



PORT of  
**vancouver**

# **PROJECT AND ENVIRONMENTAL REVIEW REPORT**

**PER NO. 16-072  
NEPTUNE BULK TERMINALS (CANADA) LTD.  
DUST SUPPRESSION UPGRADE**

Prepared for: Director, Planning & Development

May 15, 2017

# Table of Contents

- Table of Contents ..... 2
- 1.0 INTRODUCTION ..... 3
- 2.0 PROJECT DESCRIPTION ..... 4
  - Proposed Works ..... 4
- 3.0 VANCOUVER FRASER PORT AUTHORITY INTERNAL REVIEWS ..... 5
  - 3.1 Planning ..... 5
    - 3.1.1 Land Use Designation ..... 5
    - 3.1.2 Building Permit Requirements ..... 5
  - 3.2 Engineering ..... 5
  - 3.3 Transportation ..... 6
- 4.0 STAKEHOLDER CONSULTATION ..... 6
  - 4.1 Municipal Consultation ..... 6
  - 4.2 Adjacent Tenant Consultation ..... 7
  - 4.3 North Shore Waterfront Community Liaison Group Consultation ..... 7
- 5.0 PUBLIC CONSULTATION ..... 9
  - 5.1 Summary of Public Consultation ..... 10
- 6.0 ABORIGINAL CONSULTATION ..... 11
- 7.0 ENVIRONMENTAL REVIEW ..... 12
  - 7.1 Scope of Environmental Review ..... 12
  - 7.2 Environmental Effects Summary ..... 13
  - 7.3 Follow-up Program ..... 18
  - Environmental Review Decision ..... 18
- 8.0 RECOMMENDATION ..... 18
- APPENDIX A Location Plan ..... 19
- APPENDIX B List of Information Sources ..... 20

		<b>VANCOUVER FRASER PORT AUTHORITY PROJECT AND ENVIRONMENTAL REVIEW REPORT</b>
<b>PER No.:</b>	<b>16-072</b>	
<b>Tenant:</b>	<b>Neptune Bulk Terminals (Canada) Ltd.</b>	
<b>Project:</b>	<b>Dust Suppression Upgrade</b>	
<b>Project Location</b>	<b>1001 Low Level Road, North Vancouver</b>	
<b>VFPA SID No.:</b>	<b>CNV 074</b>	
<b>Land Use Designation:</b>	<b>Port Terminal</b>	
<b>Applicant(s):</b>	<b>Dana Nielsen, Project Coordinator</b>	
<b>Applicant Address:</b>	<b>1001 Low Level Road, North Vancouver</b>	
<b>Category of Review:</b>	<b>C</b>	
<b>Recommendation:</b>	<b>That PER No. 16-072 for a dust suppression upgrade be approved.</b>	

## 1.0 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. 16-072: Dust Suppression Upgrade Project (the project) proposed by Dana Nielsen working on behalf of Neptune Bulk Terminals (Canada) Ltd. (the Applicant).

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

The project and environmental review considered the 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. It is a prerequisite to the issuance of a project permit (the Permit) and the conclusions described in this report require compliance with the conditions in the Permit.

## 2.0 PROJECT DESCRIPTION

Neptune Bulk Terminals (Canada) Ltd. exports metallurgical coal to overseas markets. Coal is unloaded from unit trains at the terminal, and stockpiled on site. Municipal water is applied to the open stockpiles using a spray system to mitigate dust during dry or windy conditions.

The dust suppression upgrade project proposes to replace the existing ten wooden spray poles currently servicing the terminal coal stockpile area with eight new steel poles of equal height. The proposed upgrade also proposes to add five larger steel tower spray poles. All poles would include a horizontal spray bar mounted near the top, as shown on the drawings. They also include yard spray nozzles, which are located on the pole (not on the spray bar). The proposed system constitutes an upgrade to the existing coal dust suppression system. From June 2012 until September 2014, Neptune engaged in public and stakeholder consultation in support of its coal system improvements and the related air permit amendment application to Metro Vancouver.

All 13 of the new steel poles are proposed to include additional yard spray nozzles as well as angled LED flood lighting to illuminate the coal stockpile area below. The new poles are proposed to be connected to the existing terminal water supply system via new underground ring main piping and utility connections including a new connection to the VFPA owned ring main. Following the proposed upgrade, there will be a total of 15 steel spray poles in operation, located immediately adjacent to the current spray pole locations.

