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National Energy Board - Review Panel
Transmountain Pipeline Expansion Project
444 Seventh Avenue SW
Calgary, Alberta T2P 0X8

Letter of Comment from Urs Boxler:

Esteemed members of the Review Panel

I am opposed to the project by Kinder Morgan to expand the capacity of the Transmountain Pipeline. My opposition is based on many aspects of the project and related environmental issues. However, I am mostly concerned about the increase in the risk of oil spills occurring from the resulting oil tanker traffic that would be required to ship the oil and diluted bitumen to off-shore markets.

My wife and I are very connected to the BC coast. I will speak on behalf of both of us. We live aboard a cruising sailboat in a live-aboard co-op marina in False Creek, in the heart of Vancouver. For the past 15 years we have been cruising the BC coast extensively for several months every summer, covering the full length of the BC coast and SE Alaska. This background has given us an in-depth understanding of the coast, the weather, the tides and currents and about marine activities and risks in general. We are close to nature and deeply appreciate the beauty and the sensitivity of the coastal environment. On five previous occasions, I have lectured at the Vancouver Maritime Museum about cruising the Pacific Northwest coast. We regularly invite friends from within Canada and abroad to join us on our cruising adventures and to share the beauty of this coast. This life-style will be severely threatened in the case of a large marine spill from a tanker related to the project under question.

I am very concerned about the risks of a large tanker spill in the Vancouver harbour, and especially in the confined waters at Second Narrows Bridge. A large spill cannot be contained within the inner harbour and crude oil and dilbit pollution will inevitably be spread to the outer waters of English Bay, Strait of Georgia and beyond, fouling our own environment in which we live. The strong outflow current from the inner harbor at the time when the high tide changes to a low tide will inevitably carry the oil out from the harbor. The next high tide after a spill will inevitably bring the pollution into other coastal areas, not immediately affected by the original spill, such as into False Creek, where we live while not out cruising. Strong tidal currents flow in and out between the Strait of Georgia and the open sea through the Gulf Islands, the American San Juan Islands and the Strait of Juan de Fuca.

We own property on Pender Island, in the Gulf Islands, and are in the process of building a house. We regularly walk the beaches and visit local parks, such as Brooks Point Regional Park, or various parts of the Gulf Islands National Park. We observe birds, Orcas, Pacific White Sided Dolphins, Humpback Whales, Seals and Sea Lions. The tanker route winds its way through these waters. A large tanker spill in

these waters would ruin the attractiveness of the area and impact the pristine natural environment severely. This would certainly directly affect us and all residents and visitors to the Gulf Islands. Due to the large tides and resulting currents, a large spill can spread over wide areas, as it was shown with the Exxon Valdez incident. The Exxon Valdez oil spill affected the coastline for a distance from the original spill site that is about as much as two thirds of the BC coastline. Environmental damage to the BC coast could be very long lasting. Experience has shown that oil spills in a marine environment are nearly impossible to clean up. The experience with the Exxon Valdez spill has shown that after 25 years, oil is still found in the affected areas and some of the marine life has not been able to recover.

In addition to the damage to the environment, a large oil spill may affect all property owners in Vancouver and the adjoining coastal regions financially due to a drop in property values. Other economic impacts could affect many businesses involved in tourism, commercial fishing, shipping, harbor operations, traffic and recreational fishing and food gathering. First Nations people, who tend to be more actively involved and dependent on food gathering from the sea, would be disproportionately affected.

How do accidents happen?

Risk analysis studies, on the basis of technical matters, typically indicate that the probability of a major oil spill from marine terminal and shipping activities is low – BUT IT IS NOT ZERO. Many factors may contribute to the risk of an accident, including:

- Tanker Routes to the open sea lead through long and narrow channels;
- Difficulty of maneuvering large tankers;
- Severe weather;
- Large tides and currents;
- Reefs and shoals;
- Economic pressure to keep going even when the going gets difficult;
- Technical failure, such as loss of engine power or steerage;
- Human error.

Accidents are often the result of unforeseen events, which may be individually associated with various risk factors, occurring and coming together at the most in-opportune time. These situations add to the challenges faced by the people involved and increase the likelihood of human error occurring at the same time.

A serious tanker accident on the BC coast may be considered a “Low Probability / High Consequence” event. However, a low probability is not an argument to downgrade the potential severity of a major oil spill. Many informed people have expressed the sentiment that it will not be a question of IF, but of WHEN a serious tanker accident with a resulting large oil spill will happen on the BC coast. Reality shows that in spite of the calculations of low probability, marine traffic accidents DO HAPPEN.

Some examples may be of interest. What follows is a list of shipping accidents, with or without oil spills, that happened in various places, including in remote as well as heavily populated areas around the world. This is by no means a complete list. These accidents were due to some of the risk factors identified above, including technical failure, severe weather, difficulty of maneuvering a large ship in confined waters, and, most prevalently, human error. These same risk factors apply to oil tanker traffic

on the BC coast. The more tanker traffic in ships per year are allowed to ply the BC coastal waters the greater the risk.

