



To	Peter Xotta Vice-President Planning & Operations	From	Tim Blair Planner
Cc	James Crandles Director Planning & Development	Date	January 23, 2013
	Greg Yeomans Manager, Planning	File	PP# 2012-066
Project	Neptune Coal Capacity - Allison		
Applicant	Neptune Terminals Ltd.	Address	1001 Low Level Road, North Vancouver
Tenant	Neptune Terminals Ltd.	Level of Review	Planning Review with Consultation

Recommendation	That Project Permit No. 2012-066 for a new coal dumper building, related conveyor and equipment, and a replacement shiploader be approved.
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PROJECT SUMMARY

Neptune Terminals proposes to install additional coal handling equipment at their North Vancouver facility which currently handles metallurgical coal, two grades of potash, canola oil, and as of 2013, phosphate rock.

The equipment would include a new coal train dumper building at the east end of the site, which tips the coal in incoming rail cars onto a series of new conveyors. The conveyors supply stacker-reclaimers on the terminal, which place coal in the existing stockpile area. In addition, the project proposes the replacement of the quadrant shiploader at berth 1. The replacement shiploader includes a longer reach and more modern discharge chute, reducing particulate emissions during the loading process, and allowing more complete loading of ship holds without the use of onboard bulldozers. The shiploader includes four additional in-water piles at the extreme range of the quadrant loader tracks to support the increased weight of the new loader. These piles are in Burrard Inlet.

Anticipated capacity of the facility is expected to be increased as a result of the improvements contemplated, from 12.5 million Metric Tonnes (MT) per year to 18.5 million MT. In terms of capacity, this equates to approximately an additional coal unit train per day being processed by the facility (7.1 per week), and approximately 0.3 additional ships per week being loaded at the berth. The separate application for coal capacity improvements (the stacker reclaimer project) would increase the capacity from the current 8.5 million MT/year to 12.5 million MT. The two projects combined would see an additional 9.8 trains per week delivering to the terminal and an additional 0.7 ships being loaded at the berth per week.

In addition, the facility currently handles unit trains that are 126 cars in length, and the capacity upgrades would allow Neptune to receive 152 car trains without additional off-site impacts on the north shore rail network (the length of trains is a limiting factor, as



they extend off the leased property while being unloaded, potentially impacting rail operations of other north shore terminals or on the main line).

The proposed handling facilities fit entirely within the existing terminal footprint, and the increase in annual capacity is achieved through faster “turn” of the coal pile. In other words, with the proposed improvements the process of transferring coal from trains to stockpiles to ships would become more efficient, allowing greater throughput hence overall coal export capacity. Coal piles are not proposed to be larger or higher. The additional coal throughput is not expected to negatively impact the capacity for handling other commodities at the terminal.

A comprehensive communications program was undertaken in summer 2012, identifying no significant issues directly associated with the project that have not been addressed by Neptune. Considerable public and media attention was drawn to this and other coal-related projects being contemplated within the port after the conclusion of the communications program undertaken by Neptune. Concerns were raised around the broader issue of coal exports and their relationship to greenhouse gas emissions.

Through media interviews, correspondence and other communications, PMV representatives have explained PMV’s project permit review process and the agency’s role relative to broader issues associated with the export of the commodity. More detail on the comments received from the public is contained in the Consultation section of this report.

Site wide rail relocations and reconfigurations have been previously approved under Permit 2010-167, and the phosphate rock project was approved under Permit 2012-041. The second coal project (for a replacement stacker reclaimer) is being considered separately under Permit 2012-097.

The dumper building is subject to the National Building Code, and requires a Building Permit, which is a condition of this approval.

The investment value for this project is estimated at \$120 million. Construction is expected to require 48 months to complete from the date of permit issuance.

REAL ESTATE

All works are within the existing lease area, conform to permitted uses and require no changes to leasing provisions.

ENGINEERING

The Engineering Department has reviewed the application and supports approval of the project.



OPERATIONS

Vessel sizes calling at the facility are not anticipated to change as a result of the proposed project. The additional vessel traffic is not anticipated to have an impact on marine operations at PMV.

ENVIRONMENTAL REVIEW

An environmental review was conducted by the Environmental Programs Department. The project is not a designated project under CEAA 2012.

PMV's environmental review focused on:

- Dust control measures and the potential for fugitive dust emissions;
- In-water pile driving works and potential impacts to fishery resources;
- Potential noise impacts on the surrounding community, and;
- Excavation works associated with the railcar dumper and potential impacts to archaeological resources

Neptune has a valid GVRD Air Quality Management Permit, No. GVA0081, which specifies measures and requirements to address fugitive dust and other emissions from site operations, including 3rd party testing every two years. The permit references allowable fugitive dust emissions and maintains a list and plan showing all wet scrubbers, spray towers, and other dust suppression systems, and requires submission of annual reports on terminal air emissions. Continued adherence to the terms of the GVRD Air Quality Management Permit is expected of Neptune, who will need to update the current air permit to reflect any emission changes resulting from the project.

Neptune uses water spray towers to mist the coal piles at the terminal, and air handling scrubber systems at all material transfer points to control the generation of dust. Fugitive dust of fine particulate matter (≤ 2.5 microns in diameter) attributed to the coal handling operations at the terminal accounts for less than 1% of total emissions within the Low Level Road corridor in North Vancouver, according to a 2012 report titled Vancouver Fraser Port Authority Low Level Road Project – Air Quality Assessment. There is no anticipated increase in fugitive dust generated by this facility, as the coal stockpiles are not proposed to be changed as part of this project. Neptune terminal operations will remain a very small percentage of local emissions, and is managed through agreed upon operational measures at the terminal and the regional air quality discharge permit requirements.

