



PORT of  
**vancouver**

# **PROJECT AND ENVIRONMENTAL REVIEW REPORT**

**PER NO. 16-268**

## **FIBRECO TERMINAL ENHANCEMENT PROJECT**

Prepared for: Director, Planning & Development

## Table of Contents

Table of Contents .....	2
1. INTRODUCTION .....	3
2. PROJECT DESCRIPTION .....	4
2.1 Proposed Works .....	4
3. VANCOUVER FRASER PORT AUTHORITY INTERNAL REVIEWS .....	5
3.1 Planning.....	5
Land Use Designation.....	5
Building Permit Requirements .....	5
3.2 Engineering .....	6
3.3 Transportation .....	6
3.4 Marine Operations .....	7
4. STAKEHOLDER CONSULTATION .....	7
4.1 Municipal Consultation .....	8
4.2 Federal and Provincial Agency Consultation .....	9
4.3 Adjacent Tenant Consultation .....	9
4.4 Marine Users Consultation .....	10
4.5 North Shore Waterfront Community Liaison Group Consultation .....	10
4.6 Industry Association Consultation.....	10
5. PUBLIC CONSULTATION .....	10
5.1 Summary of Public Consultation.....	11
6. ABORIGINAL CONSULTATION .....	14
6.1 Scope of Consultation .....	14
Overview of Consultation Activities .....	14
6.2 Summary of Issues Raised by Aboriginal Groups .....	14
7. ENVIRONMENTAL REVIEW.....	21
7.1 Scope of Environmental Review .....	21
7.2 Environmental Effects Summary .....	22
7.3 Environmental Review Decision.....	29
RECOMMENDATION .....	29
APPENDIX A Location Plan.....	30
APPENDIX B List of Information Sources .....	31

		<b>VANCOUVER FRASER PORT AUTHORITY PROJECT AND ENVIRONMENTAL REVIEW REPORT</b>
<b>PER No.:</b>	<b>16-268</b>	
<b>Tenant:</b>	<b>Fibreco Export Inc.</b>	
<b>Project:</b>	<b>Fibreco Terminal Enhancement Project</b>	
<b>Project Location</b>	<b>1209 McKeen Avenue, North Vancouver</b>	
<b>VFPA SID No.:</b>	<b>DNV058</b>	
<b>Land Use Designation:</b>	<b>Port Terminal</b>	
<b>Applicant(s):</b>	<b>Glenn Dempster, Project Manager, Fibreco</b>	
<b>Applicant Address:</b>	<b>1209 McKeen Avenue, North Vancouver</b>	
<b>Category of Review:</b>	<b>C</b>	
<b>Recommendation:</b>	<b>That PER No. 16-268 for Fibreco Terminal Enhancement Project be approved.</b>	

## 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 documents VFPA's project and environmental review of PER No. 16-268: Fibreco Terminal Enhancement Project (the Project) proposed by Glenn Dempster working on behalf of Fibreco Export Inc. (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. The project and environmental review process is designed to provide that assurance. In addition, VFPA 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 VFPA and other consultations carried out by VFPA. A full list of information sources germane to the review is provided in Appendix B.

This project and environmental review report is NOT a project authorization. This project and environmental review report summarizes the review outcome, and provides the basis for approval or denial. Should the project be approved, the report is accompanied by a project permit (the Permit) and the conclusions described in this report require compliance with the conditions in the Permit.

## 2. PROJECT DESCRIPTION

Fibreco Export Inc. proposes to make enhancements to the existing Fibreco Terminal at 1209 McKeen Avenue, North Vancouver to improve its current wood pellet export operations, add new agricultural product export capability, and remove the existing wood chip exporting infrastructure. Commodities proposed to be handled include wheat, peas, lentils, barely, canola, canola meal pellets and wood pellets.

The Project site is approximately 5.9 ha and is located in an industrial area in North Vancouver. It is bound to the west by Vancouver Wharves and to the east by Seaspam. The Fibreco Terminal site is split across two jurisdictions – VFPA and District of North Vancouver (DNV). The portion of the terminal within VFPA jurisdiction comprises primarily of marine structures such as the berth, shiploader and shore-side conveyors as well as a small portion of land adjacent to the shoreline. The majority of the terminal is located upland and is within the DNV municipal jurisdiction. The overall Project involves enhancements to the entire terminal and, in addition to this project permit, the Applicant is also in the process of seeking regulatory approval from the DNV through their development permit and building permit processes for the components within DNV jurisdiction. Any reference made in this report to the Project or Project site, relates solely to the portion of the terminal that lies within VFPA jurisdiction.

As part of the Project, the Applicant proposes to remove the existing ‘wood chip only’ handling equipment and associated infrastructure located in the north-west portion of the Project site. These elements of the terminal were previously used to move wood chips from barges and the wood chip stockpiles located on the upland portion of the terminal, and from stockpiles to the vessels for export. This work comprises removal of a reclaim conveyor and dock to shore conveyor, as well as the demolition and removal of a wooden retaining wall and associated piles along the foreshore of the site.

To allow for the handling and export of agricultural products, the Applicant proposes to refit existing conveyors to ensure all conveying equipment is fully enclosed, and adding new equipment, including the installation of a travelling shiploader and breasting and berthing dolphins. These would extend the berth to the east and west to accommodate larger vessels than are currently berthed at the terminal. Other berth improvements include dredging a pocket to a design depth of 13.5m along the full length of the upgraded berth, with the majority of the dredging occurring along the west-end where the existing depth is approximately 12m.

In addition to a change in commodities handled, the Project is proposed to double the export capacity from 1.2 million metric tonnes per annum (mmt/a) in 2016 to 3 mmt/a at full built out, which is anticipated to occur four years after project completion.

### 2.1 Proposed Works

- Remove wood chip handling equipment – 1 reclaim conveyor and 1 dock to shore conveyor;
- Demolish and remove wood retaining wall (approx. 70m long x 10m high) and associated piles;
- Dismantle and remove existing shiploader and associated equipment;
- Refit and cover existing dock feed conveyor;
- Refit existing causeway conveyor;
- Berth improvements – install 2 breasting dolphins, 2 berthing dolphins and associated catwalks, including installation of 28 steel pipe piles (~1m diameter);

- Installation of new travelling shiploader (approximate dimensions are: height 36m, boom/arm 37m, width 10m and depth 15m) and associated electrical system upgrade;
- Restore 30m of existing shoreline rip-rap on rail jetty to original slope (1:1); and
- Dredging approximately 4,050m<sup>3</sup> of material in front of berth to design depth of 13.5m.

The proposed duration of the works is approximately 15 months from start to completion. During this time, there would be periods where no work is being undertaken within VFPA jurisdiction while construction activities proceed on the upland portion of the terminal.

Various different work methods and equipment are proposed to be used, as this project involves demolition and construction activities on both the upland and in water. The piles associated with the construction of the new berth structure components will be installed using a barge-mounted pile driver. Dredging would be undertaken using a cable clamshell dredger in conjunction with a barge or a barge-mounted modified excavator.

