing building.
 - Installation of steel cap beams on top of the piles and securing existing concrete and steel deck support structure
 - Repair of timber components of the wharf including timber subcaps at six locations
 - Reinstallation of concrete sections on the decking
- Installation of scour protection
 - Installation of a 98 m long by 1 m diameter geo-tube along the north edge beam of the existing building. The geotube will be filled with grout and will control erosion of sand under the wharf structure.
- Overhead gantry crane foundation:
 - Localized demolition of the floor slab inside existing building
 - Installation of micropiles under each column location
 - Forming and installation of reinforced concrete pile cap on micropiles
 - Installation of steel columns and rail beams on top of foundation structure to support new cranes.

Works will be conducted on the upland or wharf decking. Micropiles will be installed either under the existing building slab or at the edge of the foundation into existing fill or scour protection material, and therefore are not anticipated to impact the aquatic habitat. If marine derrick works are required, the permit holder will provide a marine construction staging plan to the port authority and provide applicable notifications prior to commencing marine works, in accordance with Condition 16, 17, 18, and 19.

3 VANCOUVER FRASER PORT AUTHORITY INTERNAL REVIEWS

The following port authority 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"/> Public Engagement | <input type="checkbox"/> Transportation |
| <input checked="" type="checkbox"/> Indigenous Consultation | | |

4 INDIGENOUS CONSULTATION

The port authority has reviewed the proposed works and determined that adverse impacts to Indigenous or Treaty rights are not expected.

5 EXISTING POLICIES OR GUIDELINES

The proposed works are considered to be in keeping with port authority Land Use Designation of Industrial. Areas designated Industrial are primarily designated for light to heavy industrial activities in support of port operations and marine support services, including shipping, transportation and the handling of goods, and in some cases including the manufacturing of goods.

6 MUNICIPAL NOTIFICATION

The proposed Project was assessed by the port authority to have potential impacts to municipal interests. A notification letter was sent to the City of Delta on March 11, 2020, notifying them of the proposed Project. The City of Delta had no comments.

6.1 Adjacent Tenant Notification

The proposed Project was assessed by the port authority to have potential impacts to adjacent tenant interests. A notification letter was sent to Gracia Financial Corporation and 0989483 B.C. Ltd. on March 11, 2020, notifying them of the proposed Project. No comments from adjacent tenants were received.

6.2 Public Engagement

To meet requirements of section 86 of the *Impact Assessment Act*, the port authority posted a description of the Project and notice of public participation to the Canadian Impact Assessment Registry to provide the public 30 calendar days to comment on the project and provide community knowledge. No comments were received.

The proposed Project was assessed by the port authority to have minimal or no potential impacts to community interests in the surrounding area either during construction or once the project is completed. Therefore no construction notification was required.

7 INFORMATION SOURCES

The port authority has relied upon the following sources of information in its review of the Project.

- Application form and materials submitted by the Applicant on behalf of the tenant on January 17, 2020.
- All Project correspondence from January, 17, 2020 to March 20, 2020
- All plans and drawings provided by the Permit Holder
- "Aquatic Effects Assessment", January 15, 2020, Hemmera Envirochem Inc.
- Letter titled "VITO shipyard Repairs – VFPA Project and Environmental Review application amendment (Review #20-010)", July 25, 2015, Hemmera Envirochem Inc.

8 ENVIRONMENTAL REVIEW DECISION

In completing the project and environmental review, the port authority has reviewed and taken into account relevant information available on the proposed project and has considered any adverse impact that the project may have on the rights of the Indigenous peoples, Indigenous knowledge, community knowledge, comments received from the public, and measures that would mitigate any significant adverse environmental effects of the project. We conclude that with the implementation of proposed mitigation measures and conditions described in the project and environmental conditions section below, the Project is not likely to cause significant adverse environmental effects.

ORIGINAL COPY SIGNED
ANDREA MACLEOD
 MANAGER, ENVIRONMENTAL PROGRAMS

April 8, 2020
DATE OF DECISION

9 CONCLUSION

In completing the project and environmental review, the port authority 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 PER No. 20-010 is approved by:

ORIGINAL COPY SIGNED
ANDREA MACLEOD
 MANAGER, ENVIRONMENTAL PROGRAMS

April 8, 2020
DATE OF APPROVAL

10 PROJECT AND ENVIRONMENTAL CONDITIONS

The port authority 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 82 of the *Impact Assessment Act*.

