



August 26, 2019

Mme. Jocelyne Beaudet
Panel Chair, Roberts Bank Terminal 2 Project
Canadian Environmental Assessment Agency
160 Elgin Street, 22 Floor
Ottawa, ON, K1A 0H3

Sent via email: ceaa.panelrbt2-commissionrbt2.acee@canada.ca

RE: Closing Remarks

Dear Mme. Beaudet,

Thank you for providing Friends of the San Juans with the opportunity to submit closing remarks to the Roberts Bank Terminal 2 Review Panel.

These closing remarks reference our June 2019 version of the Salish Sea Vessel Traffic Projections (that has since been updated; however, we will refer here to the version that was submitted to the Review Panel for our presentation at the June 12, 2019 hearing), the Marine Shipping Vessel Traffic Addendum (submitted June 24, 2019), the Port of Vancouver's 2015 Port Emissions Inventory Report (CEAR #1412), and previous submissions as referenced.

The RBT2 project's environmental assessment is required to take into account "the environmental effects of the designated project, including the environmental effects of malfunctions or accidents that may occur in connection with the designated project and any cumulative environmental effects that are likely to result from the designated project in combination with other physical activities that have been or will be carried out."¹

As stated in our letter sent June 24, 2019, the Roberts Bank Terminal 2 Marine Shipping Supplemental Report erred in not including the traffic volumes associated with the Discovery LNG project, nor the Woodfibre LNG and WesPac LNG projects, and the environmental effects of malfunctions or accidents that may occur between RBT2 container ships and LNG carriers. In addition, the Roberts Bank Terminal 2 Marine Shipping Supplemental Report erred in not addressing the myriad accidents and malfunctions that occur with container ships, as was addressed in our June 12, 2019 Review Panel Hearing presentation that summarized a sampling of 2019 news reports about container ship accidents.

¹ The Canadian Environmental Assessment Act, 2012, s19(1)(a)

The June 2019 Salish Sea Vessel Traffic projections identifies container, cargo, and tanker vessel traffic from 24 potential projects that could increase vessel transits by an additional 4,088 transits, over the 12,120 that occurred in 2018, representing a 34% increase. Of the 4,088 additional ocean-going vessel transits, 94% of this new vessel traffic is destined for British Columbia, Canada ports and only 6% is destined for Washington State, United States ports.

Other important cumulative environmental effects that are likely to result from the proposed RBT2 project in combination with other physical activities that have been or will be carried out that have not been address by the project proponent are the potential environmental and public health impacts from increased shipping traffic that include:

- Impacts to marine mammals, such as the Southern Resident Killer Whale, and other marine organisms from underwater noise;
- Increased risk of oil and/or chemical spills;
- Impacts from discharge of water ballast that may include harmful or invasive organisms;
- Increased air emissions from additional ocean-going vessels operating in the Salish Sea, as well as the necessary harbor-craft, cargo-handling equipment, and other mobile sources required to load and off-load the cargoes. (*Note also that air pollutants like nitrogen oxides [NOx] can also create water impacts from nutrient deposition²*).

The increase in air emissions in the Salish Sea region could be significant.

- The current Puget Sound Maritime Emissions Inventory³ (revised 2018) published by the Northwest Seaport Alliance (a partnership between the Ports of Seattle and Tacoma) reported that ocean-going vessels (OGV) in Puget Sound are *already* responsible for significant amounts of port-related goods movement emissions, including:
 - 53% of NOx pollution (a criteria air pollutant regulated by the US EPA),
 - 34% of diesel particulate matter pollution ([DPM], a known carcinogen classified by the World Health Organization⁴),
 - 97% of sulfur dioxide pollution (a criteria air pollutant regulated by the US EPA), and
 - 39% of carbon dioxide equivalents (CO2e) and 4% of black carbon (important climate pollutants).
- Using the current emissions inventory⁵, a rough estimate of what the potential additional air emissions impact might be from the increased 4,088 vessel transits each year is presented below.

² <https://ecology.wa.gov/Water-Shorelines/Puget-Sound/Issues-problems/Dissolved-oxygen-nitrogen>

³ <https://pugetsoundmaritimeairforum.files.wordpress.com/2018/10/final-2016-psei-report-19-oct-2018-scg.pdf>

⁴ https://www.iarc.fr/wp-content/uploads/2018/07/pr213_E.pdf

⁵ Using the 2016 Puget Sound Maritime Emissions Inventory (updated in 2018), an average emissions per OGV transit was calculated from total emissions (NOx = 11,516 tpy; DPM = 178 tpy, CO = 964 tpy, SO2 = 374 tpy, and CO2e = 587,994 tpy) and total movements (2016 in Puget Sound = 6,578).

https://safety4sea.com/wp-content/uploads/2018/04/Puget-Sound-Maritime-Air-Forum-Puget-Sound-Maritime-Air-Emissions-Inventory-2018_04.pdf

TABLE 1: Current, Average, and Projected Increase in Vessel Traffic Emissions Using the 2016 Puget Sound Maritime Emissions Inventory (updated in 2018)