Dredging is proposed to be undertaken in two phases: the first phase would remove a relatively small volume (~1,250m<sup>3</sup>) of material that does not meet Disposal at Sea criteria (using mitigation measures proposed in the Construction Environmental Management Plan and taken to an approved upland facility for disposal) and the second phase would remove the remainder of the dredge material (~2,800 m<sup>3</sup>), expected to meet Disposal at Sea criteria, for disposal at the Point Grey disposal site.

The Applicant anticipates that work will generally be undertaken within standard VFPA construction hours (Monday to Saturday 7am - 8pm, excluding holidays). However, specific activities such as the delivery and installation of the proposed shiploader would depend on tidal conditions and cannot be defined at this time. The Applicant would be required to seek separate authorization from VFPA for any works occurring outside of these standard construction hours.

### **3. VANCOUVER FRASER PORT AUTHORITY INTERNAL REVIEWS**

The following VFPA departments have reviewed the application and have the following project considerations.

#### **3.1 Planning**

##### ***Land Use Designation***

The majority of the proposed Project conforms to the designation of the Fibreco site as Port Terminal use in VFPA's Land Use Plan. In addition, the project expands Fibreco's lease area and the associated minor Land Use Plan amendment was approved by the VFPA Board in October 2017, subject to issuance of a project permit and lease amendments.

This Project includes the installation of new breasting and berthing dolphins to extend the existing berth to accommodate larger Panamax vessels. This will result in an expansion of the Fibreco berth by approximately 27m to the east, outside Fibreco's current lease area into an area that is currently designated "Industrial" in the Land Use Plan. Thus, the expansion requires an expanded lease area and minor Land Use Plan amendment from "Industrial" to "Port Terminal".

##### ***Building Permit Requirements***

The proposed Project requires review under the 2015 National Building Code and 2015 National Fire Code of Canada. A building permit application has not yet been submitted.

This proposal meets Planning's requirements, subject to adherence to the listed project and environmental conditions in the Permit.

### 3.2 Engineering

The proposed Project would remove an outdated shiploader and install a new travelling shiploader at the site, as well as undertake a number of improvements for the berth infrastructure through the addition of new berthing and mooring dolphins and catwalks to accommodate larger Panamax vessels at the terminal. The Applicant proposes to install 28 steel pipe piles (~1m diameter) as part of these works.

The submitted geotechnical report indicates that there is only marginal liquefaction potential at the site and with steel pile foundations to support the new dolphins, ensuring that the new shiploader exerts similar forces as the original equipment, no further ground improvement works are necessary.

As identified above, the new shiploader is not expected to exceed the design capacity of the existing wharf and will be designed to meet current code requirements for climatic loads and seismic loads. The new berthing and mooring dolphins will be designed in accordance with the Canadian Bridge Code CAN/CSA S6-14, providing Life Safety performance level for the 1 in 2,475-year return period design event.

This proposal meets Engineering's requirements, subject to adherence to the listed project and environmental conditions in the Permit.

### 3.3 Transportation

The proposed Project would move new commodities through the terminal, which would result in a change to both the rail traffic direction and numbers. In addition, on the upland portion of the terminal some improvement works to the rail tracks at the terminal are proposed.

Although all of the rail-related changes are located outside the Project site located on VFPA lands, VFPA has undertaken a review of the submitted Rail Operations Plan and Transportation Plan since changes in rail traffic have the potential to impact rail networks elsewhere in VFPA jurisdiction and throughout the region.

The proposed Project would result in no significant increase in rail traffic figures compared to current volumes. The removal of wood chip handling operations would eliminate 2 trains per week, while the introduction of the new commodities and the growth in throughput volume anticipated would result in the addition of 2-3 trains per week, which would result in a net increase of 1 train per week.

The principal direction of rail traffic would change as a result of the proposals, with wood chips currently being delivered using the CN Rail Line north through Squamish, and the new commodities being delivered from the east via the Second Narrows Bridge. This would result in an increase of 2 – 3 trains per week using the bridge.

Transportation has reviewed the application and requires the Applicant to submit a Construction Traffic Management Plan for the proposed works at least 10 days prior to the start of any construction activity for VFPA's approval.

This is reflected in condition No. 16 in the Permit.

The proposal meets Transportation Planning's requirements, subject to adherence to the listed project and environmental conditions in the Permit.

### **3.4 Marine Operations**

The proposed enhancements will allow the Applicant to berth Panamax vessels at the terminal. Historically, due to restrictions in berth size, only Handymax size vessels could call at the terminal.

The changes include the addition of new breasting and berthing dolphins and catwalks to the existing berth as well as dredging the area in front of the berth to a design depth of 13.5m. These works would allow the terminal to accommodate the larger Panamax size vessels required to facilitate these new operations. In addition, a new travelling shiploader is proposed to be installed at the berth with a longer reach to load the larger Panamax vessels.

Fibreco would continue to operate in a similar way to existing operations. Vessels will arrive at the berth under pilotage and with tug assist. The travelling shiploader will be able to reach 3 ½ hatches before the vessel needs to shift (warp). The vessels will shift with the ships winches as they do today. New cone style fenders would be installed to allow for the larger berthing energy of the Panamax vessels.

In terms of changes to vessel traffic, in 2016 the total number of vessels calls at the terminal was 56. At the full build out stage of 3mmt/a (Year 4), there is predicted to be 65 vessels calling at the terminal. Therefore, comparing to current operations the Project would result in an increase of 9 vessels per annum calling at the terminal.

Marine Operations has reviewed the application and requires the Applicant to adhere to the following:

- The Permit Holder shall submit a Marine Construction and Staging Plan, to the satisfaction of VFPA, at least 15 days before commencing construction or any physical activities;
- The Permit Holder shall submit, to the satisfaction of VFPA, an Operations Plan with respect to procedures for vessel warping addressing the recommendations made in the Summary Report of Maneuvering Assessment (12 June 2016).

These are reflected in conditions No. 22 and 59 in the Permit.

The proposal meets Marine Operations' requirements, subject to adherence to the listed project and environmental conditions in the Permit.

## **4. STAKEHOLDER CONSULTATION**

The proposed Project was assessed to have potential impacts to stakeholders and the local community and consultation activities were required. The following sections describe the stakeholder and public consultation activities undertaken by the Applicant and VFPA as part of the project and environmental review.

## 4.1 Municipal Consultation

The proposed Project was assessed to have potential impacts to municipal interests. A referral letter was sent to the District of North Vancouver on May 19, 2017 notifying them of the proposed Project.

The DNV is the Authority having Jurisdiction for the upland portion of the Project. The municipality responded to the port authority's referral letter with comments on issues they considered key in the review of the proposed Project. Below is a table summarizing the comments received and how they were considered as part of the project and environmental review.