If at any time the Hemmera Envirochem Inc. working on behalf of Carlson Construction Group (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 the port authority determines that the Permit Holder has provided any incomplete, incorrect or misleading information in relation to the Project, the port authority 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*, the port authority 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 the port authority 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.

All port authority 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.	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 the port authority'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 the port authority 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 the port authority 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 the port authority, 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 the port authority.	
7.	The Permit Holder shall cooperate fully with the port authority in respect of any review by the port authority of the Permit Holder's compliance with this Permit, including providing information and documentation in a timely manner, as required by the port authority. 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.20-010 .	
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 the port authority's satisfaction.	
12.	The port authority shall have unfettered access to environmental compliance documentation and the Project site at all times during construction without notice.	
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 the port authority.	
	CONDITIONS – PRIOR TO COMMENCING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES	SUBMISSION TIMING (business days)
14.	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

15.	For buildings, structures and proposed interior changes to buildings that are reviewable under the National Building Code and National Fire Code, the Permit Holder shall apply for a port authority Building Permit.	40 business days before commencing construction or any physical activities
16.	At least two days prior to commencing any physical activities, the Permit Holder shall notify the Harbour Master and VFPA Environmental Programs, email: Harbour_Master@portvancouver.com and EnvironmentalPrograms@portvancouver.com.	2 business days before commencing construction or any physical activities
17.	Prior to the commencement of any vessel-related activities, the Permit Holder shall contact Canadian Coast Guard (CCG) Marine Communications and Traffic Services (MCTS), (email: NAVWARN.MCTSPrinceRupert@innav.gc.ca ; Phone: 250-627-3070) regarding the issuance of a Navigational Warning (NAVWARN) to advise the marine community of potential hazards associated with the Project.	As per Coast Guard requirements
18.	Prior to the commencement of any vessel-related activities, the Permit Holder shall inform the Fraser River Pilots (email: frp-committee@googlegroups.com) providing them with the following information: (a) staging and construction areas; (b) dates and hours of operations; (c) description of activities taking place; (d) participating equipment and vessels; (e) method of preferred communication.	2 days prior to any vessel-related activities
19.	Prior to the commencement of any vessel-related activities, the Permit Holder must submit a marine construction and staging plan, including the following, to VFPA's satisfaction: (a) staging and construction areas; (b) dates and hours of operations; (c) description of activities taking place; (d) participating equipment and vessels (dimensions and load capacities must be included); (e) Detailed mooring/spudding arrangement of barges; (f) Detailed lighting schematic; (g) Proposed plan to implement and mitigate the potential for barges to break free from moorage; (h) method of preferred communication; and (i) special requests and/or additional information. The Permit Holder shall carry out the Project in accordance with the marine construction and staging plan, including any subsequent amendments completed to VFPA's satisfaction.	30 business days before commencing vessel-related activities
CONDITIONS – DURING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES		
20.	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. To modify these hours the Permit Holder must submit a plan, describing proposed activities and additional mitigation, to VFPA's satisfaction no less than 20 business days prior to the desired start date.	
21.	The Permit Holder shall notify the port authority 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.	

22.	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.
23.	The Permit Holder shall ensure that an appropriately qualified archaeological monitor be on the Project site at all times during ground disturbing activities with the potential to intrude into native soils.
24.	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 the port authority by email and phone.
25.	The Permit Holder may place temporary construction trailers on the Project site while this Permit remains in effect, provided such trailers meet all of the criteria set out in the port authority's Temporary Construction Trailer Criteria, available at: https://www.portvancouver.com/development-and-permits/building-permits/ . Should one or more of the criteria not be met, a port authority Building Permit is required.
26.	During any vessel-related activities, the Permit Holder shall: <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.
27.	The Permit Holder shall carry out the Project in accordance with the Aquatic Effects Assessment plan and mitigations provided by the Permit Holder, and any subsequent updates to the plan completed to VFPA's satisfaction.
28.	No dredging shall be conducted as part of the Project. Any proposals to dredge shall be the subject of a separate application to VFPA.
29.	Without limiting the generality of permit condition #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> .
30.	To avoid serious harm to fish during pile installation, peak sound pressure level in-water should not exceed 206 dB at a reference pressure of 1 µPa (equivalent to 30 kPa) and 186 dB accumulated sound exposure level (dB cSEL; re: 1µPa ² sec) within 10 m of the noise source.
31.	The Permit Holder shall not permit barges or other vessels used during the Project to ground on the foreshore or river/seabed or otherwise disturb the foreshore or river/seabed (including disturbance as a result of vessel propeller wash), excepting only such disturbance as is reasonably required resulting from the use of barge spuds.
32.	The Permit Holder shall not disturb the river/seabed outside the Project site.