Neptune has confirmed that rail cars arriving at the terminal have been loaded and coated with an anti-dusting agent to eliminate the chance of product loss during transit. Spraying of a crusting agent onto the open topped hopper cars is done at the mine in south-western BC and at Carlin BC (east of Kamloops). According to Neptune, no complaints about coal dusting (along the rail route from the mine to the terminals) have occurred since the Carlin station was built and put into operation in 2003.



The proposed in-water works include the driving of four steel piles and pouring of two concrete pile caps. As such, the project and draft environmental conditions were referred to the Burrard Inlet Environmental Action Program (BIEAP) Environmental Review Committee (ERC) as a Track 1 referral. The ERC members include PMV, Fisheries and Oceans Canada (DFO), and Transport Canada Navigable Waters Protection Division. The Committee had no comment on the proposed project. Measures to be employed during construction to prevent and minimize adverse impacts to fishery resources are included in the permit conditions.

Neptune conducted a comprehensive noise assessment for the proposed improvements. The study also examined the proposed stacker-reclaimer project, and anticipated noise generated by the handling of phosphate rock. The study reviewed anticipated point sources of noise for the handling of the products, identified principal noise generation locations, and modeled the anticipated noise experienced by a designated noise receptor. The study determined that there will be a negligible change in the noise received by nearby residences as a result of the proposed terminal changes. PMV has endorsed the findings of this report.

The noise impacts of Neptune terminal as a whole after the two coal and one phosphate rock projects are anticipated to drop by slightly less than one decibel at the designated receptors to the north in the City of North Vancouver. In response to the study's findings, Neptune has committed to best practices on the terminal with respect to noise generation, to making investments that will serve to reduce rail noise generated, and has specified that equipment will be enclosed at every opportunity.

Archaeological Assessment

Neptune conducted an Archaeological Overview Assessment (AOA) for the project, which identified the potential for unidentified archaeological sites to be impacted in the dumper vault location. The completion of a Archaeological Impact Assessment prior to or concurrent with construction, as well as monitoring of the excavation for the dumper building was recommended and is a project permit condition.

NOTIFICATION & CONSULTATION

Community

A community consultation plan was prepared by the applicant in consultation with the Communications and Government Affairs (CGA) Department.

The consultation plan included distribution of a householder flyer to nearly 1,000 addresses within the impacted area (including residential and business addresses in the City and District of North Vancouver), a website posting, briefing calls and notification letters to local officials and businesses, and an open public invitation for free tours of the terminal. An open house day was held on September 11, 2012, where all current project details were available to visitors. In addition, the proposal was presented to the North Shore Waterfront Liaison Committee at a regularly scheduled meeting in August 2012. No



telephone calls from the public were received as a result of the consultation undertaken. No written responses were received by PMV during these initial consultation activities.

In late November, 2012 media coverage of this project and another proposed coal export-related project at Fraser Surrey Docks generated increased public awareness of these projects and the commodities they involve. This coverage precipitated a media and letter-writing campaign by several groups opposed to coal exports and the burning of fossil fuels by importers of this product. Local and national newspapers and other media covered the issue, and PMV representatives were interviewed on several occasions. Senior PMV staff sought to clarify the scope of the proposed projects, the extent of PMV project reviews, and the distinction between project reviews and national energy/export policy, as noted above.

Approximately 620 emails about coal and the several concurrent projects that PMV is considering were received through the websites of the groups leading opposition to the export of coal. These communications stated concerns with either local or global impacts of the commodity. In addition, several emails from individuals were received, with two seeking clarification about the project review process, and three supporting the projects and export of coal. All submissions have been logged and have been or are being responded to by PMV based on the nature/scope of the comment.

Municipal

The proposed works will generate additional construction and operational activity at the terminal, including vehicle and rail traffic. As such, the proposal was referred to the City of North Vancouver for comment by letter in November 2012. City staff had no concerns with the proposed project, provided that environmental and community impacts are minimized, and the project was not referred by City staff to Council for endorsement.

The City considers the proposal to be similar to the approved 2006 potash expansion project, and requested that the comments provided to the Port for the previous project be considered for this proposal, including the requirement for a noise study, a traffic study, landscaping the publicly visible frontage along Low Level Road, and storm water management for the site.

The proposed upgrades have been designed to minimize noise impacts using maximum point source emissions criteria. The belt control systems, conveyors, dust control equipment, and ship loader will be either enclosed or specified to the latest design standards to minimize noise. Neptune has also committed to making site-wide rail improvements to reduce wheel noise, and to continue annual noise monitoring as it has done in the past. Conditions enforcing the assumptions made in the submitted noise assessment are included in the permit.

Traffic generation from the site is expected to peak during the construction phase, with dump trucks, delivery vehicles and contractor vehicles accessing the facility. Neptune is exploring options to manage this traffic and parking demands on the terminal, including leasing of off-site property for parking for staging purposes. Coordination between the



tenant and the project team overseeing construction of Low Level Road will also be critical in 2013 and 2014, and is a project permit condition.

In 2005 the City requested that the publically visible portion of the site (the north boundary) be considered for landscaping or design improvements. The Lower Level Road project anticipated for construction in 2013/2014 will completely reconfigure access at the north side of the terminal, which will address much of the aesthetic concern that was previously raised, eliminating the benefit of any landscaping upgrades previously suggested. Recent Neptune work near the north side of the site, including relocation of office functions to an offsite location and installation of a new substation, has also substantially altered the visible face of the terminal from Lower Level Road.