Issue	Mitigations and Permit Conditions	Rationale
<p>Transportation and Construction Traffic Management details requested to determine modes of transportation being considered and their potential impacts, as DNV has concerns over use of local roadways for construction trucks.</p>	<p>Condition No. 16 of the Permit requires the Applicant to submit a Construction Traffic Management Plan prior to works commencing on site.</p>	<p>The Applicant has identified that, during construction, they will employ prescribed truck routes and where possible larger equipment will be received by barge. The Applicant will also be required to submit details of construction-phase traffic for VFPA's information.</p> <p>It is understood DNV will include a similar condition in their permit and they will be responsible for approval, as the construction traffic will be wholly within DNV jurisdiction.</p>
<p>Fugitive wood waste has been a long standing concern at this site. DNV recommend that Fibreco map out the areas of sea floor impacted by wood waste deposition and propose a long term reclamation strategy to remove the impacts from past activity.</p>	<p>None required.</p>	<p>The Dredging Plan submitted as part of the permit application includes a drawing highlighting the areas where approx. 4,050m<sup>3</sup> of material (including wood waste) in front of the berth will be dredged.</p> <p>A long-term strategy to clear wood waste from the seabed is outside the scope of this Project.</p>
<p>Applicant was requested to make upgrades to the site stormwater management system.</p>	<p>Condition 19 requires the submission of a revised Stormwater Management Plan to be approved by the port authority prior to construction activities taking place.</p>	<p>Further discussions between the Applicant, DNV and the port authority resulted in agreement that upgrades to Fibreco's stormwater management system were required to meet design objectives established by DNV and VFPA.</p>

Issue	Mitigations and Permit Conditions	Rationale
Construction Environmental Management Plan (CEMP) requested to be submitted to DNV before issuance of DNV permits.	None required.	CEMP submitted as part of the permit application package.
<p>Foreshore Naturalization &amp; Invasive Species Management</p> <p>Knotweed identified in the biophysical assessment should be managed in accordance with the most current BMP.</p> <p>DNV encourages Fibreco to consider selecting new piles and dolphins that are non-creosote materials.</p> <p>DNV requests that Fibreco begin long term plans to naturalize the waterfront areas of their site that appear to be necessary for their current project area – e.g., utilization of new technology for forage fish spawning structures attached to new or existing pilings.</p>	<p>Condition No. 52 requires Fibreco to manage invasive species in accordance with the Biophysical Assessment in a manner that prevents their spread.</p> <p>None required.</p> <p>None required.</p>	<p>This meets the objective of preventing the spread of invasive species.</p> <p>All new piles will be steel or concrete.</p> <p>This is not required by VFPA, consistent with the Land Use Plan designation for terminal use.</p>
<p>Air Quality</p> <p>DNV recommend that a pre and post development air quality monitoring program be developed and implemented as a condition of the Project Permit.</p>	<p>Conditions No. 57 &amp; 58 of the permit require the submission of an Air Emissions Management Plan (AEMP) and dust filtration performance testing to monitor air quality.</p>	<p>This is required to validate the assumptions of the environmental air assessment and to ensure operations are carried out in accordance with an approved AEMP.</p>

## 4.2 Federal and Provincial Agency Consultation

The proposed Project was assessed to be of potential interest to Federal and Provincial agencies. A referral letter was sent to Transport Canada – Navigation Protection Program on May 19, 2017 notifying them of the proposed Project.

VFPA did not receive any comments from Transport Canada.

## 4.3 Adjacent Tenant Consultation

The proposed Project was assessed to have potential impacts to adjacent VFPA tenant operations. A referral letter was sent to the following VFPA tenants on May 19, 2017 notifying them of the proposed Project:

- Seaspac ULC
- McKeen & Wilson

VFPA did not receive any tenant comments.

#### **4.4 Marine Users Consultation**

The proposed Project was assessed to have potential impacts to marine users. A referral letter was sent to the following Marine Users Groups on May 19, 2017 notifying them of the proposed Project:

- Pacific Pilotage Authority
- BC Coast Pilots
- Shipping Federation of Canada
- Chamber of Shipping BC

Marine Users Groups did not provide any comments on the proposed Project.

#### **4.5 North Shore Waterfront Community Liaison Group Consultation**

The proposed Project was assessed to be of potential interest to the Northshore Waterfront Liaison community liaison group.

The Applicant presented their project to the community liaison group on May 4, 2017.

A number of general queries were raised by members of the liaison group and Fibreco responded to all queries at the meeting. VFPA did not receive any further comments from the liaison group.

#### **4.6 Industry Association Consultation**

The proposed Project was assessed to be of potential interest to Industry Associations. A referral letter was sent to the Council of Marine Carriers on May 19, 2017 notifying them of the proposed Project.

VFPA did not receive any comments from the Council.

### **5. PUBLIC CONSULTATION**

The proposed Project was assessed to have potential impacts to community interests in the surrounding area during construction and upon completion. These include potential impacts such as noise, traffic, and visibility.

The Applicant was required to conduct public consultation activities with a 20 business day public comment period and host a public information session. The objective of public consultation as part of the project and environmental review is to solicit feedback from the public on the proposed project, the completed technical studies, and proposed mitigations during construction and operation.

The Applicant carried out their public consultation activities on the proposed project in April and May 2017. This included notifying the local community in April and holding a public information session on May 10, 2017. VFPA reviewed the record of public consultation, including all comments received and the Applicant's response to comments, in determining mitigation requirements and in making a decision on the proposed Project.

## 5.1 Summary of Public Consultation

A description of the Project and proposed works, and all supporting materials were posted to VFPA's website in April 2017 for public review and comment. Details of the Applicant's public information session was posted on VFPA's website and links were provided to the Applicant's website for more information.

Public consultation activities were conducted by the Applicant from April 26 to May 24, 2017 and included:

- Hosting a public information session on May 10, 2017 in North Vancouver;
- Developing a project background guide with key information about the Project;
- Hand-delivering and mailing notification letters to residents and businesses in North Vancouver;
- Placing an advertisement in the North Shore News regarding the public information session;
- Creating a feedback form to collect community input;
- Posting all Project-related materials on-line on the Applicant's website.

The Applicant hand-delivered/mailed notification letters to all residents and businesses in the area as shown in the map below on April 26, 2017, with information about the proposed project and upcoming public information sessions. The notification area included all residents and businesses within approximately four blocks (500 m) from the project site.

*Mail drop area for public notification*



During the consultation period, the public was invited to provide feedback via telephone, mail, and online. A dedicated webpage for the proposed project was created by the Applicant to inform the public and accept online feedback (<http://www.fibrecoterminalenhancement.com/>).

The public information session was held at the Grouse Inn North Vancouver Hotel, 1633 Capilano Road, North Vancouver on May 10, 2017 between 5:00 p.m. and 8:00 p.m. The public information session provided information about the project scope, design, environmental and other technical assessments, construction activities and construction management. Hard copies of the feedback form were also available. The Applicant had project and technical consultants available to answer questions from the public. Staff from VFPA and the District of North Vancouver attended.