Neptune's current dust suppression system is over 40 years old and uses ten wooden spray poles with water nozzles, and two steel spray poles, which were previously upgraded and will remain in operation following the implementation of this project. The project is not anticipated to increase the use of municipal water at the terminal.

### Proposed Works

- Removal of ten existing wooden spray poles and sections of existing underground piping
- Installation of eight new steel spray poles approximately 24.0m (82.0 ft.) in height, each with a horizontal spray bar approximately 24.4m (80.0 ft.) long;
- Installation of five new steel tower spray poles approximately 43.9m (144.2 ft.) in height, each with a horizontal spray bar approximately 39.6m (130.0 ft.) long;
- Installation of additional yard spray nozzles on each new pole approximately 10.0m (33.0' ft.) above the ground surface;
- Excavation to a depth of 2.5m (8.2 ft.) for the eight new spray pole foundations;
- Excavation to a depth of 3.0m (9.84 ft.) for the five new larger tower spray pole foundations;
- Installation of concrete pedestal foundations for each new spray pole totaling 10.2m<sup>2</sup> (110.0 ft<sup>2</sup>);
- Installation of concrete pedestal foundations for each new larger tower spray pole totaling 26.5m<sup>2</sup> (286.0 ft<sup>2</sup>);
- Installation of new LED flood lights at a height of approximately 21.0m (69.0 ft.) on each pole;
- Excavation and replacement of existing sections of water ring main including a new connection to the VFPA ring main at the terminal;
- Installation of water, electrical and telecommunications connections to the new spray poles and;
- Construction of three new equipment container sheds containing piping and electrical connections to service the new poles.

Sections of the existing underground water supply main installed under terminal buildings and infrastructure will not be removed and will instead be abandoned and capped in place as shown on

attached drawings. In addition other sections of water main will be abandoned and repurposed for future electrical conduit under the existing terminal rail tracks as shown on the attached drawings.

Construction of the project may be phased and completed over a maximum timeframe of three years. The majority of construction will be completed during standard VFPA construction hours between 7:00am and 8:00pm Monday through Saturday with no work on Sundays or statutory holidays. Some work which will require shut down of existing terminal operations will require work outside of regular hours, likely once a month during existing nighttime terminal shut down periods. Specific dates for anticipated extended work hours are not known at this time. Community notification requirements have been included as a permit requirement. Notifications would be issued once the intended extended work hour dates have been confirmed by the Applicant.

## **3.0 VANCOUVER FRASER PORT AUTHORITY INTERNAL REVIEWS**

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

### **3.1 Planning**

Planning supports the recommendation to approve the project subject to adherence to the listed project and environmental conditions in the Permit.

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

The proposed dust suppression upgrade supports the use of the site as a terminal, and thus conforms to the designation of "Port Terminal" in Vancouver Fraser Port Authority's Land Use Plan.

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

The proposed installation of three containers to house equipment require review under the 2015 National Building Code and 2015 National Fire Code of Canada. The Applicant has submitted a building permit application and the review is currently underway.

### **3.2 Engineering**

As part of the proposed project, the Applicant intends to excavate and replace existing sections of water ring main that they own. The new ring main system and distribution to new spray poles will require a new connection to the VFPA owned ring main at the terminal. The project will also include installation of electrical and telecommunications conduit underground to service the new dust suppression system. Sections of existing water ring main are proposed to be abandoned and capped in place with some sections being used for future electrical conduit as per attached drawings. The system would continue to use the existing municipal water supply and each new pole will require structurally reinforced concrete pedestal foundation systems to be installed as per attached drawings.

Engineering has reviewed the application and requires the Applicant to ensure:

- Any utility works (including tie-ins and shut-downs) are localized to the site and will not affect the operation of adjacent VFPA properties.
- The condition of utilities to be decommissioned and repurposed for other uses are suitable for their intended use and locations are accurately recorded during construction and reflected in the submitted record drawings to VFPA upon completion of the project.

These are reflected in conditions no. 5 and 35 in the Permit.

Engineering supports the recommendation to approve the project subject to adherence to the listed project and environmental conditions in the Permit.

### 3.3 Transportation

The proposed project will require a shutdown of the terminal rail system during select regular shut down periods due to the proximity of the new poles and water main to the terminal rail tracks. This work will be contained entirely within the existing terminal and VFPA transportation staff have no concerns with the proposed works.

