



Doc Title:
Doc Ref #:
Doc Rev #:

B2 Out of Hours Request
LET-VFPA-0001
4

Neptune Bulk Terminals Canada Ltd.
Jurgen Franke, Director, Engineering and Projects
1001 Low Level Road
North Vancouver, BC, Canada V7L 1A7

July 14, 2023

Vancouver Fraser Port Authority, Project and Environmental Review
Taisha Mitchell, RPBio, PAg, Environmental Specialist
100 The Pointe, 999 Canada Place
Vancouver, BC, V6C 3T4
taisha.mitchell@portvancouver.com

re: B2 Project - Vancouver Fraser Port Authority – Category C – Request to Conduct Construction
Outside of Vancouver Fraser Port Authority Standard Work Hours for the B2 Project (PER 21-068)

Dear Taisha,

1 INTRODUCTION

Neptune Bulk Terminals (Canada) Ltd. (NBT) is undertaking the B2 Shiploader Project (B2 Project) which is considered a maintenance works project to upgrade the berth to accommodate ongoing operations. The B2 Project will replace the current B2 shiploader system and will consist of a new single traveling slewing potash shiploader, marine structures, and approach conveyors to replace the existing quadrant style West potash shiploader and East potash shiploader. The B2 Project consists of NBT and Vancouver Fraser Port Authority (the Port Authority) assets, where the combi-wall, owned by the Port Authority, is planned for replacement. A detailed description of the B2 Project scope is provided in Section 1.3.1 of the B2 Construction Environmental Management Plan (CEMP) (NBT, 2023b).

This letter supports an application for authorization for the B2 Project to conduct construction activities outside of the Port Authority standard work hours. This application was informed through the Port Authority's guidance document titled 'Vancouver Fraser Port Authority – Construction Outside of Regular Work Hours' (Port Authority, 2023). Table 1-1 informs the information requirements for the application. This application is being submitted along with the B2 Category C Preliminary Project Environmental Review (PER) Application and Response approval (PER 21-068) application. A separate letter has been developed to support the Lynn Creek Estuary (LCE) Offset Project's application for authorization to conduct construction activities outside of standard working hours (NBT, 2023c).

The construction activities proposed to be performed outside of standard working hours are not expected to generate significant noise. NBT is committed to concentrating activities that are likely to generate noise to during Port Authority standard work hours to minimize disturbance to nearby residents. NBT has an Environmental Complaint Procedure in place to manage and address



complaints, which will be communicated to the Port Authority as they arise (NBT, 2022). A B2D2 Extended Hours Work Plan (EHWP) will be developed with support through BKL Consultants Ltd. (BKL) to describe noise management measures and noise thresholds to be implemented during the B2 Project construction (NBT, in progress). The B2D2 EHWP will be provided to the Port Authority a minimum of 30 business days prior to the start of construction activities outside of standard hours. NBT will also implement conditions related to construction outside of standard work hours as per the B2 Category C PER approval (PER 21-068). A summary of compliance measures is also provided in Section 6.5.11 and 6.7.8 of the B2 CEMP (NBT, 2023b).



Table 1-1: Information Required for Extended Hours Construction Activities for Berth 2 (PER 21-068)