During the public consultation period, public participation was as follows:

- 25 people attended the public information session;
- 8 people completed the feedback form;
- 13 comments via emails (including one comment directly to VFPA), letters and phone calls were received as a result of the session.

Comments from the public were mainly related to environmental effects, dust impacts, view impacts, train traffic, and construction activities.

The Applicant prepared a Consultation Input and Consideration Report dated July 25, 2017 following the conclusion of public consultation activities. This Report provided a detailed summary of the public consultation process conducted, and all comments received with the Applicant's formal responses to these comments. VFPA has reviewed the documents and found them both to be acceptable. These reports were posted on VFPA and the Applicant's websites in September 2017.

Below is a table summarizing issue themes raised by the public, and how they were considered by VFPA as part of the permit review.

Issue	Mitigations and Permit Conditions	Rationale
Increase in general noise as a result of the proposed project.	None required.	The Applicant conducted a noise assessment which showed that at full capacity, the proposed project would result in a minimal increase in noise. Also, the study confirmed that the Applicant's operations are not the dominant noise source in the area.
Lighting impacts resulting from the proposed project.	None required.	The Applicant submitted a lighting plan during application review including mitigation measures to minimize potential impacts to neighbours. As described in Section 7.2, VFPA is satisfied with the contents of the plan.
Air quality, in particular dust emissions, related to operations.	None required.	The Applicant conducted an independent air quality assessment in accordance with VFPA guidelines showing that air quality in the area would improve as a result of the proposed project.

Issue	Mitigations and Permit Conditions	Rationale
Fire safety risk associated with the dust from agricultural products.	None required.	The Applicant has incorporated fire prevention into the design of the project (e.g., dust suppression shiploading spout) and also submitted a Fire Safety report as part of their application submission, which highlights the measures being implemented to ensure the highest level of fire prevention, detection, and response, is designed and implemented into the project.
Construction management and contracting plans.	Condition No. 14 requires the Applicant to submit a Construction Communications Plan to keep the community informed about construction activities and potential impacts. Condition 28 requires the Applicant to submit regular environmental monitoring reports to ensure the Project is carried out in accordance with the approved CEMP.	The Applicant will keep neighbours informed about construction activities and potential related impacts. The Applicant shall also provide environmental monitoring reports to VFPA's satisfaction on a monthly basis.
Impact of rail traffic.	None required.	<p>The Applicant indicates that growth in annual product throughput will be achieved by using longer unit trains which would result in fewer rail switches and less rail noise.</p> <p>In addition, best practices in handling rail cars are also proposed, including a commitment to respond to enquiries and/or complaints from neighbours in a timely manner.</p>
Concern about increased rodents and/or pests.	None required.	The Applicant indicates that they use best practices in their current pest management plan and will incorporate further preventative measures related to grain handling with the proposed project to reduce the potential for infestations.

VFPA has reviewed the record of public consultation, and provided that the mitigation measures and conditions outlined in the table above are included in the Permit, is of the view that the Project has adequately addressed the concerns raised during public consultation.

## 6. ABORIGINAL CONSULTATION

Upon receipt of a complete application, VFPA reviewed the proposed project, and determined that the works may have the potential to adversely impact Aboriginal rights.

### 6.1 Scope of Consultation

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

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

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

### Overview of Consultation Activities

On April 4, 2017, VFPA sent a referral package to each of the Aboriginal groups listed above. The referral package included:

- referral letter;
- permit application;
- location plan;
- project overview; and
- the table of contents for the complete application.

Comments were requested from Aboriginal groups within 30 business days, by May 17, 2017.

Aboriginal groups sent comments regarding the proposed project by letter and email. VFPA responded to all comments from Aboriginal groups via email and letter.

### 6.2 Summary of Issues Raised by Aboriginal Groups

The following table summarizes the issues raised by Aboriginal groups and VFPA's consideration of those issues.

Issue	VFPA Considerations	Action Required
<b>Current use of lands and resources for traditional purposes</b>		
Concerns with use of treated timber.	All piles associated within the scope of the project under review will be steel or concrete.	None.

Issue	VFPA Considerations	Action Required
	<p>Under a separate permit, Fibreco replaced existing creosote treated timber piles with new creosote treated timber piles.</p>	
<p>Structures of the development (specifically new dolphins and piles) are not considered beneficial to fish and fish habitat. From a net environmental gain perspective, request that consideration is given to support restoration initiatives.</p>	<p>VFPA continues to seek opportunities to work with Aboriginal groups and others to improve environmental management practices and to provide net environmental benefits through various initiatives. This includes continuing to identify shared interests and to focus on collaborative projects with Aboriginal groups that will result in net environmental gains within Burrard Inlet.</p> <p>VFPA has informed the Applicant of the request to support restoration initiatives. The Applicant has informed VFPA that they are interested in beginning discussions with Aboriginal groups on this matter.</p>	<p>None.</p>
<p>Request for reassurance that dredging operations will not impact the salmon migrations and will be done outside of the fisheries window for all species of salmon, including pink salmon.</p>	<p>Dredging activities are proposed during the timing window of least risk for Burrard Inlet (August 15 to February 28) which is protective of fish including salmon species.</p>	<p>VFPA added condition No. 29 which requires that there will be no in-water works during the fisheries sensitive period from March 1 to August 15.</p>
<p>Management of contaminated dredgeate</p>	<p>Dredgeate that does not meet Disposal at Sea criteria will be taken by clamshell dredge into a flat scow and decanted on board the scow. Silt curtains will be employed around the scow during dredging activities to contain suspended sediment. Sediment that does not meet Disposal at Sea criteria will be towed via a barge to a ramp along the Fraser River for off-loading, stabilization and transfer to trucks. The</p>	<p>VFPA added condition No. 20 which requires the Permit Holder to submit a dredging plan to VFPA. Water will not be permitted to be discharged from the containment barge to the environment unless water quality results have been reviewed and accepted by VFPA.</p> <p>VFPA will ensure that the Applicant's updated dredging plan is shared with Aboriginal groups and that Aboriginal</p>