Transportation supports the recommendation to approve the project subject to adherence to the listed project and environmental conditions in the Permit.

## 4.0 STAKEHOLDER CONSULTATION

The proposed project was assessed to have potential impacts to stakeholders and the local community and consultation activities were determined to be 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 by Planning to have potential impacts to municipal interests. A referral letter was sent to the City of North Vancouver on February 22, 2017 notifying them of the proposed Project:

The City of North Vancouver responded with comments on the proposed project. The following table summarizes the comments received on March 17, 2017 and how they were considered as part of the Project and Environmental Review.

Issue	Mitigations and Permit Conditions	Rationale
Request to ensure the municipal water connection will not be adversely impacted due to the possible increase in water consumption.	None required.	The Applicant has confirmed that their dust suppression upgrade project is not expected to result in an increase to water consumption at the terminal.
Request to provide confirmation that sufficient water supply for firefighting activities is maintained.	None required.	The Applicant has provided written confirmation that sufficient water supply will be available for firefighting purposes based on their previous test results of the fire suppression system at the terminal. The Applicant's written confirmation has been forwarded to the City.

Issue	Mitigations and Permit Conditions	Rationale
<p>The City requested a voluntary contribution from the Applicant toward the City’s tree planting program which would consist of planting additional trees upslope of Low Level Road in order to screen the new dust suppression equipment.</p>	<p>None required.</p>	<p>The Applicant has stated that they have previously contributed toward the City’s tree planting program and will not be doing so again at this time. This information was forwarded to the City.</p>

### 4.2 Adjacent Tenant Consultation

The proposed project was assessed by Planning to have potential impacts to adjacent VFPA tenant operations due to potential off-site effects from the dust suppression infrastructure. During winds in excess of 30 km/hr, water spray may go beyond the site boundary. It is anticipated to go over the rail tracks towards Low Level Road and onto adjacent VFPA tenants, but is not anticipated to reach adjacent residential properties.

A referral letter was sent to the following VFPA tenants on February 22, 2017 notifying them of the proposed Project:

- Cargill Limited
- Canadian National Railway
- G3 Canada Limited

VFPA did not receive comments from any tenants.

### 4.3 North Shore Waterfront Community Liaison Group Consultation

The proposed project was assessed by Project Communications to be of potential interest to the North Shore Waterfront community liaison group and the Applicant presented their project to the group on March 23, 2017.

The North Shore Waterfront community liaison group responded with comments on the proposed Project. The following table summarizes the comments received and how they were considered as part of the project and environmental review.

Issue	Mitigations and Permit Conditions	Rationale
<p>There was a request to provide information on how much water is used a year, and how much of that water is recycled.</p>	<p>None required.</p>	<p>The Applicant has confirmed to VFPA that in 2016, Neptune’s water use was 804,244 cubic meters. This is a significant reduction from 1.29 million cubic meters, or 0.09 cubic meters per metric tonne used in 2013 due to the Applicant’s onsite water conservation measures. The Applicant will be providing this information to the North Shore Waterfront Liaison Committee at the next scheduled committee meeting. The Applicant has confirmed that their dust suppression upgrade project is not expected to result in an increase to water consumption at the terminal.</p>
<p>There was a request to provide information on water run-off from spray poles and to where excess water is pumped.</p>	<p>None required.</p>	<p>The Applicant has confirmed the following:</p> <ul style="list-style-type: none"> <li>○ There are drainage sumps at 5 locations at the terminal.</li> <li>○ The run-off is pumped to settling ponds and it is then treated on-site. Excess water is pumped into Burrard Inlet, but is first treated and must meet environmental standards set by the BC Ministry of Environment.</li> <li>○ The water is regularly tested by the Applicant for compliance.</li> <li>○ The Applicant will be providing this information to the North Shore Waterfront Liaison Committee.</li> </ul>
<p>Possibility of using recycled water and inquiry as to how much water is recycled.</p>	<p>None required.</p>	<p>The Applicant has indicated water is currently only recycled in the coal area of the terminal during dry months, and this equates to approximately 5% of use. Recycled water is used on the conveyor systems as wash-water, but it does not get used on the spray poles because of concerns about particulate clogging the spray nozzles. The Applicant has indicated they continue to explore additional opportunities to recycle water at the terminal. The Applicant will be providing this information to the North Shore Waterfront Liaison Committee at the next scheduled committee meeting.</p>