ITEM NO	TASK	RESPONSE
1	Rationale for extended work hours request	<p>B2 Project construction will primarily occur within the Port Authority’s standard work hours (Monday to Saturday, 7:00 a.m. to 8:00 p.m., none on Sundays/holidays). However, authorization for construction outside of the Port Authority’s standard work hours throughout the duration of the B2 Project construction will be required for critical path activities for the B2 Project. The majority of the construction activities planned to be conducted outside of standard working hours are low sound producing, and the B2D2 EHWP will describe mitigation, monitoring, and communication commitments to be undertaken during construction.</p> <p>This time is required to reduce congestion on site, enhance safety conditions for construction personnel, and shorten the overall construction schedule. By ensuring efficient and timely completion of B2 Project construction, NBT also plans to reduce potential impacts to other vital operations at NBT including rail car unloading and stockpiling (both potash and coal) as well as export activities from B1 (steel making coal) and B3 (potash).</p>
2	<p>Construction methodology as outlined in the Construction Environmental Management Plan Guideline</p> <p>This should include, but may not be limited to:</p> <ul style="list-style-type: none"> • Project components/tasks associated with the extended work hours request. • Construction methods (e.g., equipment, number of personnel). 	<p>Construction and demolition methodologies will be undertaken as described in Sections 3.2.1, 3.3.1, and Table 3-2 of the B2 Construction Environmental Management Plan (CEMP) (NBT, 2023b).</p> <p>B2 construction activities are summarized as follows:</p> <ul style="list-style-type: none"> • Berth demolition (e.g., shiploader, conveyors, quadrant beams, wharf head, existing dolphins, walkways, shore mooring, and associated upland buildings, structures, and foundations). • Pile driving (Installation/removal). • Drilling (installation).



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		<ul style="list-style-type: none"> • Berth construction (e.g., combi-wall, service platform installation, marine structure installation, gangway landing platform installation, and mooring dolphin installation). • Shiploader installation. • Conveyor installation including Conveyor 242 (C242), Conveyor 243 (C243). • Concrete (cast-in-place and pre-cast). • Rip rap removal/displacement and reinstatement. • Dredging as part of the slope stabilization (potential). • Infill. • Stone column installation (ground improvement). <p>The B2 Project schedule has not been completed at this time, and activities that will occur outside of the Port Authority’s standard working hours is not confirmed. However, activities that could result in excessive noise such as impact pile driving will not occur outside of regular hours. The B2D2 EHWP will outline noise management measures to be implemented during construction activities completed outside of standard working hours.</p>
3	<p>Description of potential offsite noise disturbances from the work</p> <ul style="list-style-type: none"> • Types of noise. • Location on site where noise will be generated. • Proximity to residents and neighbours that may be affected. 	<p>Types of Noise: Noise emitted from the proposed construction activities within the B2 Project Area may be varied, ranging from low frequency noises and clear tonal noise types (see Appendix B for the noise screening worksheet).</p> <p>Location where noise will be generated: Noise will be primarily generated from the B2 Project footprint, as shown in Figure 1. However, noise may be generated from other areas at the Terminal for various reasons (e.g., trucks moving across the site for material deliveries).</p> <p>Proximity to affected neighbours: The Terminal is bounded by Cargill Grain Terminal to the west, G3 Terminal to east and to the north is Low Level Road and commercial land-users (see Figure 1). The nearest residential receptors are located approximately 515 m</p>



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		to the northwest of the B2 Project. No other sensitive receptors such as schools or hospitals are in the surrounding area. Several intervening Terminal buildings, the railway, and a grade-separated Low-Level Road provide effective noise shielding or reflection between the construction activities and the nearest residential areas to the north of the site.
4	Dates and times or proposed work, or a range of dates and times	The authorization of construction activities outside of standard work hours will be required to occur throughout the planned B2 Project duration, 24/7, Monday to Sunday, including all statutory holidays (see Section 3.5 of the B2 CEMP for the B2 Project schedule (NBT, 2023b)). Construction will be conducted with two 12-hour shifts over a 24-hour period.
5	Map of proposed work area and surrounding properties that may be affected by project noise, generally within one (1) kilometre of work site	See Figure 1.
6	Site plan showing structures, buildings, and topography	<p>Refer to the following drawings in Appendix B of the B2 Design Drawings Supplemental Report (NBT, 2023a):</p> <ul style="list-style-type: none"> • Drawing No. 317071-00041-02-MA-DGA-1502: Existing Site Plan and Demolition Plan <p>Topography at the B2 Project Area is relatively flat.</p>
7	Proposed mitigations that can be applied to minimize and prevent disturbances, such as limiting noise-generating activities to daytime hours, shrouding the work area, altering construction methods, or use of broadband backup alarms	<ol style="list-style-type: none"> 1. Lights will be positioned away from residences and focused only on work areas, enabling crews to perform work safely. The expected crew size will be limited to only required personnel and is not expected exceed the number of personnel present during daytime activities. 2. NBT will circulate a construction notice to surrounding Residents (see draft notice in Appendix A), which will be distributed prior to construction on the timeline stipulated in the PER approval. 3. NBT will provide monthly updates which will detail the anticipated construction activities and proposed hours. This information will be submitted to the Port



