

Dear Sirs,

Members of the Wave Point Consulting team led by Darryl Anderson and K. Joseph Spears have completed a number of independent research reports related to the issue of oil tanker safety and the corresponding regulatory regime comparing the situation in Canada to other jurisdictions.

It is fair to say that the regulation of international shipping in Canadian waters is a highly developed and sophisticated regime using experienced participants working in conjunction with industry to regulate shipping in the public interest. Tankers are given closer scrutiny than other commercial vessels because of the potential pollution risk posed. Yet, there are opportunities for improvement and a methodical risk assessment. In completing our research we found the following the following risk management definition useful for completing our analysis:

A. Prevention: those measures intended to reduce the probability of an incident.

B. Response: are the preparedness measures or activities that are planned in advance for prompt and effective pollution response.

- Organization for preparedness and response,
- Plan contents and format,
- Response resources,
- Emergency towing arrangements.

C. Mitigation: measures intended to minimize consequences of oil pollution incidents.

D. Restoration: activities that contribute to rehabilitation or replacement to the natural and man-made environment that were damaged by an oil spill incident.

Thus a number of best practices were identified as the result of reviewing existing literature, relevant legislation, and insights from past major spills. The results of our research findings published in the Australian Journal of Maritime and Ocean Affairs and the Proceedings of the Canadian Transportation Research Forum indicate that a wide scale geographic ban on tanker traffic is usually not included as the main policy tool to manage risks. Rather the following principles have emerged in response to managing tanker traffic risks.

a. Oil Spill Preparedness And Response:

i. Cascading and complimentary layers of federal and state policy, regulations and operational response,

ii. Active Networks Of Expertise: comprising federal and state governments, relevant agencies, knowledge centres (for scientific input) and community networks (for social licence and two-way information sharing),

iii. Regular Reviews To Recognise And Update Capability.

Copies of our research papers and articles are available on the Blog Shipping Matters (<http://wavepointconsulting.ca/shipping-matters>). The papers and articles contain a number of specific suggestions that may be of interest to the panel. The papers are attached to this e-mail and the main findings highlighted below.

Even though Canada has not had a major oil spill in over 30 years since the Nesucta oil spill off the Oregon coast that washed onto Vancouver Island in 1988 the adequacy of Canada's pollution prevention response regime is a valid policy concern. However, there are policies and procedures that can be implemented that will result in improved performance. The 2011 'Marine Shipping Quantitative Risk Analysis: Technical Data Report' prepared by DNV on behalf of Enbridge Northern Gateway Pipeline proposal noted that risk mitigation measures have been implemented in other jurisdictions such as the United States, the United Kingdom and Norway that further reduce the risks compared to the industry's average safety performance.

In Canada the main problem is that we have reactive maritime policy development resulting in an approach that focus on narrow technical issues. There is inconsistent funding with very little sustained independent policy input that incorporates insights from universities, government and the private sector. In addition, elements of the present safety and pollution regimes provide very low levels of public transparency. To improve sustainability an alternative approach is required.

Economic Perspective ~ There is a need to ensure adequate financial resources are available to protect coastal communities and the marine environment. Parliament could create an independent Agency responsible for conducting independent oil spill risk assessments and directing investments in spill prevention and response. It would also be possible to empower this Agency with the provision of the marine navigation services, including pilotage. A single entity using the NAV CANADA governance model could be developed to provide both the strategic direction and the technical operations the relevant Ministers in light of new shipping projects.

The private sector could partially fund the new Agency through a cargo levy similar to the one used in the Ship-source Oil Pollution Fund. Since crude oil tankers represent the source of a large-scale incident these vessels could be subject to an additional levy. In addition, higher levies may need to be made to the Certified Response Organizations so there is an adequately financed spill response capacity to meet risk from increased tanker traffic and address the Auditor General's concerns and the Government of Canada's review that is presently taking place.

Another option to consider from an economic perspective would be a requirement that in certain specific trades (the movements of bulk oil) the onboard cargo must be carried in Canadian flagged vessels, or a second registry as a legislative requirement of the coastal state and exporting nation. It would be totally within Canadian law to make this a legislative requirement and impose any restrictions or positive requirements on navigation in these Canadian tankers. For example, in the United States under the Jones Act, all the tankers traveling

between Alaska and the lower 48 states are American flagged tankers that meet US Coast Guard requirements. The US tankers also require large escort tugs moving through US waters when in close proximity to shore.

Social Perspective ~ Mandated and voluntary best achievable practices would be one of the most effective ways to improve sustainability without resorting to an outright tanker ban. For example, Washington State has achieved a significantly lower spill rate from vessels compared to other key port states and in the US as a whole. Lower spillage rates in Washington waters were attributable to mandated and voluntary best-achievable practice programs for vessel owners and operators in the State, and continuous efforts of the Washington State Department of Ecology in such activities as inspecting vessels, monitoring vessel response and spill preparedness plans, implementing pre-booming regulations for oil transfer operations, tug escort programs and conducting spill response drills and exercises.

The effectiveness of these type of policy requirements is documented in the 2009 report "Oil Spill Risk In Industry Sectors Regulated by Washington State Department of Ecology Spills Program for Oil Spill Prevention and Preparedness" which noted the fact that oil tankers have historically represented less than four percent of the total spill risk while having a potential risk potential of over 75 percent.[ii] The study further observed that spill prevention measures at both national and federal levels have been enforced with great efficacy. Spill prevention policy measures are an important response to an increase in tanker traffic since the risk of a vessel grounding and human error are at the heart of risk exposure to the most significant impacts. Subject to technological restrictions, the vessel traffic regime could be extended out 200 miles. New technologies would allow this including HR Surface radar and space based AIS.

While the Canada Shipping Act, 2001 (section 180) gives the federal government the necessary statutory power to take all available steps with respect to ship source oil pollution response to prevent, mitigate, or clean up pollution the Canadian approach may not be as operationally effective as the regime in the United Kingdom. In the UK the Secretary of States Representative for Maritime Salvage and Intervention has the delegated authority for one individual to take operational control of a spill, or to prevent pollution. In Canada, we presently have some overlap between agencies and the effectiveness of our regime has never been tested in a real incident for over 30 years. More important is the lack of both industry and government investment and leadership, resources, and public communication in ensuring continuous improvement in vessel casualty prevention and response as marine traffic expands and changes in complexity.

Environmental Perspective ~ The sustainability of crude oil shipments could also be improved by allocating increased resources to the areas that matter most to coastal communities. It is important to note that Canada has accepted obligations under international agreements to create marine protected areas. The commitment is to protect 12% of its water mass by 2010. While development of these marine protected areas is complex it is fair to characterize this as a work in progress. The 2012 report Sustaining Canada's Marine Biodiversity: Responding to the Challenges Posed by Climate Change, Fisheries, and Aquaculture observed that Canada is nowhere close to meeting our international commitments to establish a

network of marine protected areas by 2012. It is also fair to suggest that significant private and public financial commitments need to be applied to marine protected areas, coastal zone management and ocean spatial planning initiatives.

Kindest regards
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