Issue	Mitigations and Permit Conditions	Rationale
Possibility of using salt water with dust suppression system	None required.	The Applicant has concerns as to how salt would interact with coal and the potential of salt damaging the equipment. The Applicant will be providing this information to the North Shore Waterfront Liaison Committee at the next scheduled committee meeting.
Provide information on water reduction strategies during dry seasons	None required.	The Applicant continually investigates water reduction strategies. In the meantime, the Applicant is employing mitigation measures such as shutting down the car wash and manually operating sprayers. This information will be provided to the North Shore Waterfront Liaison Committee at the next scheduled committee meeting. VFPA understands that Metro Vancouver and the City of North Vancouver supplies water services to Neptune Terminals. While Metro and the City are currently revising the Water Shortage Response Plan to manage local demand for drinking water and conserve limited water supplies during the dry summer months, the proposed changes are not anticipated to impact Neptune Terminals dust suppression infrastructure. There are no proposed water conservation restrictions for industrial use, and the use of municipally-supplied water is essential to ensure that potential air emissions are appropriately managed.
Provide information on lighting to be installed on new poles.	None required.	The Applicant confirmed that the existing spray towers already have lighting, and the new towers will have lights at the same height. The lights will be angled downwards on the coal pile to minimize disturbance on surrounding neighbours.

## 5.0 PUBLIC CONSULTATION

The proposed Project was assessed by VFPA to have potential view impacts to community interests in the surrounding area during construction and upon completion.

The Applicant was required to conduct public consultation activities with a 20 business day (28 calendar day in this case) public comment period and distribute a community notification letter. The objective of public consultation as part of the permit review, was 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 February and March 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 February 2017 for public review and comment. Mention of the Applicant's requirement to distribute a community notice was posted on VFPA's website and links were provided to the Applicant's website for more information (<http://www.neptuneterminals.com/explore-our-terminal/terminal-improvements/>).

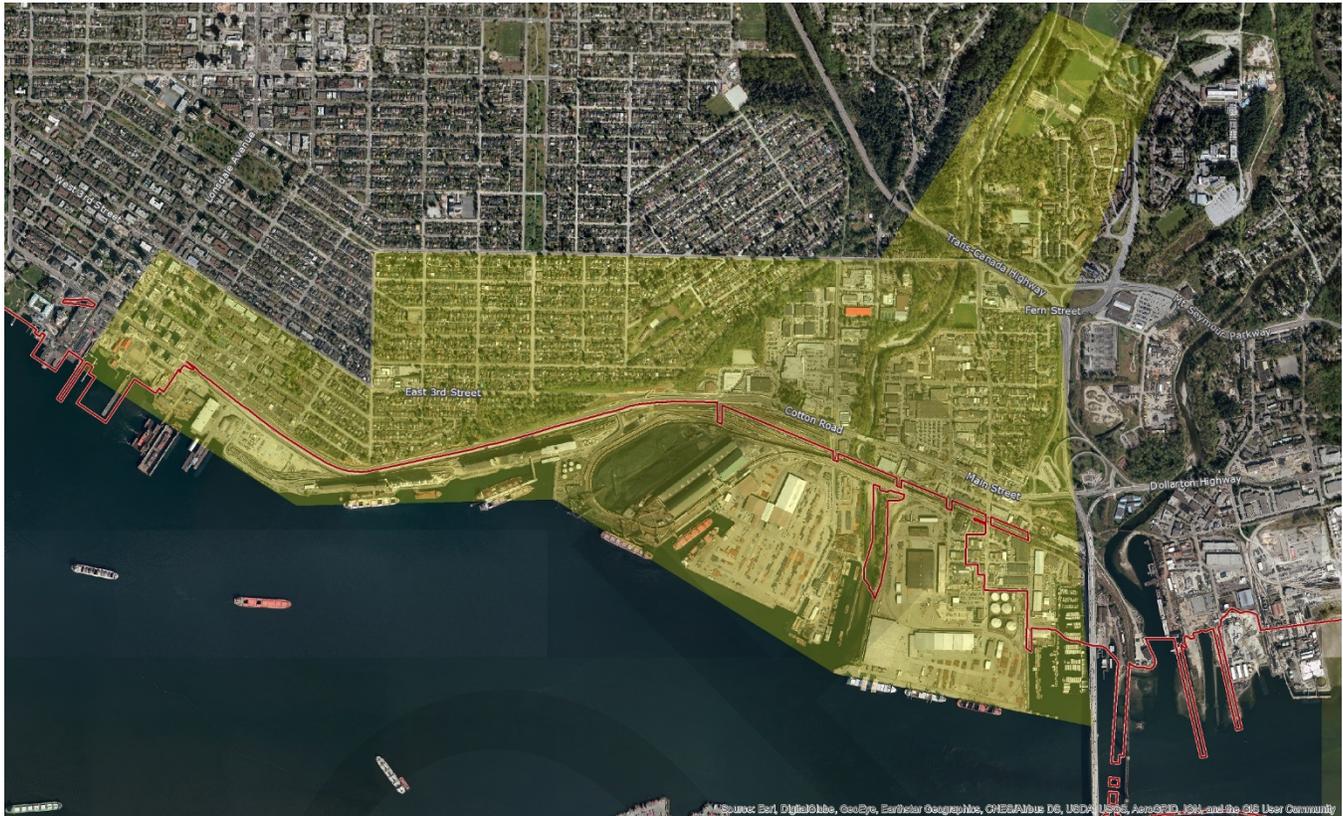
Public consultation and engagement activities were conducted by the Applicant from February 20 to March 17, 2017 and included:

- Hand-delivering and mailing community notification letters to residents and businesses in North Vancouver;
- Providing an email address for inquiries and submissions;
- Posting a project webpage on the Neptune website; and
- Conducting a presentation to the North Shore Waterfront Liaison Committee on March 23, 2017.

The Applicant mailed community notification letters to all residents and businesses in the notification area map shown below on February 20, 2017, with information about the proposed project and a 20 business day feedback period. The notification area was determined by the Applicant and is the same area that the Applicant has previously used for other notification activities. The notification area chosen by the Applicant exceeds the minimum four block (500m) notification radius from the project site required by VFPA for a Category C project. The area of notification included approximately 1075 residents and businesses in the area.

In addition, the Applicant also mailed copies of the community notification letter to various government stakeholders, North Vancouver Chamber of Commerce and two nearby First Nation groups.

*Mail drop area for public notification*



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

- The Applicant received 3 comments via emails directly from the public; and
- VFPA received 0 comments from the public.

Comments received by Neptune expressed support for the project as a means of reducing dust and enhancing overall air quality in the area.

The Applicant provided a Consideration Report of the public consultation process, as well as all comments received in the form of an Engagement Summary Report dated April 20, 2017. VFPA has reviewed the documents and found them both to be acceptable. These reports were posted on VFPA and the Applicant's websites on May 8, 2017.

VFPA has reviewed the record of public consultation and is of the view that the project has adequately addressed the concerns raised during public consultation.

## **6.0 ABORIGINAL CONSULTATION**

Aboriginal Affairs reviewed the proposed works and determined that adverse impacts to Aboriginal or Treaty rights are not expected.

The project contains no in-water works and no impacts to the marine environment are expected. Excavation will occur to a depth of approximately 1.75 metres for the piping for water infrastructure, and to a depth of approximately 3 metres for installation and foundations for the poles. The project footprint exists well beyond the original confines of the 1949 historical shoreline

and the majority of the site is constructed on fill. Accordingly, impacts on native soil are not expected.

The proposed system constitutes an upgrade to the existing coal dust suppression system. From June 2012 until September 2014, Neptune engaged in public and stakeholder communication and consultation in support of its coal system improvements and the related air permit amendment application to Metro Vancouver. This effort targeted a large area of the City and District of North Vancouver. Neptune indicates that it communicated with Tsleil-Waututh Nation, Squamish Nation and Musqueam Indian Band during this process in 2012.

While adverse impacts to rights are not expected, VFPA will continue to work with the Applicant to ensure that any Squamish and Tsleil-Waututh residents receive copies of any public notifications sent by the applicant to neighbouring communities.

## 7.0 ENVIRONMENTAL REVIEW

To fulfill its responsibilities under the *Canada Marine Act* and CEAA 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 project, and provides the environmental review decision in Section 7.2. 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.

Specific studies, along with proposed mitigation measures, included in the Application that were pertinent to the environmental review include:

- The Stormwater Pollution Prevention Plan, Air Emissions Management Plan and Energy Efficiency Study.