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		<p>Authority (PER@portvancouver.com) and on the NBT website for the B2 Project.</p> <ol style="list-style-type: none">4. All conditions that are issued in the Category C PER approval will be followed.5. The B2 CEMP (NBT, 2023b) will be updated subsequent to Port Authority approval of this application to confirm which activities will be conducted outside of standard hours.6. The mitigations identified for implementation when undertaking construction outside of standard working hours include turning off diesel engines and using electric power when possible, using strobe lights in combination with lower volume back-up alarms when appropriate, placing lights at low levels and directing them away from residential areas, using black screens for welding, placing concrete with a crane and bucket, avoiding the use of high-noise power tools, and using synthetic hammers instead of steel hammers.7. The B2D2 EHWP (NBT, in progress) will identify communication and monitoring commitments to be undertaken during construction. Commitments will also include communication requirements between the B2 and Dumper 2 (PER 21-172) Projects.8. Noise monitoring conducted will include the existing NBT on- and off-site autonomous noise monitoring stations, in addition to construction specific real time noise monitoring, and compared to a proposed noise level threshold at the property boundary that will be discussed and agreed upon with the Port Authority. Further details around the project-specific noise threshold and method and frequency of monitoring will be described in the B2D2 EHWP (NBT, in progress).9. Compliance with the vibration and noise mitigation and monitoring measures are described in Sections 6.5.11 and 6.7.8 of the B2 CEMP (NBT, 2023b).



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		10. NBT will monitor terminal noise complaints to confirm any that are due to the B2 Project construction. Complaints will be managed as per the NBT Environmental Complaint Procedure (NBT, 2022).
8	A completed screening level work sheet (Appendix I):	See Appendix B.
9	Contact information for the applicant and/or contractor if the Port Authority receives a noise complaint	Jurgen Franke, P.Eng. Director, Engineering and Projects Neptune Bulk Terminals Phone: 778-838-7581 jfranke@nepturterminals.com Security out of hours contact: Phone: 604-985-7461, Ext: 0
10	Draft Construction Notification (for notice content see External Guidelines for Public Consultation Section 7.1)	See Appendix A.



SCALE:

Scale: 1:8,000

SOURCE / NOTE:
- Aerial image is downloaded from Google EarthPro.(2021)

PROJECT:
SYSTEM:
ASSET:
DISCIPLINE

REV	YYYY-MM-DD	DESCRIPTION	DRAWN	APPROVED
ISSUES/REVISIONS				

VENDOR

ISSUED AS RECORD COPY (YES/NO) NO

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TITLE:
Berth 2 Project:
Distance to Nearest Neighbour and One Kilometre Radius

SCALE: 1:10000

SHEET OF

DRAWING NO:

Figure 1



3 REFERENCES

- NBT. (2022). Environmental Complaint Procedure. Doc No: PRO-NBT-191029. January 21, 2022. Rev. 2.
- NBT. (2023a). B2 Design Drawing Report. Doc No: REP-B2D2-0003. April 24, 2023. Rev1.
- NBT. (2023b). Berth 2 Shiploader Replacement Project Construction Environmental Management Plan. Doc No: PLAN-B2D2-0013. July 14, 2023. Rev2.
- NBT. (2023c). Lynn Creek Estuary Offset Project – Request to Conduct Construction Outside of Vancouver Fraser Port Authority Standard Work Hours (PER 21-068). Doc No: LET-VFPA-0006. July 14, 2023. Rev3.
- NBT. (in progress). Extended Hours Work Plan. Doc No: PLAN-B2D2-0005. In progress.
- Port Authority. (2023). Project and Environmental Review Guideline - Construction Outside of Regular Work Hours. March 2023. Available at: <https://www.portvancouver.com/wp-content/uploads/2023/03/2023-03-09-PER-Guideline-Construction-Outside-Regular-Work-Hours.pdf>. Accessed: March 2023.



