

February 7, 2018

Mr. William Mooney  
Senior Vice President, Vancouver Terminal  
G3 Limited  
#800 – 423 Main Street  
Winnipeg, MB R3B 1B3

Dear Mr. Mooney:

Re: **Vancouver Fraser Port Authority PER No. 15-180 Amendment  
G3 Terminal Vancouver LP - G3 Terminal Vancouver**

Reference is made to the request from Peter Kiewit Sons ULC (Kiewit) made on behalf of G3 Terminal Vancouver Limited Partnership (G3) to amend Project Permit 15-180 Condition No. 41, which requires that no in-water works occur during the fisheries sensitive period of March 1 to August 15 inclusive. The request is for authorization to continue to conduct the following in-water works during the March 1 to August 15 window:

- Installation of up to 57 piles (i.e., 43 steel pipe piles of 36" diameter and 14 steel pipe piles of 24" diameter) with a vibratory hammer and setting them using impact pile driving. To date, the impact pile driving portion of the pile installation has taken on average 15 minutes per pile;
- Removal of temporary piles; and
- Placement of rock revetment materials on the intertidal foreshore and subtidal seabed until approximately April 15, 2018.

The Vancouver Fraser Port Authority (VFPA) has reviewed the request and all additional information provided in correspondence between November 29, 2017 and January 25, 2018, including the following supporting documents:

- Aquatic Environmental Effects Determination, Nov. 27, 2017, Balanced;
- Memorandum "re: Response to Feedback from VFPA Regarding Permit No. 15-180 Condition 41 Amendment Request – Pile Installation and Removal Outside Marine Timing Window", Dec. 15, 2017, Balanced;
- Memorandum "RE: G3 Grain Terminal Underwater Acoustic Monitoring Data Summary", Nov. 3, 2017, Core 6;
- Marine Mammal and Acoustic Monitoring Report, Monthly Summary (August 28-September 30, 2017), Oct. 25, 2017, Envirowest Consultants Inc.;
- Marine Mammal and Acoustic Monitoring Report, Monthly Summary (August 28-October 31, 2017), Dec. 11, 2017, Envirowest Consultants Inc.; and
- Letter "re: Offshore Revetment Rock Placement – Revised Timing", January 25, 2018, Balanced.

.../2

To address potential additional risks to fish, Kiewit proposes to implement the following additional mitigation measures related to the works proposed to be conducted between March 1 and August 15:

1. An appropriately qualified environmental professional will be onsite full time to monitor for the presence of fish. Daily observations shall be recorded. Work will be stopped immediately if:
  - o any spawning herring are noted within the project vicinity.
  - o any herring spawn within the work area. Spawn sites must be left undisturbed until hatching has occurred. VFPA must be notified of any herring spawn within the project vicinity.
2. Silt curtains will be installed around the area of impact pile driving of 36" diameter steel piles and around the area of active rock placement. The silt curtains will have a depth of 3 m below the surface, and will be installed and maintained such that fish migrating along the shoreline are excluded from within 10 m from the pile driving location and from the area of active rock placement.
3. Rock placement will be conducted using a GPS enabled clam shell bucket.
4. Should juvenile salmon or other fish be noted within the immediate project vicinity, special precautions will be taken to ensure that the fish are not harmed – including halting any in-water works. The decision to halt work will be at the discretion of the qualified environmental professional.

In addition, the following conditions shall also be adhered to:

- A. The Permit Holder shall notify the following Aboriginal groups about the amendment, including information on mitigation measures and project schedule:
  - Squamish Nation
  - Musqueam Indian Band
  - Tsleil-Waututh Nation
  - Lake Cowichan First Nation
  - Cowichan Tribes
  - Penelakut Tribe
  - Halalt First Nation
  - Lyackson First Nation
  - Stz'uminus First Nation

The VFPA can provide contact information for the above-listed groups if required. I understand this has already been discussed with your team.

- B. The Permit Holder shall not place rock revetment from May 1, 2018 to August 15, 2018.
- C. Underwater sound from impact pile driving undertaken from March 1 to August 15 shall not exceed a peak sound pressure level of 20 kPa (206 dB re: 1 µPa) at a distance of 10 metres from the pile. Sound pressure shall be monitored via continuous underwater noise measurements. If sound levels exceed this threshold, or a fish kill is observed despite mitigation measures being in place, the Permit Holder will cease pile driving activities immediately and mitigation measures are to be reviewed and modified in consultation with VFPA.

Mr. William Mooney  
PER 15-180 - G3 Permit Amendment  
February 7, 2018  
Page 3 of 3

The sound pressure threshold stipulated in additional condition C is based on the most up-to-date injury criteria available for fish (see Hawkins and Popper (2014), available at <http://acousticstoday.org/assessing-the-impact-of-underwater-sounds-on-fishes-and-other-forms-of-marine-life-anthony-d-hawkins-and-arthur-n-popper/>).

By way of this letter, the permit is amended to provide an exemption to Permit 15-180 Condition No. 41 for the above proposed activities during the indicated periods, provided that the above mitigation measures are implemented and additional conditions A, B and C are adhered to.

The environmental review decision and conclusions of PER No. 15-180 are not affected by this amendment. All other conditions approved under PER No.15-180 shall be strictly adhered to during the works.

In the event of any breach of any of the Conditions, or of any of the background information being determined by VFPA to be incorrect or misleading, then VFPA, acting at its sole discretion, may cancel this amendment and/or take other remedial actions. This Project Permit may also be cancelled for any other reasons set out in Section 29 of the Port Authorities Operations Regulations.

Should you have any questions about this authorization, please call Marianne Gilbert at 604-665-9097.

Sincerely,

VANCOUVER FRASER PORT AUTHORITY

*Original Copy Signed*

Greg Yeomans  
Director, Planning and Development

Cc Andy Mitchell, Project Director, G3  
Don Jacobsen, Project Director, Kiewit  
Tim Wilde, Environmental Manager, Kiewit  
Andrea MacLeod, Manager, Environmental Programs, VFPA