Issue	VFPA Considerations	Action Required
	<p>sediment will then be trucked to Envirogreen Technologies Ltd facilities in Princeton, BC.</p>	<p>groups are afforded sufficient time to review and comment.</p> <p>VFPA also included condition No. 45 which requires the Permit Holder to provide VFPA a copy of their Disposal at Sea Approval prior to dredging any material to be disposed of at sea.</p>
<p>Request for all stormwater to be treated prior to entering Burrard Inlet</p>	<p>Throughout the project review, VFPA has worked closely with District of North Vancouver and the Applicant to ensure stormwater management is appropriately addressed.</p> <p>On August 9, 2017, VFPA issued a memo to DNV in order to provide guidance to both DNV and the Applicant to inform the Applicant's Stormwater Management Plan and the design of the infrastructure to treat stormwater from the entire site prior to entering Burrard Inlet.</p> <p>VFPA shared this memo with the inquiring Aboriginal group on September 11, 2017.</p>	<p>VFPA added condition No. 19 which requires the permit holder to submit a revised Stormwater Management Plan that meets the design objectives established by the DNV and VFPA to VFPA.</p> <p>VFPA will ensure that the Applicant's revised Stormwater Management Plan is shared with Aboriginal groups and that Aboriginal groups are afforded sufficient time to review and comment.</p>
<p>Potential changes in air quality</p>	<p>VFPA is working with the District of North Vancouver, whose jurisdiction the majority of the overall project falls within, to coordinate the review of air emissions, including greenhouse gas emissions, from the Project.</p> <p>Upon receipt, VFPA shared the Applicant's updated Air Quality Assessment with the inquiring Aboriginal group and invited comments.</p> <p>VFPA's review concluded that the proposed project</p>	<p>VFPA added condition No. 57 which requires the Permit Holder to provide an air emissions management plan in accordance with VFPA guidelines to VFPA.</p> <p>The plan will include:</p> <ul style="list-style-type: none"> <li>a) dust control;</li> <li>b) vessel loading operations and environmental performance of ship loader;</li> <li>c) verification of project mitigation performance;</li> </ul>

Issue	VFPA Considerations	Action Required
	<p>compared to the existing terminal will reduce air emissions across all pollutants, including greenhouse gases. In particular the modern ship loader and removal of the exposed wood chip pile results in a substantial decrease in air emissions of particulate matter.</p>	<ul style="list-style-type: none"> <li>d) confirmation that operating procedures remain effective;</li> <li>e) management of community complaints; and</li> <li>f) reporting and tracking of emissions.</li> </ul> <p>VFPA will ensure that the Applicant's air emissions management plan is shared with Aboriginal groups and that Aboriginal groups are afforded sufficient time to review and comment.</p>
<p>Residual air emissions from construction activities</p>	<p>In accordance with the PER Environmental Air Assessment guideline, air emissions associated with construction activities are addressed through the Construction Environmental Management Plan (CEMP). The CEMP approach is to implement mitigations that reduce and minimize emissions during the construction phase.</p> <p>While it is possible that residual emissions from construction combined with operational emissions could increase the predicted emissions in 2020, VFPA anticipates that on the whole, emissions from construction will be similar to or smaller in magnitude to emissions during terminal operations. During construction, the emissions from ocean going vessels and rail shipments will be minor.</p>	<p>None.</p>
<p>Cumulative effects assessment of air emissions</p>	<p>Though VFPA does not have a legislative requirement to explicitly consider cumulative effects in PER, the past and current effects of development on the</p>	<p>None.</p>

Issue	VFPA Considerations	Action Required
	<p>environment, as well as our understanding of effects from ongoing port activities and operations, provides the context for our assessment of project effects, and accordingly, consideration of cumulative effects is inherently integrated into PER.</p> <p>VFPA explicitly considers cumulative effects from air and noise emissions in its environmental reviews as follows. Air and noise studies include model predictions of the potential effects of a project in the context of the existing conditions. For these types of assessments, the potential effects of a project are not considered in isolation, rather they are considered on top of the existing conditions. The predicted cumulative effect (existing + project) is then compared to regional standards.</p>	
<p>Importance of proposed project area from a traditional use perspective</p>	<p>VFPA invited Aboriginal groups to provide more information about the specific uses of the area but did not receive a response.</p> <p>During consultation on other projects, VFPA has heard about the canoeing activities that take place in Burrard Inlet. The proposed project is not expected to cause any incremental impacts on canoeing activities.</p>	<p>None.</p>
<p>Impacts on the marine environment from dredging</p>	<p>Mitigation measures outlined in the Construction Environmental Management Plan will be implemented to reduce potential adverse, environmental effects. Such measures include the use of</p>	<p>VFPA added condition No. 27 which requires the Permit Holder to engage a qualified environmental professional to monitor Project construction and that that monitoring will be full time when works are under</p>

Issue	VFPA Considerations	Action Required
	<p>silt curtains around dredging operations and the barge used to transport dredgeate to contain suspended sediment and contaminants during dredging.</p> <p>With mitigation measures in place, significant effects on the marine environment as a result of dredging are not expected.</p>	<p>way that have the potential to adversely affect fish or fish habitat.</p> <p>Also, VFPA added condition No. 29 that there shall be no in-water works during the fisheries sensitive period from March 1 to August 15.</p>
<p>Impacts on the marine environment from the placement of rip rap</p>	<p>The footprint of the existing rip-rap in the intertidal area is not anticipated to change. The rip-rap slope will be restored to its original grade and the hard substrate will be replaced with similar hard substrate. Impacts to the marine environment are not expected as a result of the placement of rip rap.</p>	<p>VFPA included condition No. 41 which specifies that rip rap shall be clean and free of fines and shall be lowered through the water column and deposited near the seabed and not dumped or deposited from above or near the water surface.</p>
<p>Potential impacts on the marine environment from the installation of new shipping infrastructure</p>	<p>Upgrades to the berthing dock will include the addition of new dolphins and piles. Potential effects from the installation of these new structures include the change from soft substrate to hard substrate in the footprint of the piles (and addition of hard substrate along the length of the piles) and potential sound effects (mortality or disturbance) from pile driving activities on fish and marine mammals.</p> <p>Mitigation measures include the use best management practices for pile driving, use of low energy (less noisy) installation methods, and visual and acoustic monitoring during large pile (&gt;24 inch diameter) installation with shut-down of operations or additional mitigation measures implemented as required to reduce potential</p>	<p>VFPA added condition No. 31 that piles shall be 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.</p> <p>VFPA also added conditions No. 21 and No. 32, that the Permit Holder shall submit a marine mammal monitoring plan for in-water pile driving activities to VFPA, which includes the size of the exclusion zone(s), the species to which they apply, and that the Permit Holder shall monitor marine mammals using an appropriately qualified environmental professional.</p>

Issue	VFPA Considerations	Action Required
	effects.	
Proximity to traditional harvesting sites, including fish-bearing creeks	<p>VFPA invited Aboriginal groups to provide more information about their traditional uses of the area, including fishing and harvesting marine resources.</p> <p>Based on the mitigations described above in responses above, VFPA does not expect the proposed project to result in adverse environmental effects on the marine environment, including fish and fish habitat.</p>	None.
Potential increase in vessel traffic	VFPA provided historical and predicted future vessel numbers to the inquiring Aboriginal group and explained that using 2016 vessel calls as a base case scenario, total vessel traffic is expected to increase from current (2016) volumes by nine vessels per year.	None.
<b>Additional Issues</b>		
Request for information relating to a VFPA project permit that approved the use of treated timber at the project site.	<p>VFPA sent information to the inquiring Aboriginal group regarding VFPA permit PER #16-279. This included the replacement of five existing creosote-timber piles with five newer creosote-timber piles.</p> <p>VFPA reviewed this as a Category A project under the Project and Environmental (PER) process, as these works are considered repair and maintenance of an existing facility.</p>	None.
Proximity to reserve land	VFPA acknowledges the proximity of the proposed project to reserve land. VFPA invited Aboriginal groups to provide further details on this	None.