Storm water collected on the site will be directed to either the coal or potash water treatment systems, where it is recycled for use on the terminal (spraying the coal piles during dry periods) or released to the storm water system or the sanitary sewer system. There is no proposed change to the current site footprint, to the area devoted to the storage of coal or to the storm water treatment systems in this project. As such, the proposed works will not impact City storm water services. There is no proposed change to the water treatment systems or storm water systems on site.

The City requested that it be the lead agency in issuing a Building Permit for the portions of the project that are reviewable under the Building Code. PMV has an existing MOU with the City which enables the City to implement PMV's Building Code review process on PMV's behalf. In this case, PMV has elected to undertake the Building Code review itself with its code consultants, and will provide opportunities for the City to provide input to the process.

First Nations

The First Nation Pre-Consultation Report was completed and approved by the Manager of Planning and the Manager of Community and Aboriginal Affairs on June 25, 2012 and it was determined that the duty to consult was triggered. The following First Nations were consulted: Tsleil-Waututh First Nation, Musqueam First Nation and Squamish Nation. Consultation letters were sent on August 3, 2012 providing 30 days for review and comment.

Given the depth of excavations anticipated for this project, it was determined that the completion of an Archaeological Overview Assessment (AOA) was warranted. The results of the AOA recommended the completion of an Archaeological Impact Assessment as well as monitoring of the excavation site during construction by a qualified archaeologist. The AOA was provided to the consulted First Nations by mail on October 1, 2012 as supplementary information.

Tsleil-Waututh First Nation:

In September, Tsleil-Waututh First Nation (TWN) and Neptune began engaging directly on the Allison and Stacker Reclaimer projects. TWN requested participation funding in the



amount of \$4,790 and additional documents from Neptune in order to complete their review. In order to share the documents, Neptune requested that TWN sign a confidentiality agreement. As of January 9, 2013, PMV understands that TWN did not sign the confidentiality agreement, and the materials and participation funding were not provided by Neptune.

PMV continued to engage with TWN over this period in effort to help facilitate TWN's review.

On December 10, 2012, PMV provided TWN the draft Environmental Assessment for the project in hopes that the information provided within the document would help facilitate TWN's review.

On December 18, 2012, PMV emailed TWN to explain that a decision on the project would be made no later than December 21, 2012.

On December 18, 2012, TWN sent a letter to PMV stating that they were unable to complete their review as they felt they didn't have all the documents they required. The letter also stated that TWN was not aware of the in-water works proposed for the project as it had not been included in the initial consultation letter.

On January 3, 2013, PMV wrote to TWN stating that much of the information requested in their letter of December 18 was provided in draft Environmental Assessment. PMV also explained that the proponent modified the project description to include the in-water works following the initial consultation letter. PMV extended the time period until January 14, 2013.

No response was received from TWN by January 14th.

Squamish Nation:

On November 29, 2012, Squamish Nation (Squamish) emailed PMV requesting a meeting with Neptune Terminals to discuss the proposed Allison project and the stacker reclaimer project. A meeting was arranged for December 6, 2012.

On December 6, 2012, Squamish, PMV and Neptune Terminals met to discuss the two projects. Squamish expressed concerns about the impacts of vessel and rail traffic and rail noise. Neptune explained that the proposed project may add one more train a day, but that the configuration of their rail do not result in shunting on site. Neptune also explained that rail cars carrying Neptune's cargo do not pass the Mission or Capilano reserves. The rail cars do pass the Seymour Reserve, but with the proximity of Highway 1, the road traffic is the dominant source of noise. In terms of vessel traffic, Squamish expressed concern about the speed of tugs in the Burrard Inlet. PMV has since notified Operations. Finally, Squamish also expressed interest in employment, skills training, education, and community benefits. PMV followed-up with Neptune's Vice President of Logistics and



Community, who intends to meet with Squamish to discuss these matters as it relates to corporate social responsibility.

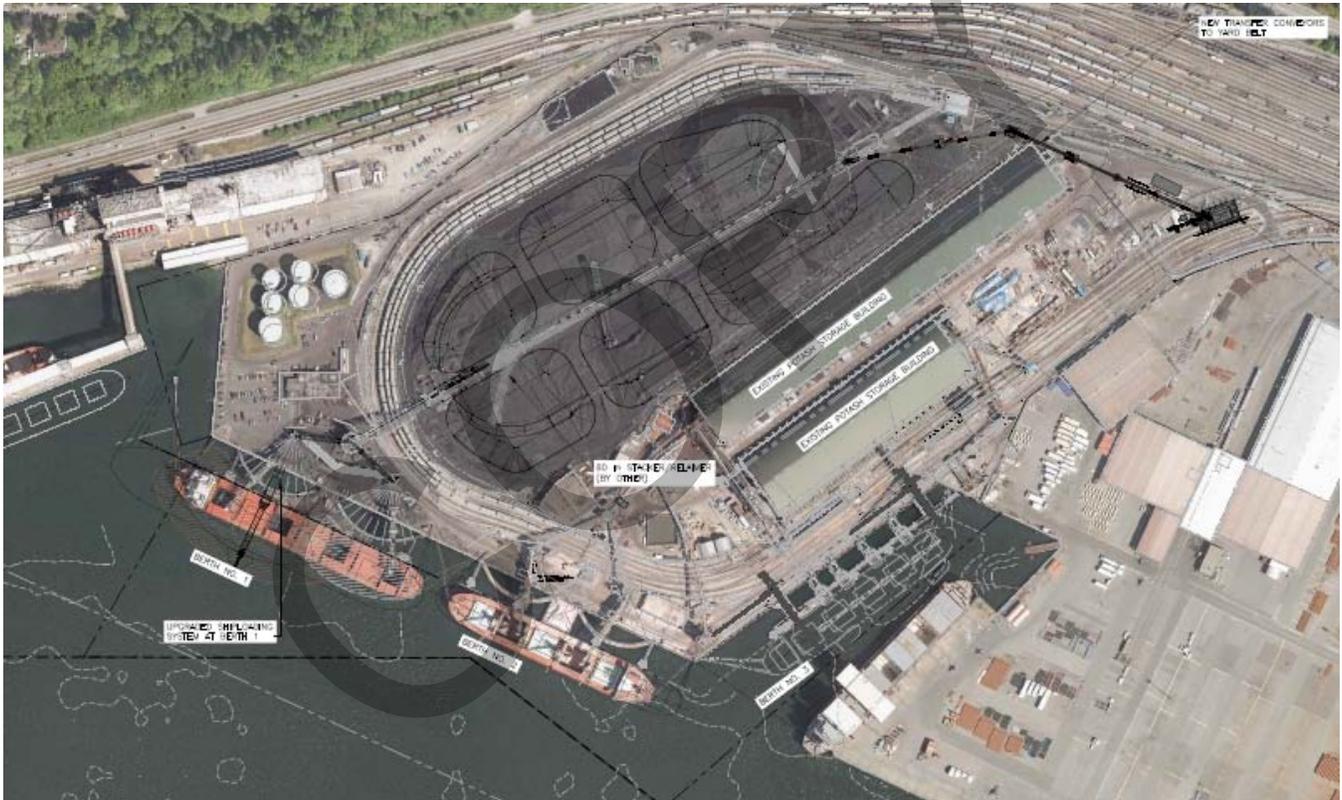
CGA has reviewed the record of consultation and believes that the Port, as an agent of the Crown, has met the legal duty to consult.