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APPENDIX – A – DRAFT NOTICE



NOTICE OF EXTENDED HOURS CONSTRUCTION - NEPTUNE TERMINALS

Neptune Bulk Terminals (NBT) has received approval from the Vancouver Fraser Port Authority (the Port Authority) to carry out extended hours construction on the following projects on its site:

- Berth 2 Shiploader Project (PER 21-068).

NBT will add Sunday, statutory holiday, and night shifts to conduct work 24 hours a day, 7 days a week. The Berth 2 Shiploader Project (B2 Project) is expected to require 17 months of construction, beginning with intermittent Early Works construction from April to November 2024, followed by fulltime Primary Construction which is scheduled from July 2025 through January 2027. Updates will be posted as required on NBT's website: www.neptuneterminals.com. The majority of B2 Project will be undertaken with a 12-hours a day 6 days a week schedule and within regular construction hours (i.e., Monday to Saturday, 7 am – 5pm). However, some construction activities will be required to occur outside of standard work hours. NBT has received permission from the Port Authority to allow for the activities listed below to be completed outside of Port Authority standard working hours.

Extended construction hours may include Sundays, statutory holidays, and night shifts. This time is required to reduce congestion on site, enhance safety conditions for construction personnel and shorten the overall construction schedule, thus reducing the impact on the community. By ensuring the efficiency and timely completion of B2 Project construction, NBT also plans to reduce potential impacts to operations at NBT including steelmaking coal export activities from Berth 1 and potash export activities from Berth 3.

Construction activities performed outside of regular working hours will be limited to those activities which are anticipated to have low impacts on the surrounding community and an Extended Hours Work Plan has been developed, which will detail noise thresholds and management strategies for noise generated by the B2 Project. These activities may include:

- Pile installations (vibratory hammer).
- Splicing and welding piles.
- Servicing construction equipment.
- Testing and inspecting materials.
- Moving materials on site (gravel, mats, etc.).
- Laying pipes.
- Weld inspections and hydro testing.
- Material deliveries.
- Rebar work.
- Falsework and formwork.
- Pouring concrete.
- Erecting steel.
- Excavation.

Impact pile driving will not be conducted during night-time work (i.e., 8:00 pm to 7:00 am). Lights will be positioned away from residences and focused only on work areas, enabling crews to perform work safely. The expected crew size will be limited to only required personnel and is not expected exceed the number of personnel present during daytime activities. Noise will primarily be generated from the B2 Construction Work Area, as shown in Figure A. However, noise may be generated from other areas at the Terminal (e.g., trucks moving across the site for material deliveries).



Figure A: Site Location Map Showing B2 Construction Work Area

If any construction activity is anticipated to have a significant impact outside the project site, NBT will issue a separate notice.

NBT values its relationship with its terminal neighbours, and will take special care and use the following construction methods to minimize the impact of evening work on the community, particularly related to noise and light:

- Turning off diesel engines and using electric power whenever possible.
- Combining the use of strobe lights with lower volume back-up alarms on construction vehicles when appropriate.
- Positioning lights close to the ground and directing them down and away from residential areas.
- Using black screens to shield light when welding.
- Placing concrete with a crane and bucket.
- Avoiding the use of high-noise power tools, during structural steel construction.



- Limiting impact pile driving to daytime hours. NBT will be closely monitoring noise levels during this period to ensure construction activity does not result in a noticeable increase to average existing noise levels.

To be added to the email distribution list for ongoing NBT construction notices, please email us at community_questions@neptuneterminals.com.