Issue	VFPA Considerations	Action Required
	concern, however no response was forthcoming.	
Pursuit of discussions with the Applicant in regards to restoration initiatives and environmental gains, including the effects of creosote-timber piles	VFPA informed the Applicant of Aboriginal groups' willingness to discuss these matters. VFPA offered to facilitate a discussion between the parties, however, Aboriginal groups indicated that they would reach out directly to the Applicant.	None.
<b>Consultation/Process Issues</b>		
Concerns with PER process	VFPA remains willing to work with Aboriginal groups toward a mutual understanding of how consultation can occur on projects proposed within the lands and waters managed by VFPA. VFPA invited Aboriginal groups to meet and discuss specific concerns with the PER process and VFPA's approach to Aboriginal consultation.	None.

Aboriginal Affairs has reviewed the record of Aboriginal consultation and is of the view that the duty to consult has been met.

## 7. ENVIRONMENTAL REVIEW

To fulfill its responsibilities under the *Canada Marine Act* and CEEA 2012, VFPA must make a determination on the potential environmental effects of a proposed project on VFPA managed lands and waters prior to authorizing those works to proceed. To make that determination, VFPA considers the residual adverse effects of the project, that is, the effects after mitigation measures have been taken into account. In addition, should a project be approved, VFPA includes additional environmental conditions in the project permit to further reduce the identified potential impacts.

This section of the project and environmental review report summarizes the environmental review conducted for the Fibreco Terminal Enhancement Project, and provides the environmental review decision in Section 7.3. The environmental review also considered the information provided in the previous sections of this report.

### 7.1 Scope of Environmental Review

The environmental review includes consideration of the potential environmental effects of the proposed project, taking into account mitigation measures to avoid or reduce those effects. This review considered the project components and physical activities described in Section 2.

The temporal scope of the review includes site preparation, project construction, and operations.

The environmental review considered potential adverse environmental and social effects of the project on 14 environmental components (e.g., species with special status, aquatic resources,

recreational interests, etc.) and from Accidents and Malfunctions. These environmental components are aspects of the biophysical and socio-economic environment considered to have ecological, economic, social, cultural, archaeological, or historical importance.

The environmental components assessed by the VFPA are presented in Section 7.2 and include the environmental effects listed in section 5(1) and 5(2) of CEAA 2012.

Section 7.2 summarizes the results of the environmental review.

## 7.2 Environmental Effects Summary

The following table summarizes the potential environmental effects the project could have on the identified environmental components.

Environmental Component	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
<b>Ground water</b> Assessed as required under subsection 5(1) and 5(2) of CEAA 2012	<input checked="" type="checkbox"/>	<input type="checkbox"/>	It is anticipated that fill and other materials will be used in the proposed shoreline works. Any materials brought on-site is required to be from clean sources.  With proposed mitigation measures and permit conditions no. 26, 27, 42, 43, 46, 47 and 48, the Project is not anticipated to result in residual adverse effects on groundwater.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Component	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
<p><b>Surface water and water bodies</b> Assessed as required under subsection 5(1) and 5(2) of CEAA 2012</p>	■	<input type="checkbox"/>	<p>Surface sediment in the existing berth pocket include woodwaste and certain contaminants (e.g., some metals and polycyclic aromatic hydrocarbons) at concentrations that exceed Disposal at Sea criteria. Dredging and other in-water construction activities have the potential to resuspend contaminants and increase turbidity.</p> <p>Mitigation measures, such as the use of silt curtains and an environmental clamshell bucket described in the Construction Environmental Management Plan (CEMP), and permit conditions will be implemented to limit the amount and spread of suspended sediment and potential contaminants (Conditions No. 20, 26, 27, 29, 30, 41, 42, 43, 44, 45, 48, 49 and 53).</p> <p>Stormwater discharge from the site to Burrard Inlet has the potential to reduce surface water quality. However, new infrastructure will be installed to treat and convey stormwater for the site (including the upland portion of the site outside of VFPA jurisdiction), which is anticipated to improve the stormwater discharges from the site overall (Condition No. 19).</p> <p>With mitigation measures in place, the residual effect of the Project on surface water and water bodies is predicted to be not significant.</p>	<input type="checkbox"/>	■
<p><b>Soils</b> Assessed as required under subsection 5(1) and 5(2) of CEAA 2012</p>	■	<input type="checkbox"/>	<p>It is anticipated that fill and other materials will be used in the proposed shoreline works. Any materials brought on-site is required to be from clean sources.</p> <p>With proposed mitigation measures and permit conditions no. 26, 27, 42, 43, 46, 48, 51 and 52, the Project is not anticipated to result in residual adverse effects on soils.</p>	<input type="checkbox"/>	■

Environmental Component	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
<p><b>Sediments</b> Assessed as required under subsection 5(1) and 5(2) of CEAA 2012</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>Dredging will generally improve the quality of surface sediment in the berth area by removing woodwaste and contaminants from surface sediment and the marine environment. Disposal at Sea (DAS) of sediment will only be for sediment meeting DAS criteria and conducted under a valid DAS permit (Condition No. 45).</p> <p>During operations, contaminants have the potential to affect sediment quality if entrained in stormwater and deposited on the seabed.</p> <p>However, new infrastructure will be installed to treat and convey stormwater which is anticipated to improve the stormwater discharges from the site overall (Condition No. 19).</p> <p>With mitigation measures in place, the residual effect of the Project on sediment is predicted to be not significant.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Species/ habitat with special status</b></p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The Project is not anticipated to affect species with special status, including federally listed species at risk or critical habitat.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Terrestrial resources</b> (e.g., vegetation, wildlife, etc.)  Assessed as required under subsection 5(1) and 5(2) of CEAA 2012</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>Vegetation clearing has the potential to affect vegetation and wildlife in the Project footprint. The vegetation to be removed is limited to small shrub and herbaceous plants. Japanese knotweed, a noxious weed, is also present in the western portion of the site.</p> <p>Mitigation measures outlined in the CEMP will be implemented to reduce potential adverse effects. For example, no vegetation clearing will be conducted during the bird nesting season, and the Best Management Practices described in the Biophysical Survey Report (Terrestrial) will be implemented to reduce the potential for Japanese knotweed to spread during construction and operations (Condition No. 52).</p> <p>With the implementation of mitigation measures, the residual effect of the Project on terrestrial resources is predicted to be not significant.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Wetlands</b></p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The Project is not anticipated to affect wetlands.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Component	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
<p><b>Aquatic resources</b> (e.g., aquatic plants, fish and fish habitat, waterbirds, marine mammals, etc.)</p> <p>Assessed as required under subsection 5(1) of CEEA 2012</p> <p>Assessed under section 79 of the Species at Risk Act, as applicable</p>	■	□	<p>Project-related activities have the potential to affect aquatic species and fish habitat.</p> <p>Pile installation can injure marine mammals and fish in close proximity during pile driving. Dredging will temporarily disrupt the benthic community in the dredge footprint and can cause turbidity that affects fish and filter-feeders. Shoreline works will temporarily remove habitat for sessile organisms. Noise generated during dredging and pile driving can also temporarily disturb marine mammals and fish frequenting the area.</p> <p>The mitigation measures outlined in the CEMP will be implemented to reduce potential adverse, environmental effects. Key mitigation measures include:</p> <ul style="list-style-type: none"> <li>• conducting in-water works outside the fisheries sensitive period (Condition No. 29);</li> <li>• using silt curtains around dredging operations and the barge used to transport dredgeate to contain suspended sediment; and</li> <li>• using best management practices to reduce sound pressures from impact pile driving and marine mammal observers.</li> </ul> <p>This is also reflected in permit conditions No. 21, 27, 31, 32, 33, 35, 37, 38, 39 and 40.</p> <p>With mitigation measures in place, residual effects on aquatic resources are predicted to be not significant.</p>	□	■