CONCLUSION

The review process has addressed all outstanding concerns regarding the project, subject to conformance with the Environmental Conditions stipulated in the Permit.

ORTHO PHOTO

Neptune Terminals



Terminal modifications shown in heavy black:

- Dumper building (far right)
- Conveyors
- Replacement shiploader (lower left)



DATE OF APPROVAL	January 23, 2013
APPLICANT	Neptune Bulk Terminals Ltd.
ADDRESS OF APPLICANT	1001 Low Level Road, PO Box 86367 North Vancouver BC V7L 4K6
PROJECT LOCATION	1001 Low Level Road, North Vancouver
PROJECT TITLE	Neptune Coal Capacity - Allison

PROJECT DESCRIPTION

For the purposes of this Permit, the Project is understood to include the following "Works" on Vancouver Fraser Port Authority property:

Installation of a coal dumper building, related conveyor and equipment, and a replacement shiploader.

GENERAL CONDITIONS OF APPROVAL:

1. This Permit is conditional on a valid tenure agreement with respect to the subject premises being in place. **NO CONSTRUCTION MAY COMMENCE IN THE ABSENCE OF A VALID TENURE AGREEMENT.**
2. This Permit is granted subject to the fulfillment of all other requirements of the Vancouver Fraser Port Authority (VFPA), doing business as Port Metro Vancouver, relating to the Project, and subject to all applicable laws and other necessary approvals being obtained. Prior to commencing construction the Applicant shall ensure that it has complied with all necessary legal requirements and that all necessary regulatory approvals have been obtained. Furthermore, the issuance of the VFPA Project Review Permit does not preclude compliance with the regulatory processes and requirements of any other applicable agencies;
3. This Permit in no way endorses or warrants the design, engineering, or construction of the construction works contemplated under this Permit and no person may rely upon this Permit for any purpose other than the fact that VFPA has permitted the contemplated construction works to commence, subsequent to the issuance of this Permit, in accordance with the terms and conditions of this Permit;
4. In consideration of the granting of this Permit by VFPA the Applicant agrees to indemnify and save harmless VFPA against any and all actions, claims, loss, damages or other expenses in any way arising or following from or caused by the granting of this Permit or the construction of any works as contemplated by this Permit;
5. Development shall be generally in accordance with the application submitted by Ron Sander on behalf of Neptune Bulk Terminals Ltd. on June 1, 2012, including the attached drawings titled, numbered and dated:
 - "Allison General Overall Site Plan without Aerial" No. 303817-GA-100-100-1001-002, Dated June 16, 2012, Revision A, by Hatch Mott MacDonald;

- "Allison Mechanical Coal Dumper No. 2 General Sections" No. 303817-MH-100-400-1003-02, Dated June 16, 2012, Revision A, by Hatch Mott MacDonald;
- "Allison Mechanical Coal Receiving Conveyor C101 Plan and Elevation" No. 303817-MH-100-400-1011-01, Dated May 22, 2012, Revision A, by Hatch Mott MacDonald;
- "Allison Mechanical Berth 1 Coal Shiploaders Setting Plan" No. 303817-MH-100-600-1005-01, Dated June 22, 2012, Revision A, by Hatch Mott MacDonald;
- "Allison Mechanical West Coal Shiploader Elevation" No. 303817-MH-100-600-1006-01, Dated June 22, 2012, Revision A, by Hatch Mott MacDonald;