33.	The Permit Holder shall repair and/or remediate any damage or erosion resulting from disturbance to the intertidal foreshore during the Project.
34.	The Permit Holder shall use an environmentally clean excavator bucket. The bucket and any portion of the excavator arm that will be in contact with or near the water shall be cleaned of any residual hydrocarbons or other contaminants prior to the start of works.
35.	<p>The Permit Holder shall not permit sediment, sediment-laden waters, or other deleterious substances to enter the water during the Project. The Permit Holder shall carry out all physical activities in a manner that prevents induced sedimentation of foreshore and near shore areas and induced turbidity of local waters, and the release of sediment, sediment-laden waters, and turbid waters to the aquatic environment. The Permit Holder shall manage turbidity in compliance with the following water quality criteria:</p> <p>(a) when background is less than or equal to 50 nephelometric turbidity units (NTU), induced turbidity shall not exceed 5 NTU above the background values; and</p> <p>(b) when background is greater than 50 NTU, induced turbidity shall not exceed the background values by more than 10% of the background value.</p> <p>For the purposes of this condition, "background" means the level at an appropriate adjacent reference site (as determined to the satisfaction of VFPA) that is affected neither by physical activities at the project site, nor sediment-laden or turbid waters resulting from physical activities at the project site.</p>
36.	Piles shall be installed by drilling techniques or driven with a vibratory or drop hammer. Piles shall not be installed using a diesel or hydraulic hammer or other technology such as drilling without review and authorization by VFPA.
37.	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.
38.	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.
39.	The Permit Holder shall contain and collect debris and waste material in the immediate working area within the Project site. The Permit Holder shall dispose of waste material at suitable upland locations and maintain records of off-site disposal.
40.	Without limiting the generality of permit condition #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.
41.	The Permit Holder shall dispose of any soils excavated from the project site that are not suitable for backfill at appropriate off-site facilities and maintain records of off-site disposal.
42.	Without limiting the generality of permit condition #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.

43.	Prior to commencing construction or any physical activities, the Permit Holder shall have in place a spill prevention, containment and clean-up plan for hydrocarbon products (including fuel, oil and hydraulic fluid) and any other deleterious substances. Appropriate spill containment and clean-up supplies shall be available on the Project site at all times and all personnel working on the Project shall be trained on the spill prevention, containment and clean-up plan. The Permit Holder shall carry out the Project in accordance with the spill prevention, containment and clean-up plan.	
44.	The Permit Holder shall maintain equipment in good mechanical condition and free of fluid leaks, invasive species, and noxious weeds.	
45.	During upland construction activities, the Permit Holder shall not conduct refuelling or maintenance activities on nonroad 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.	
46.	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).	
47.	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/).	
	CONDITIONS – UPON COMPLETION	SUBMISSION TIMING (Business Days)
48.	The Permit Holder shall notify the port authority upon completion of the Project.	Upon substantial completion
49.	The Permit Holder shall provide record drawings in accordance with the port authority'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 the port authority, including a Project site plan that clearly identifies the location of works.	Within 40 business days of completion
50.	If the footprint of the wharf is altered, or new marine infrastructure is constructed, 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 Canadian Hydrographic Service charts to be updated. VFPA's Marine Operations department must be carbon copied into the request (navigation.review@portvancouver.com).	within 30 business days of project completion
The port authority reserves the right to rescind or revise these conditions at any time that new information warranting this action is made available to the port authority.		
LENGTH OF PERMIT VALIDITY		
The Project must be completed no later than December 31, 2021 (the Expiry Date).		

AMENDMENTS

- 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 the port authority for consideration of an amendment to this Permit.
- For an extension to the Expiry Date, the Permit Holder must apply in writing to the port authority no later than 40 days prior to that date.

Failure to apply for an extension as required may, at the sole discretion of the port authority, result in termination of this Permit.

CONTACT INFORMATION

Vancouver Fraser Port Authority
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Website: www.portvancouver.com

After normal business hours:

In the event of any land or marine construction incidents or concerns related to works carried out on-site under this permit, please contact the 24/7 Port Operations Centre 604-665-9086. In the event of an emergency requiring 'First Responders', please call 911 first.