The temporal scope of the review includes 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 species and their habitat, 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.

Section 7.2 summarizes the results of the 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
Air quality	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The project is not anticipated to result in adverse effects on air quality, as it is expected to reduce dust and potential residual effects from the coal piles.</p> <p>Neptune has been operating a metallurgical coal export terminal in Burrard Inlet in North Vancouver since 1970. The current maximum coal throughput is 18.5 MMT per year. This project will not increase capacity of product handled.</p> <p>The conveying, stacking, storage and reclaiming operations in the coal handling area, and stockpile wind erosion, can lead to air emissions. Neptune’s ongoing air emissions management program includes:</p> <ul style="list-style-type: none"> <li>• An existing GVRD Air Discharge Permit (GVA0081),</li> <li>• Continuous monitoring of particulate matter (10 and 2.5 µm),</li> <li>• Meteorological monitoring (for rainfall, humidity and wind speed), and</li> <li>• Automatic operation of the dust suppression infrastructure based on meteorological conditions and operational activities.</li> </ul> <p>The proposed upgrade works to the dust suppression system are expected to improve existing air quality.</p> <p>The new dust suppression system will be equipped with large horizontal spray bars with more nozzles to create a finer water mist. This will enable a higher percentage of coal to be sprayed with water and contain more dust. The location of the spray poles was selected based on prevalent wind conditions.</p> <p>During construction, the existing spray poles will only be decommissioned after the new infrastructure is operational.</p> <p>The project is anticipated to reduce dust emissions from the site.</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
Lighting	<input checked="" type="checkbox"/>	<input type="checkbox"/>	There will be four LED floodlights and two marker lights on each spray pole to illuminate the coal handling area. The floodlights will be angled at least 30 degrees down from the horizontal to illuminate the coal stockpiles for operational purposes.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Noise	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<p>The project-related upgrades to the dust suppression system are not anticipated to increase noise at the terminal, as the booster pumps are proposed to be enclosed and will not elevate noise over existing background levels.</p> <p>Construction activities are also not expected to increase noise levels, as the majority of the work will be conducted during regular construction hours. There may be temporary construction-related activities outside of construction hours. These are anticipated to be limited to connecting the utility upgrade to the ring water main, and demolishing the existing spray poles in close proximity to the rail tracks. These activities will only occur a maximum of once a month during construction.</p> <p>With mitigation in place, no adverse effects on noise are anticipated.</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
Soils	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>There is potential for adverse effects on soil quality from the excavation and reuse of soils on site. There will be soil excavation required for:</p> <ul style="list-style-type: none"> <li>• Installation of the five proposed tower spray pole foundations (each requiring the excavation of approximately 11 m<sup>2</sup> to a depth of 3 m),</li> <li>• Installation of the seven proposed spray pole foundations (each requiring the excavation of approximately 6 m<sup>2</sup> to a depth of 2.5 m), and</li> <li>• Excavation for the installation and removal of utilities (maximum trench dimensions are 1.65 m x 1.75 m).</li> </ul> <p>Neptune has proposed to conduct sampling for soil that is being relocated onsite or disposed offsite. Any soil that exceeds industrial standards will be disposed of at a licensed facility.</p> <p>In addition to Neptune’s proposed soil management approach, VFPA requires that all soil excavated for the project is tested and characterized. All soil that exceeds industrial standards will be required to be disposed of at a licensed facility.</p> <p>With the proposed mitigation measures, and additional permit conditions, there is a low likelihood of residual adverse effects of the project on soil quality, and if the effects occur they are expected to be not significant.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sediments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project is not expected to affect sediments.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ground water	<input type="checkbox"/>	<input checked="" type="checkbox"/>	During operations, the sprays poles are to consume municipal potable water. At this time, VFPA has not authorized the use of 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
Surface water and water bodies	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>During operations, the process water and stormwater is collected and treated by an onsite treatment facility, through a combination of primary and secondary settlement basins, a purification pond and the addition of coagulants and flocculants. Post-treatment, it discharges to Burrard Inlet through a permitted outfall (PE06898). The dust suppression upgrade project is not anticipated to increase the volume of this discharge, and the existing water treatment system has sufficient capacity to handle the volume of process water and stormwater. Neptune conducts regular sampling of their effluent for total suspended solids and fish toxicity. In addition, elements of the water treatment are inspected and monitored weekly, including pH, turbidity, flow meter and chlorine.</p> <p>During construction, temporary dewatering may be required to construct the spray pole foundations. The depth of excavation is approximately 2.5 meters, and groundwater is anticipated to be encountered between 1.5 and 2.5 meters. Details on dewatering are to be submitted in the Construction Environmental Management Plan. VFPA anticipates that the dewatering plan will include pumping groundwater into the onsite wastewater treatment facility.</p> <p>Project construction is not expected to cause significant residual adverse effects on surface water and water bodies, taking into consideration the implementation of mitigation measures.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Species/habitat with special status	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project is not expected to affect species, or habitats, with special status.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Terrestrial resources (e.g., vegetation, wildlife, etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No upland vegetation will be impacted by the project. While birds may temporarily land onsite, it is not anticipated that project will affect wildlife mortality.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Wetlands	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Wetlands will not be affected by the Project.	<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
Aquatic resources (e.g., aquatic plants, fish and fish habitat, waterbirds, marine mammals, etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	There will be no in water works associated with the Project.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Archaeological, physical, and cultural heritage resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Impacts to archaeological and heritage resources are not expected.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Aboriginal Group interests (health and socio-economic conditions, current use of lands and resources for traditional purposes)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	VFPA reviewed the proposed works and determined that adverse impacts to Aboriginal group interests are not expected from the project (see Section 6).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Recreational interests	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Recreational interests will not be affected by the Project.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Accidents and malfunctions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<p>There is potential for adverse effects on surface water, soils, and groundwater from accidental equipment leaks or spills.</p> <p>Mitigation measures will be in place to reduce potential for adverse, project-related effects due to accidents. The details measures will be outlined in the Construction Environmental Management Plan.</p> <p>With mitigation in place, the residual adverse effect, if it occurs, is expected to be not significant.</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:

- Lighting;
- Soil; and
- Surface water and water bodies.

The residual adverse effects of the project on the environmental components are characterized as:

- Low in magnitude due to predicted effects on soil and surface water and water bodies during construction;

- Site-specific in geographic extent;
- Short-term in duration;
- Weekly in frequency because soil and stormwater emissions may occur during construction of the project; and
- Reversible because all of the residual effects of the project would be reversible once project is decommissioned.

Taking into consideration all of the above, and with the implementation of the proposed mitigation measures and Permit conditions, the residual adverse effects from the project are predicted to be not significant.

### 7.3 Follow-up Program

VFPA requires additional follow-up programs to be completed by Neptune Terminals. This includes soil testing and characterizing, and the submission of a Final for Approval Air Emissions Management Plan (within 90 days of permit issuance) as described in condition no. 17.

### 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**

May 16, 2017

---

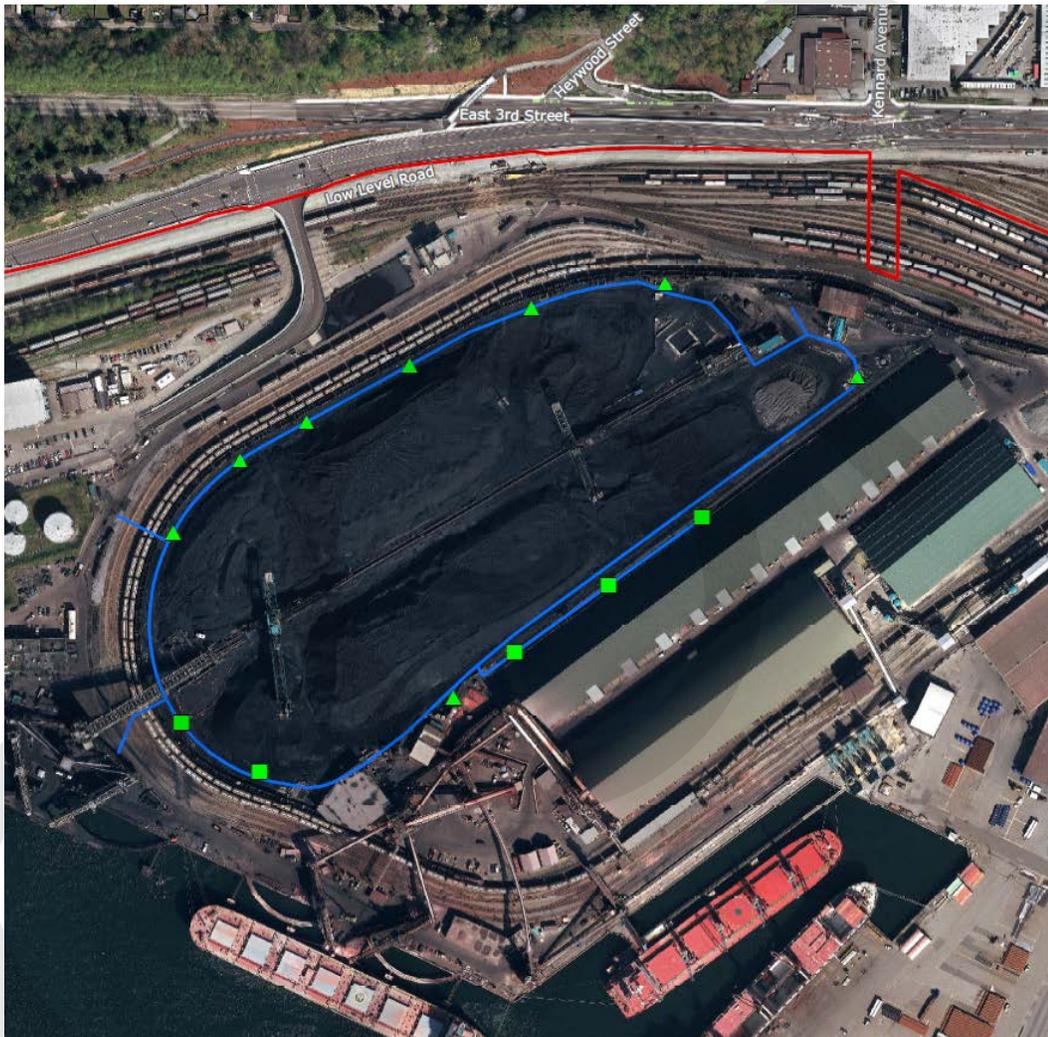
**DATE OF DECISION**

### 8.0 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. 16-072**.

## APPENDIX A Location Plan



### Neptune Dust Suppression Upgrade Project

PER #16-072

- VFPA Boundary
- Proposed Spray Supply Main
- ▲ Proposed Pole Spray
- Proposed Tower Spray



**PORT of vancouver**  
 VFPA Spatial Data Group  
 January 2017  
 PLAN # G2017-013

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 Dana Nielsen on behalf of the Neptune Bulk Terminals Canada Ltd. on December 22, 2016.