6. The Applicant shall adhere to the conditions listed on the attached VFPA Schedule of Environmental Conditions numbered 12-066;
7. The Applicant is responsible for locating all existing site services and utilities including any located underground and the Applicant shall ensure that these services and utilities are protected during construction and operation of the Project. The Applicant is responsible to employ best practices and meet applicable code requirements with respect to protection of existing site services and clearance between existing and proposed site services. The Applicant is responsible for repair or replacement of any damage to existing site services and utilities, to the satisfaction of VFPA, that result from construction and operation of the Project;
8. Details of any significant proposed changes to the Project or relating to the application must be submitted to VFPA for consideration of an amendment to this Permit;
9. Prior to commencement of construction, the Applicant shall submit signed and sealed drawings and professional letters of assurance approved for construction by a professional engineer licensed to practice in the Province of British Columbia, and shall obtain a VFPA Building Permit;
10. The Applicant shall provide VFPA with a construction schedule prior to commencement of construction and shall provide VFPA with regular updates of the construction schedule throughout the duration of construction;
11. The Applicant shall notify VFPA upon commencement of construction of the approved works and upon completion of the Project;
12. A construction notice shall be mailed to residents that received the household information mailer at least two weeks prior to commencement of construction;
13. The Applicant shall ensure that an Archaeological Monitor registered to practice in British Columbia is on site during excavation of the dumper building foundation, and will cease all related activities should any archaeological artifacts be uncovered, and until such time as a recovery and mitigation plan is reviewed and approved by VFPA;
14. The Applicant shall adhere to the recommendations made in the noise study prepared by BKL and submitted to VFPA on November 10, 2012, including maintenance of strict operating noise controls, new administrative controls, use of quieter fan motors, and acoustic design review;
15. The Applicant shall submit plans detailing the train wheel noise abatement devices proposed in accordance with the recommendations of the noise study conducted by BKL and submitted to VFPA on November 10, 2012;
16. All construction activities shall be in compliance with City of North Vancouver Noise Control By-Law No. 5819, as amended;

17. The Applicant shall prepare and implement a construction traffic plan prior to the commencement of construction, to the satisfaction of VFPA;
18. The Applicant shall designate a point contact who shall be responsible for coordination of on-site construction activities with VFPA contractors and consultants working on the Low Level Road project for the duration of construction of the authorized upgrades;
19. The Applicant may place temporary construction trailers on site while this permit remains in effect, provided that the Applicant shall not connect such trailers to any underground utilities without the prior written consent of VFPA which may include, without limitation and at VFPA's discretion, a VFPA Building Permit;
20. The Applicant shall provide as-built drawings, in both AutoCAD and Adobe (PDF) format, within 60 days of completion of all works; and,
21. The approved works must commence by January 31, 2014 (the "Commencement Date") and be complete no later than January 31, 2018 (the "Completion Date"). For an extension to the Commencement Date, the Applicant must apply to VFPA in writing no later than 30 days following that date. For an extension to the Completion Date, the Applicant must apply in writing to VFPA no later than 30 days prior to that date. Failure to apply for an extension as required may, at the sole discretion of VFPA, result in termination of this approval.

Original Copy Signed

Peter Xotta
Vice President Planning and Operations

 PORT METRO vancouver	VANCOUVER FRASER PORT AUTHORITY ENVIRONMENTAL ASSESSMENT REPORT AND SCHEDULE OF ENVIRONMENTAL CONDITIONS		VFPA Review Number: 12-066
			Page 1 of 7
Project:	Coal Handling Infrastructure Upgrade and Expansion	Location:	1001 Low Level Road North Vancouver, BC
		VFPA Site/Area No.:	CNV074
Proponent(s):	Neptune Bulk Terminals Ltd.	ERC Track/Number: 1/2012-12-B025	

Project Description

Neptune Bulk Terminals Ltd. (NBT) proposes to upgrade and expand metallurgical coal handling systems at the terminal facility located at 1001 Low Level Road, North Vancouver, BC. The purpose of the upgrade works is to increase throughput and improve coal handling operations. The increased vessel traffic from the project is expected to be approximately one additional train per day and one additional vessel per week.

The proposed works include the installation of a second rotary railcar dumper, a new railcar indexer, a new elevated conveyor connecting the second railcar dumper to the existing stockyard, and replacement of the existing Berth 1 shiploader boom with a longer boom.

Dumper Vault and Building

- The new railcar dumper will be located in the north-east corner of the facility, approximately 300 m from Burrard Inlet. The new dumper will be installed parallel to the existing railcar dumper to allow incoming trains to be split into two strings for simultaneous unloading. The height of the new dumper building will be consistent with the existing dumper building at 12 m above grade.
- A vault approximately 13 m wide, 33 m long, and 21 m deep will be excavated to house the dumper barrel and associated equipment. The construction method for vault construction will involve injecting concrete slurry into the subsurface to form walls in-situ, then sealing the bottom of the walls with jet grout prior to excavating soils within the walls. This underground vault "box" will minimize the groundwater entering the excavation area and limit the dewatering required. Groundwater entering the excavation during construction will be conveyed to and treated by the existing on-site water treatment and effluent discharge system.
- A significant quantity of soil will be excavated for the construction of the vault. Testing and disposal procedures will be followed to check for contaminated material.
- A 75 m long tunnel will be constructed from the base of the vault to ground level. The vault and tunnel will have concrete walls and slabs with interior architectural block walls.
- An Archaeological Overview Assessment (AOA) conducted for the project concluded that there is a potential for excavation activities to impact unidentified archaeological sites in the project area, particularly the dumper vault location. An Archaeological Impact Assessment (AIA) in the form of construction monitoring was recommended during excavation activities in this area. The highest potential for cultural materials within the dumper footprint is considered to be soils 2.75 to 4 m below ground surface, which were likely near ground surface prior to industrial development.
- The existing GVRD Air Quality Management Permit, No. GVA0081, will be amended to include the second dumper as a new point source. NBT will comply with the GVRD Air Quality Management Permit during construction and operation.