Sample Accidents:

Brittany, France, March 1978:

The oil tanker "Amoco Cadiz" suffered damage to the rudder in a heavy storm near the entrance to the English Channel, ran onto the rocks, broke up completely and spilled its entire load of cargo, which fouled 320 km of coastline.

Vancouver, BC, Inner Harbour, October 1978:

The freighter "Japan Erica" hit the railway bridge at Second Narrows in fog and darkness with a pilot on board. This incident shut down rail service to the North Shore for 4 ½ months.

San Francisco Bay, January, 1979:

The oil tankers "Oregon Standard" and "Arizona Standard" collided in heavy fog near the Golden Gate Bridge. The 840,000 gallons of crude and heavy fuel oil that escaped the wreckage was the largest oil spill in the San Francisco Bay.

Near Galveston Texas, November, 1979:

The tanker "Burmah Agate" collided with the freighter "Mimosa", rupturing the tanker's cargo tanks and causing a series of explosions that killed 33 crew members. Spilled oil caught fire and continued to burn for over two months, even consuming some of the booms placed to contain the spill.

Prince William Sound, March, 1989:

The oil tanker "Exxon Valdez" ran aground on Bligh Reef, near the exit from the Valdez oil port. The officer on the bridge had taken a turn too soon while the captain had retired and was drinking alcohol. Within two weeks the oil had spread along the Alaska coast for 240 km and within 56 days the oil had spread to 750 km from the accident site.

Portland, Maine, September, 1996:

The oil tanker "Julie N." collided with the Million Dollar Bridge in Portland, tearing a 15-foot hole in the hull and spilling its cargo of 180,000 gallons of home heating oil and its own fuel oil into the harbor.

Galicia, Spain, November, 2002:

In a storm off the coast of Spain, the oil tanker "Prestige" began to take on water and eventually sank, releasing its entire cargo of more than 20 million gallons of crude oil into the Atlantic Ocean. Oil eventually coated 1,800 miles of coastline and beaches in the Galicia region of Spain.

Gil Island, BC North Coast, March, 2006:

The BC Ferry "Queen of the North" was driven straight into Gil Island on its routine run from Prince Rupert to Port Hardy. The officers on the bridge failed to make a routine 11 degree course change while navigating at night in the very confined channels of the BC Coast.

Mississippi River, Downtown New Orleans, Louisiana, July, 2008:

The tank barge "DM932" collided with the oil tanker "Tintomara," splitting open the cargo compartment of the barge. The barge sank and spilled most of its contents of 212,090 gallons of heavy fuel oil.

Sabine-Neches Waterway, Texas, January, 2010:

The double-hulled tank ship "Eagle Otome" collided with a tank barge being pushed by the tug boat "Dixie Vengeance" in a shipping channel near Port Arthur, Texas. Almost half a million gallons of crude oil spilled from the Eagle Otome's punctured cargo tanks (despite the double hull) into the Sabine-Neches waterway between Texas and Louisiana.

North Island of New Zealand, October, 2011:

The container ship "Rena" was run by its officers into Astrolabe Reef. The ship could not be pulled off the reef. It eventually broke up spilling containers and oil into the water.

Outside of Prince Rupert harbor, Prince Rupert, BC, November 2012:

The 278-metre container ship "Hanjin Geneva" ran aground because the captain and pilot were doing an unusual maneuver in order to avoid a potential collision with a fishing boat.

Near Laredo Sound, Princess Royal Island, BC Coast, November 2012:

The 188-metre bulk cargo ship "Tern Arrow" lost engine power in heavy seas and 40-knot winds. This ship drifted for almost three hours before establishing emergency power and heading to open water.

Off the coast of Kodiak Island, Alaska; December, 2012:

The drilling rig "Kulluk" was under tow by a large ocean-going tug en-route from Alaska to Seattle. The towing operation had to be abandoned in 12 to 14-metre seas and 50-knot wind and the drilling rig ran aground.

On the west coast of Haida Gwaii, BC, October, 2014:

The Russian container ship "Simushir" was traveling from Washington state to Russia when it lost all power during the night in gale force wind. It was adrift near the coast of Haida Gwaii. The Canadian Coast Guard vessel "Gordon Reid" attempted three times to secure a tow line but failed each time. Eventually, the large oceangoing tug "Barbara Foss" succeeded in towing the ship away.

These examples clearly show that in spite of the best attempts to mitigate the risks and the expectation of low a probability of accidents, marine traffic accidents DO HAPPEN.

Esteemed members of the Review Panel please take the above into account when assessing the risks of an oil spill that may result from the proposed project and its resulting tanker traffic. Please be fully conscious that the more tanker traffic we allow on the BC coast the greater the risk will be that a large and devastating oil spill will eventually happen.

Yours truly
Urs Boxler