- Project Permit Application form dated February 15, 2017
- Dust Suppression Upgrade 2016, Memorandum Drift Distances and Overspray Considerations by Omni Engineering Inc., dated 2016;
- Neptune Terminals Dust Suppression Upgrade, Port of Vancouver Permit Application #16-072, View and Shade Impact Analysis, Revision 3, by Neptune Bulk Terminals Canada Ltd., dated 2016;
- Neptune Terminals Dust Suppression Upgrade, Port of Vancouver Permit Application #16-072, Energy Efficiency Study, Revision 3, by Neptune Bulk Terminals Canada Ltd., dated 2016;
- Neptune Terminals Dust Suppression Upgrade, Port of Vancouver Permit Application #16-072, Stormwater Pollution Prevention Plan with Appendices, Revision 3, by Neptune Bulk Terminals Canada Ltd., dated 2016;
- Neptune Terminals Dust Suppression Upgrade, Port of Vancouver Permit Application #16-072, Air Emissions Management Plan with Appendices, by Neptune Bulk Terminals Canada Ltd., dated 2016;
- Letter in Anticipation of Soil Management Plan Neptune Bulk Terminals (Canada) Ltd; by Envirochem Services Inc., dated December 22, 2016;
- Neptune Terminals Dust Suppression Upgrade, Port of Vancouver Permit Application #16-072, Communication and Consultation Plan, Revision 4, by Neptune Bulk Terminals Canada Ltd., dated January 4, 2017;
- Sections of Environmental Management System Manual, by Neptune Bulk Terminals Canada Ltd., dated July 15, 2014;
- VFPA Application Completeness Spreadsheet with Applicant Responses, dated November 23, 2016;
- All Project correspondence from April 1, 2016 to April 30, 2017;
- All plans and drawings labelled PER No.16-072-A to S