Review History		
Draft	October 22, 2012	KK
First completion	December 6, 2012	KK
Final	January 15, 2013	KK

 PORT METRO vancouver	VANCOUVER FRASER PORT AUTHORITY ENVIRONMENTAL ASSESSMENT REPORT AND SCHEDULE OF ENVIRONMENTAL CONDITIONS		VFPA Review Number: 12-066
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Project: Coal Handling Infrastructure Upgrade and Expansion	Location: 1001 Low Level Road North Vancouver, BC	VFPA Site/Area No.: CNV074	
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Conveyors

- The new elevated conveyor system will be comprised of two coal receiving conveyors in series moving coal from the dumper to the stockyard conveyor. Water sprays will be located at transfer points from one coal receiving conveyor to the next, and from the second receiving conveyor to the yard conveyor system. The dust control system will be upgraded, as necessary.
- From the stockyard, an upgraded conveyor will transfer coal to the new shiploader. Conveyors between the sampler cutter and the analyser will also be upgraded as part of these works.
- Dust control measures will include dust capture and collections systems, a water-based suppression system at transfer points, and specialized chutes.

Shiploader Replacement

- The west quadrant shiploader will be replaced to allow Capesize vessels to be loaded without moving the ship back and forth. The new shiploader will have a longer boom and a specially-designed spout to allow all hatches to be reached for ships ranging from Handymax to Capesize.
- The new shiploader will be heavier than the existing one. It will have additional wheels relative to the existing shiploader to spread the load onto the quadrant beam. The existing in-water piles will be retained, with the exception of the last pile cap on the shore end of each side. These pile caps, consisting of two piles each, are undersized relative to the rest of the piles and will be replaced as part of ongoing maintenance. The entire pile and pile cap will be replaced at these two locations.
- The quadrant beam will be removed and replaced with a new beam that distributes the load from the shiploader more effectively. The beam will be extended onto the land side of the berth to provide a track for the wider wheel base. In-land piles will support the extensions.
- The west pivot foundation, located on the upland adjacent to the berth, will be strengthened to support the increased loading. Additional foundation components will be added outside the existing foundation with pile supports to provide increased strength. Grade beams, also supported by piles, will be added to structurally connect the pivot foundation to the quadrant beam.
- A total of four in-water steel piles will be installed, with two concrete pile caps being poured in place for each pair of piles. No other in-water works are associated with the project. A total of 32 new piles will be added in-land to provide increased foundation support. Some excavation may be required.

Water Treatment System

- Additional process water (e.g., spray, wash-down) will be required as a result of increased throughput once upgrades are complete. The existing supply system will be sufficient to accommodate the additional demands, although new booster pumps may be required to maintain sufficient water pressure and meet specific operational requirements at certain locations.

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Draft	October 22, 2012	KK
First completion	December 6, 2012	KK
Final	January 15, 2013	KK

 PORT METRO vancouver	VANCOUVER FRASER PORT AUTHORITY ENVIRONMENTAL ASSESSMENT REPORT AND SCHEDULE OF ENVIRONMENTAL CONDITIONS		VFPA Review Number: 12-066
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Project: Coal Handling Infrastructure Upgrade and Expansion	Location: 1001 Low Level Road North Vancouver, BC	VFPA Site/Area No.: CNV074	
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- During operation, water will be treated through the existing coal water treatment and discharge system. The critical design scenario for the existing water treatment system is a 10-year return period and 24-hour duration storm event. As the stockpile footprint and total catchment will remain unchanged, the design scenario is not significantly affected. While additional wash-down flows will be created at various locations, the total wash-down water will still be less than the critical design scenario.

Noise

- An Environmental Noise Assessment was conducted to determine the noise impacts of several NBT projects. The noise assessment included the proposed coal handling upgrade works, a new section of rail line previously reviewed as PP 2010-167, a new proposed stacker/reclaimer under review as PP 2012-097, and a phosphate rock handling facility reviewed as PP 2012-041.
- The noise assessment concluded that the projects would result in a small reduction in noise emissions from NBT, provided that proposed low noise initiatives are enforced and strict operating noise controls are maintained on high noise rail activities. These include: maintaining slow and gentle impacts during shunting; track lubrication on bends; and, low speeds for trains moving around the rail loop.

Information Sources

- Email from Ron Sander (NBT) to Tim Blair (Vancouver Fraser Port Authority, VFPA) and Jennifer Natland (VFPA), March 5, 2012, 10:08 am, *Re: Neptune Projects – Follow Up meeting*.
- VFPA Project Review Application form submitted by Paul Edgcumbe (NBT), dated May 30, 2012, with submittal letter, project overview document, community engagement approach document, and six project drawings attached.
- A series of “Allison” drawings, prepared by Hatch Mott MacDonald:
 - Drawing No. 303817-GA-100-100-1001-01, Revision A, “Overall Site Plan With Aerial”, dated 2012.05.22;
 - Drawing No. 303817-GA-100-100-1001-02, Revision A, “Overall Site Plan Without Aerial”, dated 2012.05.22;
 - Drawing No. 303817-MH-100-100-1020-01, Revision A, “Coal Handling Flow Diagram”, dated 2012.05.22;
 - Drawing No. 303817-AR-100-400-1003-01, Revision A, “Coal Dumper Building #2 – Enclosure Cladding - Elevations”, dated 2012.05.22;
 - Drawing No. 303817-MH-100-400-1003-02, Revision A, “Coal Dumper Building No.2 General Sections”, dated 2012.05.22;
 - Drawing No. 303817-MH-100-400-1011-01, Revision A, “Coal Receiving Conveyor C101 Plan and Elevation”, dated 2012.05.22;
 - Drawing No. 303817-MH-100-400-1013-01, Revision A, “Coal Receiving Conveyor C102 Plan and Elevation”, dated 2012.05.22;
 - Drawing No. 303817-MH-100-600-1005-01, Revision A, “Berth 1 – Coal Shiploaders Setting Plan”, dated 2012.05.22; and,
 - Drawing No. 303817-MH-100-600-1006-01, Revision A, “West Coal Shiploader Elevation”, dated 2012.05.22.