Environmental Component	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
<p><b>Air quality</b></p> <p>Assessed as required under subsection 5(1) and 5(2) of CEEA 2012</p>	■	□	<p>There is potential for adverse effects on air quality from the upgraded facility due to changes in marine and rail activity, and from the shift in commodities handled on site. The Project (the upgraded facility) is anticipated to substantially reduce the emissions of particulate matter and dust from products handling, facility operations, and loading into marine vessels, compared to current operations. The decommissioning of bulldozers is also anticipated to reduce emissions of diesel particulate matter and NOx (nitrogen oxides). However, emissions from marine vessels and increased rail traffic have the potential to increase emissions of diesel particulate matter and NOx (nitrogen oxides).</p> <p>Key mitigation measures to minimize dust emissions are integrated into the Project design. For example, the agri-products will be transported by a network of enclosed conveyors with aspiration systems to collect dust and will reduce dust release from transfer points. The ship loading system will be equipped with a cascading style travelling shiploader, which extends into the vessel hold reducing the release of fugitive dust from the open vessel hold.</p> <p>No project-specific mitigation measures are proposed to reduce emissions from rail locomotives or marine vessels, however, emissions from these sources are anticipated to decrease over time with technology improvements due to international and Canadian regulations, and normal fleet turnover.</p> <p>Fibreco will develop and implement an Air Emissions Management Plan that includes verifying that the Project mitigation measures perform as designed, operating procedures remain effective, and that the facility can demonstrate continuous improvement (Conditions No. 57 and 58).</p> <p>There is potential for dust to be generated during construction. Dust mitigation measures will be implemented as detailed in the CEMP (Condition No. 26).</p> <p>With mitigation measures in place, residual adverse effects on air quality are predicted to be not significant.</p>	□	■

Environmental Component	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
<p><b>Noise</b> Assessed as required under subsection 5(1) and 5(2) of CEAA 2012</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>The Project is located in a busy industrial area and has the potential to generate noise that affects residences and other noise sensitive areas near the site.</p> <p>Typical construction noise generally associated with construction activities will be generated, but will be limited to regular construction hours.</p> <p>Project-related noise during construction is predicted to be not significant. Once the terminal is in operation, noise levels are not anticipated to increase noticeably relative to existing noise levels. Noise monitoring to confirm the predictions of the noise assessment will be required (Conditions No. 56 and 62). With mitigation measures in place, residual adverse effects on noise are predicted to be not significant.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Lighting</b> Assessed as required under subsection 5(1) and 5(2) of CEAA 2012</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>New exterior lights will be added to the facility.</p> <p>Permanent facility lights will be directed at the facility and not toward neighbouring sites, LED lights – which reduce light spill – will be used, and outdoor lights, including those on the ship loader, will be shut off unless needed to reduce effects on marine navigation and aquatic life.</p> <p>Construction activities will primarily occur from Monday to Saturday between 7:00 am and 8:00 pm. If temporary lighting is needed during construction, lights will be directed downward, toward the facility.</p> <p>With mitigation in place, the Project is not anticipated to result in residual adverse effects on the community from lighting.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Health and socio-economic conditions</b>  Assessed as required under subsection 5(1) and 5(2) of CEAA 2012</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Based on the very low magnitude of residual effects on air and noise, the Project is not expected to cause adverse effects on health of people, including Aboriginal people.</p> <p>The Project is not expected to result in adverse effects on socio-economic conditions because public access to the foreshore would be maintained.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Component	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
<p><b>Archaeological, physical, and cultural heritage resources</b></p> <p>Assessed as required under subsection 5(1) and 5(2) of CEAA 2012</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The Project is not anticipated to affect archeological, physical and cultural heritage resources.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Current use of lands and resources for traditional purposes by Aboriginal peoples</b></p> <p>Assessed as required under subsection 5(1) and 5(2) of CEAA 2012</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>Section 6 provides an overview of the concerns raised by Aboriginal Groups during VFPA consultation about the Project.</p> <p>With mitigation measures in place (as described in Section 6) residual adverse effects on Current use of land resources for traditional purposes by Aboriginal peoples are not anticipated.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Accidents and malfunctions</b></p> <p>Assessed as required by the <i>Canada Marine Act</i></p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>There is potential for adverse effects on surface water and sediment from accidental equipment leaks or spills.</p> <p>Mitigation measures will be implemented to reduce potential adverse Project-related effects due to accidents and malfunctions. These measures include having a CEMP and a Spill Prevention and Emergency Response Plan.</p> <p>With mitigation measures and a response plan in place, residual adverse effects, if they occur, are expected to be not significant. Remediation of any residual adverse effect is anticipated to be achievable.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Residual adverse effects (i.e., effects that remain with mitigation in place) were identified for the following environmental components:

- Surface water and water bodies;

- Sediments;
- Terrestrial resources;
- Aquatic resources;
- Air quality; and
- Noise.

Overall, the residual adverse effects of the Project on all of the environmental components are characterized as:

- Moderate in magnitude due to seabed and shoreline physical disturbance and associated potential effects on aquatic resources during construction, combined with lower magnitude effects to air and noise during operations;
- Local in geographic extent due to off-site effects on air quality, noise and aquatic resources through underwater noise extending beyond the Project footprint;
- Long-term in duration because the facility is anticipated to operate for several decades, and air and stormwater discharges and noise emissions will be generated throughout the operation period, therefore effects would extend throughout the life of the facility;
- Continuous in frequency because the facility will operate daily; and
- Most of the residual adverse effects of the Project would be reversible once the Project is decommissioned.

In conclusion, based on the characterization above, the mitigation measures proposed by the Applicant and the permit conditions, the residual adverse effects of the Project are predicted to be not significant.