Pollutant	Current Emissions from 6,578 Total OGV Transits (2016 EI)	Average Emissions/ OGV Transit (Current Emissions/ 6,578 OGV Transits)	Estimated Additional Emissions (Average Emissions/OGV Transit * 4,088 New Transits)
NOx	11,516 tons per year (tpy)	1.8 tpy	7,400 tpy
DPM	178 tpy	0.027 tpy	110 tpy
Carbon monoxide (CO)	964 tpy	0.15 tpy	610 tpy
Sulfur dioxide (SO ₂)	374 tpy	0.57 tpy	2,300 tpy
CO ₂ e	587,994 tpy	89 tpy	360,000 tpy

The methodology used to develop these projections was a simple extrapolation from the 2016 Puget Sound Maritime Emissions Inventory, using information on page 22 (Table 2.10) for the 2016 emissions from ocean-going vessels and page 24 (Table 2.11) for 2016 vessel movements. The extrapolation creates an average emissions per transit. After the 2020 International Maritime Organization (IMO) low-sulfur fuel requirements, sulfur dioxide levels are expected to decrease; however, it is important to note that ships can obtain exemptions from the fuel requirements if they cannot obtain compliant fuel. Significantly, however, other vessel emissions (e.g., NOx, DPM, CO₂e, etc.) and impacts from the additional transits would remain.

As another point of reference, the Port of Vancouver’s 2015 Port Emissions Inventory Report also suggests significant additional emissions from increased vessel calls. The Port of Vancouver’s 2015 Port Emissions Inventory Report methodology is different from the Puget Sound Maritime Emissions Inventory, so cannot be compared on a line item basis. However, there is a clear indication that emissions would significantly increase with additional vessel calls.

Using the Port of Vancouver’s 2015 Port Emissions Inventory Report, a rough estimate of what the potential additional air emissions impact might be from the increased 4,088 vessel transits each year is presented below.

TABLE 2: Current, Average, and Projected Increase in Vessel Traffic Emissions Using the 2015 Port of Vancouver Emissions Inventory

Pollutant	Current Emissions from “Marine Sector” (2015 EI)	Average Emissions/ Marine Sector (~3,100 OGVs)	Estimated Additional Emissions (Average Emissions/Marine Sector) * 2,044 New OGVs (estimate based on 4,088 transits where 1 transit = 1 round-trip per vessel)
NOx	8,997 tpy	2.9 tpy	5,900 tpy
PM2.5	140 tpy	0.045 tpy	93 tpy
Carbon monoxide (CO)	963 tpy	0.31 tpy	635 tpy
Sulfur dioxide (SO2)	265 tpy	0.085 tpy	175 tpy
CO2e	635,192 tpy	204 tpy	419,000 tpy

The methodology used to develop these projections was a simple extrapolation from the 2015 Port of Vancouver Emissions Inventory, using information in the data tables (pages 28-29) and page 10 for the number of OGVs calling at Port of Vancouver. The extrapolation creates an estimated average emission per OGV.

In conclusion, we respectfully request that the Review Panel not recommend approval of this Project unless:

1. An interjurisdictional, comprehensive cumulative impact study is conducted of existing Salish Sea marine vessel traffic, and all related impacts, with an agreed-upon vessel traffic volume that ensures sustainable environmental, economic, and cultural vitality in the Salish Sea.
2. The completion of a thorough marine shipping cumulative effects assessment that identifies and evaluates all RBT2 container ship specific vessel traffic impacts, including
 - a. Adverse impacts from current and projected increases in vessel traffic emissions;
 - b. Adverse impacts to all United States Tribes’ and Canadian First Nations’ cultural and natural resources;
 - c. Adverse impacts to Southern Resident Killers Whales, their designated critical habitats, as well as Chinook salmon and forage fish;
 - d. Adverse impacts to critical areas in San Juan County including the San Juan Islands National Wildlife Refuge, the San Juan Islands National Monument, the San Juan Island National Historical Park, the San Juan County Marine Biological Preserve, and the San Juan County Marine Stewardship Area;
 - e. Adverse impacts from all accident and oil spill and cargo spill risks;

with all existing and reasonably foreseeable vessel traffic, including LNG projects; demonstrating that all RBT2 vessel traffic can operate within the above agreed-upon sustainable vessel traffic volumes that ensure ecological, economic, and cultural vitality in the Salish Sea.

If the Project is recommended for approval, we respectfully request that you include the following conditions:

- A. To reduce noise impacts from RBT2 shipping traffic that would be detrimental to the critically endangered and at risk Southern Resident Killer Whales, require all container ships that call on RBT2 to be accredited as quiet by a ship-classification society.
- B. To address the increased risks of accidents and oil spills and cargo spills from the RBT2 vessel traffic, require Emergency Response Towing Vessels along the project's vessel route to prevent accidents and oil and cargo spills.
- C. To address the Project's potential pollution from wet scrubber discharges, and to also reduce the environmental and economic impacts from potential oil spills, require all container ships that call on RBT2 to use propulsion fuels that comply with the IMO's 0.50% sulphur limit. This would prohibit the use of Heavy Fuel Oil – the high viscosity, tar-like fuel that can have significant environmental and economic and cultural impacts when spilled.
- D. To address the existing economic sectors that rely on the ecological vitality of the Salish Sea, require any RBT2 project justification to compare well-quantified project-related job creation and other economic benefits with the existing jobs and economic sectors that rely on our beautiful marine ecosystem that could suffer significant adverse environmental effects from the proposed Roberts Bank Terminal 2 project.

Thank you for your attention to these closing remarks.

Sincerely,

<Original signed by>

Lovel Pratt
Marine Protection Program Director