Review History		
Draft	October 22, 2012	KK
First completion	December 6, 2012	KK
Final	January 15, 2013	KK

 PORT METRO vancouver	VANCOUVER FRASER PORT AUTHORITY ENVIRONMENTAL ASSESSMENT REPORT AND SCHEDULE OF ENVIRONMENTAL CONDITIONS		VFPA Review Number: 12-066
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Project: Coal Handling Infrastructure Upgrade and Expansion	Location: 1001 Low Level Road North Vancouver, BC	VFPA Site/Area No.: CNV074	
Proponent(s): Neptune Bulk Terminals Ltd.		ERC Track/Number: 1/2012-12-B025	

- GVRD Air Quality Management Permit, No. GVA0081, amendment date September 15, 2004.
- Email from Ron Sander (NBT) to Tim Blair (VFPA), June 18, 2012, 3:24 pm, *Re: PMV Info – Allison.*
- Email from Ron Sander (NBT) to Tim Blair (VFPA), September 10, 2012, 8:44 am, *Re: additional PMV Info – Pile caps and water uses.*
- Report titled “Neptune Terminals Allison Coal Terminal Expansion Project North Vancouver, B.C. Archaeological Overview Assessment” prepared by Inlailawatash Forestry Limited Partnership, dated 20 September 2012.
- Report titled “Neptune Bulk Terminals Improvement Projects Environmental Noise Assessment” prepared by BKL Consultants Ltd., dated November 2012.
- Email from Ron Sander (NBT) to Tim Blair (VFPA), December 6, 2012, 4:33 pm, *Re: additional PMV Info - Pile caps and water use - Neptune Allison.*
- Email from Ron Sander (NBT) to Tim Blair (VFPA), January 7, 2013, 2:22 pm, *Re: Questions for Port Permit*, with the following attachments:
 - Material Safety Data Sheet for “NALCO® 8882”, issued 2009/12/24;
 - Material Safety Data Sheet for “OPTIMER® 83949”, issued 2009/11/16; and,
 - Two photos of the spray station.

Environmental Conditions

If the “project description” summary does not accurately reflect the subject proposal, please advise VFPA Environmental Programs immediately as this may affect the assumptions underlying this assessment. If the summary does accurately reflect the subject proposal, the following are the minimum conditions that must be followed to mitigate potential or foreseeable adverse environmental effects.

1. Neptune Bulk Terminals Ltd. (NBT) shall ensure that all works are as described in the above referenced documents. Works other than those described are not authorized with this document.
2. NBT acknowledges that all plans and specifications relating to this project have been duly prepared and reviewed by appropriate professionals working on their behalf. NBT and its agent(s) and/or contractor(s), further acknowledge that they are solely responsible for all design, safety and workmanship aspects of all of the works associated with this project.
3. All work associated with the subject project shall comply with the requirements of the *Fisheries Act*, and all other applicable laws, legislation, and best management practices. Note that Section 36(3) of the federal *Fisheries Act* prohibits the discharge of deleterious substances to waters frequented by fish either directly or indirectly as by storm sewer. Due diligence is required at all times to prevent such discharges and adherence to these conditions does not provide relief from ongoing responsibilities in this regard.

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Project:	Coal Handling Infrastructure Upgrade and Expansion	Location:	1001 Low Level Road North Vancouver, BC
		VFPA Site/Area No.:	CNV074
Proponent(s): Neptune Bulk Terminals Ltd.		ERC Track/Number: 1/2012-12-B025	

4. All works shall be carried out in such a manner so as to avoid any adverse impact on fish or fish habitat. If the harmful alteration, disruption or destruction of fish habitat occurs, the works will be in contravention of Section 35 of the *Fisheries Act*. Fisheries and Oceans Canada has advised that if such impact occurs it reserves the right to immediately suspend or alter operations and the applicant shall undertake, at his or her own expense, any compensatory and/or remedial works deemed necessary by Fisheries and Oceans Canada to ensure a “no net loss” in the productive capacity of local fish habitat.
5. Debris and waste materials generated during these works shall be appropriately contained, collected, and disposed of at appropriate upland locations in accordance with all applicable legislation, guidelines, and best management practices.
6. Any soils excavated from the site during the proposed works shall be handled in a manner that will prevent their release into the aquatic environment, either directly or indirectly as silt in storm runoff.
7. Excavation works shall be monitored for the presence of contaminants. Should materials be encountered that may be or are suspected to be contaminated, NBT shall immediately advise the VFPA. NBT shall ensure that all contaminated materials are removed, contained, and disposed of at an appropriate permitted off-site landfill.
8. In the event that archaeological resources are encountered, excavations shall cease immediately and the BC Archaeology Branch and an individual with appropriate archaeological qualifications shall be contacted.
9. Any materials brought onto the property to be used for backfilling shall be from sources documented to be clean and free of contamination.
10. All work associated with the project involving the use or demolition of concrete, cement, mortars and other Portland cement or lime-containing construction materials shall be conducted so as to ensure that sediments, debris, concrete (cured or uncured), and concrete fines are not deposited into the aquatic environment, either directly or indirectly. Water that has contacted uncured or partly cured concrete or Portland cement or lime-containing construction materials, such as the water that may be used for exposed aggregate wash-off, wet curing, equipment and truck washing, etc. shall not be permitted to enter the aquatic environment. Containment facilities shall be provided at the site for the wash-down water from concrete delivery trucks, concrete pumping equipment, and other tools and equipment, as required.
11. Best efforts shall be employed to prevent the deposition of debris into the aquatic environment. Any debris that is deposited, floating or sinking, shall be contained within the immediate area of the work site and recovered as soon as possible. Sinking debris shall be recovered by diver or other non-intrusive means (e.g. recovery by grapple or clamshell is not permitted unless specifically authorized by VFPA Environmental Programs).
12. Piles shall be driven with a vibratory or drop hammer. In the event that a diesel or hydraulic hammer or other technology such as drilling is required to install the piles, VFPA Environmental Programs shall be consulted for additional review and authorization in this regard prior to initiating the physical works.