For questions related to the out-of-hours exemption for the proposed construction activities, please contact the Port Authority's Community feedback line at 604-665-9004 or community.feedback@portvancouver.com.



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APPENDIX – B – NOISE SCREENING WORKSHEET



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Question 1 – Noise levels expected on project site	
Based on experience with similar construction operations, or on your best judgment, do you expect that noise levels within the project site will be:	
Very Low	<input type="checkbox"/>
Low	<input type="checkbox"/>
Moderate	<input checked="" type="checkbox"/>
High	<input type="checkbox"/>
Very High	<input type="checkbox"/>

Question 2 - Presence of undesirable characteristics	
Will any of the key activities create ongoing noise which (indicate all that apply):	
Are clearly tonal (hums, whirs, whines)	<input checked="" type="checkbox"/>
Are impulsive or have very rapid onset (bumps, bangs, material handling impacts, rail car shunting, compressed air release etc.)	<input checked="" type="checkbox"/>
Contains strong low-frequency content (e.g., large diesel engines, large fans or air compressors)	<input checked="" type="checkbox"/>

Question 3 – Presence of high-energy impulsive noise	
Will any activities create noise which could be classified as “High-energy Impulsive”? Examples could include the industrial use of explosives, explosive circuit breakers, or pile driving.	
No	<input checked="" type="checkbox"/>
Yes	<input type="checkbox"/>

Question 4 – Hours/days of operation	
Will the extended hours schedule be (check all that apply):	
Evening Shift [8 p.m. to 10 p.m.; weekdays]	<input checked="" type="checkbox"/>
Evening Shift [8 p.m. to 10 p.m.; weekend]	<input checked="" type="checkbox"/>
Night Shift [10 p.m. to 7 a.m.; weekdays]	<input checked="" type="checkbox"/>
Night Shift [10 p.m. to 7 a.m.; weekend]	<input checked="" type="checkbox"/>



Question 5 – Proximity to noise-sensitive areas

How far is the nearest noise-sensitive land use (residences, schools, hospitals, parks etc.) from the property line of the project site?

More than 1,000 m	<input type="checkbox"/>
500 to 1,000 m	<input checked="" type="checkbox"/>
250 to 500 m	<input type="checkbox"/>
125 to 250 m	<input type="checkbox"/>
less than 125 m	<input type="checkbox"/>

Question 6 – Presence of noise shielding or reflection

Will buildings, structures, vegetation and/or landforms partially or totally screen construction noise sources from nearby noise receptors (that is, interrupt the line of sight and direct hearing)? Here consideration should be given to the relative elevations of the noise sources, the noise receptors (ground floors vs. upper floors) and the intervening buildings and/or landforms.

Substantial, continuous noise shielding	<input type="checkbox"/>
Substantial, but not total, screening	<input checked="" type="checkbox"/>
Intermittent shielding, e.g., row of smaller, non-adjointing buildings	<input type="checkbox"/>
Scattered shielding by objects, machinery, stockpiles	<input type="checkbox"/>
No shielding potential	<input type="checkbox"/>

Question 7 – Existing noise environment

How would you rate the existing noise environment in the vicinity of the project site?

Very noisy (near busy highway, busy port, airport, heavy industry)	<input checked="" type="checkbox"/>
Noisy (near busy arterial road, light industrial area, urban core)	<input type="checkbox"/>
Moderately noisy (near collector road, suburban residential)	<input type="checkbox"/>
Quiet (suburban residential away from collector roads)	<input type="checkbox"/>
Very quiet (rural residential, well away from industry or main roads)	<input type="checkbox"/>

Question 8 – Population potentially exposed to project noise

Approximately how many residences are located within 500 m of the project site?

5 or less	<input checked="" type="checkbox"/>
5 to 15	<input type="checkbox"/>
16 to 40	<input type="checkbox"/>
41 to 100	<input type="checkbox"/>
more than 100	<input type="checkbox"/>