### 7.3 Environmental Review Decision

In completing the environmental review, VFPA has reviewed and taken into account relevant information available on the proposed project, has considered the information and proposed mitigations provided by the Applicant and other information as listed elsewhere in this document, and concludes that with the implementation of proposed mitigation measures and Permit conditions, the Project is not likely to cause significant adverse environmental effects.

ORIGINAL COPY SIGNED

**ANDREA MACLEOD**  
MANAGER, ENVIRONMENTAL PROGRAMS

November 28, 2017

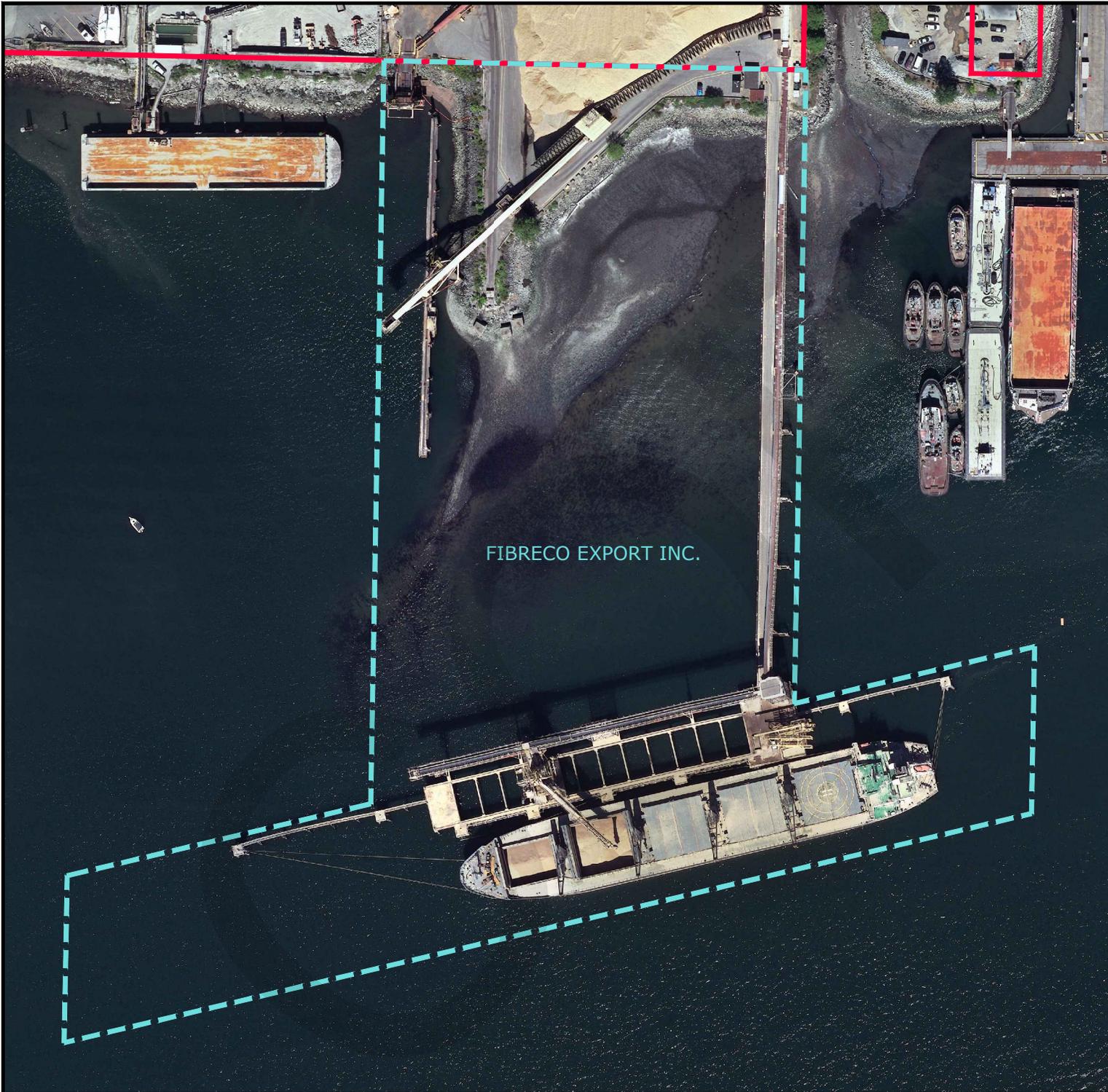
**DATE OF DECISION**

### RECOMMENDATION

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

It is the recommendation of staff that this application be approved subject to conformance with the project and environmental conditions listed in project permit **PER No. 16-268**.

**APPENDIX A**  
**Location Plan**



# FIBRECO TERMINAL ENHANCEMENT

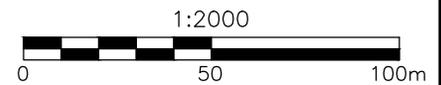
## SITE LOCATION PLAN

PER # 16-268

Project Location:  
1209 McKEEN AVE,  
NORTH VANCOUVER, BC

### LEGEND

-  PROJECT LOCATION
-  VFPA BOUNDARY



VFPA SPATIAL DATA GROUP  
APRIL 3, 2017  
PLAN # S2017-091

Any areas marked "proposed" represent approximate locations



**APPENDIX B**  
**List of Information Sources**

**VFPA has relied on the following sources of information in the project and environmental review of the Project:**

- Application form and materials submitted by Applicant on behalf of the tenant on January, 19, 2017.
- All Project correspondence from January, 19, 2017 to November, 07 2017
- All plans and drawings labelled PER No.16-268-A to F
- Consultation Input and Consideration Report, July 25, 2017, Fibreco
- Biophysical Survey Report, June 9, 2017, Hemmera
- Permit Application Project Overview Report (R3), August 25, 2017, Fibreco
- Environmental Noise Assessment (R2), September 07, 2017, BKL & Fibreco
- Dredging Plan (R3), October 3, 2017, Hemmera & Fibreco
- Construction Environmental Management Plan (R5), October 3, 2017, Hemmera & Fibreco
- Environmental Air Assessment (R3), October 24, 2017, WSP & Fibreco
- Key correspondence:
  - Email dated 2017-08-11, from Kevin Zhang (DNV) to Glenn Dempster, “stormwater management requirements” with the following attachment:
    - VFPA Memo “PER 16-268 – Fibreco Terminal Enhancement Project – Review of Proposed Stormwater Management Plan (Appendix L), August 9, 2017, Anika Calder
  - Email dated 2017-10-03, from Glenn Dempster to Tanya Hajgato (DNV) & Jim Piercy (DNV) , “Fibreco Stormwater Design” with the following attachments:
    - Draft CREUS Engineering Drawings Ref. 17326-KEY1, 17326-KEY2, 17326-MDP1, 17326-MDP2, 17326-DET1 & 17326-DET1
    - Detailed Stormceptor Sizing Report – North Vancouver Catchment 1- 100
    - - Detailed Stormceptor Sizing Report – North Vancouver Catchment 2- 100
    - Detailed Stormceptor Sizing Report – North Vancouver Catchment 3- 100