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Project: Coal Handling Infrastructure Upgrade and Expansion	Location: 1001 Low Level Road North Vancouver, BC	VFPA Site/Area No.: CNV074	
Proponent(s): Neptune Bulk Terminals Ltd.		ERC Track/Number: 1/2012-12-B025	

13. In the event that distressed, injured or dead fish are observed following the initiation of pile driving, the work shall be halted immediately and VFPA Environmental Programs shall be consulted for additional authorization requirements before the work may be resumed.
14. Any exposed hollow pipe piles shall be capped to prevent wildlife entrapment.
15. Any sediment contained within the piles after driving shall be left in place. If it is determined that they must be removed for engineering reasons, NBT shall consult VFPA Environmental Programs for additional review and authorization prior to initiating the proposed works.
16. NBT shall ensure that barges or other vessels used during the works are not permitted to ground on the foreshore or seabed or otherwise disturb the foreshore or seabed (e.g., disturbance as a result of vessel propeller wash) other than the minimum disturbance associated with the use of spuds.
17. Sediment or sediment-laden waters or other deleterious substances shall not be permitted to enter the aquatic environment during the proposed works. All works and activities shall be carried out in a manner that prevents induced sedimentation of foreshore and near shore areas and induced turbidity of local waters, and the release of sediment, sediment-laden waters, and turbid waters to the aquatic environment. All works shall be in compliance with the following water quality criteria:
 - When background is less than or equal to 50 nephelometric turbidity units (NTU) or 100 milligrams per litre (mg/L) non-filterable residue (NFR), induced turbidity should not exceed 5 NTU or 10 mg/L NFR above the background values.
 - When background is greater than 50 NTU or 100 mg/L NFR, induced turbidity should not exceed the background values by more than 10% of the background value.

For the purposes of this letter, background is defined as the level at an appropriate adjacent reference site that is affected neither by works at the site, nor sediment-laden or turbid waters resulting from works at the site.
18. An appropriate spill prevention, containment, and clean-up contingency plan for hydrocarbon products (e.g., fuel, oil, hydraulic fluid, etc.) and other deleterious substances shall be put in place prior to work commencing. Appropriate spill containment and clean-up supplies shall be kept available on site whenever the subject works are underway, and personnel working on the project should be familiar with implementing the spill clean-up plan and the deployment of spill response materials.
19. All equipment should be regularly inspected to ensure that it is in good mechanical condition and free from visible evidence of fuel, oil, coolant, solvents or hydraulic leaks.
20. During construction, for heavy duty diesel powered road licensed vehicles, every effort should be made to use a model year 2007 or newer. For diesel powered nonroad or offroad equipment, every effort should be made to use Tier 3 equipment or better.

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21. During construction, NBT shall ensure that best practices are followed with respect to fugitive dust control, generally including, but not limited to, the following:
 - a) No visible dust beyond the property line;
 - b) Tracked out material is not to exceed eight (8) metres;
 - c) A wheel washing facility to reduce track out shall be established, if appropriate;
 - d) Vehicles used to transport bulk fine materials shall be covered;
 - e) Stockpiles of soil or aggregate shall be stabilized with water;
 - f) Paved sections subject to dust accumulations are to be cleaned/wetted on a regular basis; and,
 - g) Unpaved sections are to be wetted on regular basis.
22. For in-water works, the Fisheries and Oceans Canada, Conservation and Protection Field Supervisor for Lower Mainland/Squamish in Steveston, BC is to be advised at least two (2) days in advance of the start of the physical works (tel. 604-664-9250 or fax 604-664-9255). VFPA Environmental Programs and Harbour Master shall be copied on this notification (fax 1-866-284-4271 or email EnvironmentalPrograms@portmetrovancover.com and Harbour_Master@portmetrovancover.com). The physical works may not be initiated before the expiry of the notice period.
23. The VFPA reserves the right to rescind or revise these conditions at any time that new information warranting this action is made available to the Port. The VFPA also reserves the right to monitor compliance with these conditions.
24. It is understood that by proceeding with the subject works, NBT and its agent(s) and/or contractor(s) shall have indicated that they understand, accept and have agreed to the foregoing conditions. In this regard, a copy of this Schedule of Environmental Conditions is to be provided to any contractor(s) prior to work commencing. In addition, a copy of this Schedule is to be retained on site at all times when the subject works are underway, and shall be available for inspection by a Fishery Officer or other authorized person upon request.

The above comments and recommendations are based solely upon the consideration by the Vancouver Fraser Port Authority of the potential adverse environmental impacts associated with this project. Any other required approvals must be addressed directly with those responsible. Also, in the interests of public safety a Notice to Shipping action may be taken by contacting the agency below at least five (5) days in advance of your intended date of commencement.

Canadian Coast Guard
Vessel Traffic Services
23rd Floor, 555 West Hastings
Vancouver, BC, V6B 5G3

Tel (604) 666-6011
Fax (604) 666-8453

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