



**Panel Review Phase II:
Arctic Ship-source Spills**

Submitted to the Tanker Safety Expert Panel

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SHIPPING FEDERATION OF CANADA

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Executive Summary:

The Shipping Federation of Canada, incorporated by an Act of Parliament in 1903, is the representative of the owners, operators and agents of ocean ships trading at ports across Canada, from the Atlantic to the St. Lawrence and Great Lakes to the West Coast. We wish to make the following comments and recommendations with respect to the development of Canada's Ship-source Spill Regime for the Arctic:

General Positions:

- The implementation of any new measures arising from this review should be based on a thorough assessment of the risks associated with current projects related to Canada's northern strategy, including their cumulative impacts.
- The resources invested in developing the regime north of 60° should not come from resources allocated to the regime south of 60°, and the response capacity should not be funded by all ships plying Canadian waters. The future regime must provide adequate levels of service at a reasonable cost, without compromising the degree of preparedness or environmental protection that is expected for Arctic waters.
- Canada's future Arctic waters preparedness and response regime must abide by the international conventions that Canada has ratified, and support the implementation of the Code of Safety for Ships Operating in Polar Waters (Polar Code) that is currently being discussed at the International Maritime Organization (IMO).



SHIPPING FEDERATION OF CANADA

SUBMISSION ON CANADA'S ARCTIC SHIP-SOURCE SPILL REGIME

Introductory Comments

The Shipping Federation of Canada, incorporated by an Act of Parliament in 1903, is the representative of the owners, operators and agents of ocean ships trading at ports across Canada, from the Atlantic to the St. Lawrence and Great Lakes to the West Coast. We are writing with respect to the development of Canada's ship-source spill regime for the Arctic.

The Federation's main interest in the development of ship-source spill regime for the Arctic is to ensure that this multi-layered system made up of prevention, preparedness and response functions effectively in Canada and is also aligned with the international regime. More specifically, and as per our previous submissions to the Panel¹, it is essential that that Canada's future Arctic regime abides by the international conventions that have been developed at the IMO, while providing adequate levels of service to our membership at a reasonable cost without compromising either the degree of preparedness or environmental protection for which the regime is designed.

Although the government is committed to encouraging development of the North as per Canada's Northern Strategy, it is worth noting that marine traffic north of 60° remains marginal, representing a small fraction of what it is south of 60°. Despite the fact that traffic in the North is expected to increase over time, it will never reach the same level as south of 60°. Some of the reasons for this are articulated in a recent Conference Board of Canada report entitled *Economic Development in Canada's Northern Waters*², which notes that:

“...commodity prices are pivotal to the pace, type, and amount of economic activity, as projects occur only if they make economic sense. Other important influences on marine-based economic development are the clarity, efficiency, and effectiveness of regulatory regimes, and the ability to reduce key information gaps, such as the lack of adequate seabed charting.”

This reality should be taken into account when developing an Arctic spill regime, with a view to ensuring that the impacts of development are balanced against the fragility of northern ecosystems.

We acknowledge the development of the Polar Code at the International Maritime Organization, and welcome the adoption of the zero discharge standard for oil or oily mixtures that will be incorporated into the document. Nevertheless, we remain concerned by the urgency with which the Code is being finalized, and worry that this might result in a tool that is neither practical for ship operators nor useful from an environmental protection perspective. As well, the development of the Polar Code is only one step in a long process that also involves the development of a great deal of maritime infrastructure, including aids to navigation, nautical charts, means of satellite communication, port reception facilities for ship's waste, ice-breaking assistance, search and rescue capability, and the provision of adequate places of refuge for ships in distress. It will be important

¹ As per our comments on Canada's Marine Oil Spill Preparedness and Response Regime submitted on June 21, 2013 and our comments on the development of Canada's Ship-source Hazardous and Noxious Substances (HNS) Incident Preparedness and Response Regime submitted on March 28, 2014.

² Fournier, Stefan, and Margaret Caron-Vuotari, *Changing Tides: Economic Development in Canada's Northern Marine Waters*. Ottawa: The Conference Board of Canada, 2013.



to actively consult with industry stakeholders in this respect, given that they have multi-year experience operating in the Arctic.

This being said, we would like to reiterate that our priority as an industry is to ensure the safety of vessel operations, which is where we believe the greatest reductions in environmental risks can be achieved. As the number of ships transiting the Arctic has increased over the years, so too has the operational safety of the vessels involved. Navigational technologies, safety management procedures, and the training of shipboard and shore personnel have also undergone a significant evolution in terms of safety and effectiveness.

With these general comments in mind, you will find below our responses to the panel's main lines of enquiry, with particular focus on our industry's efforts to ensure vessel safety with respect to Arctic shipping.



The Arctic Environment

- 1. The Arctic provides a unique operating environment, both for navigators and regulators. What factors, including future considerations, should be considered while developing spill prevention, preparedness and response requirements for the Arctic?**

As a first step, we recommend that Transport Canada undertake a data collection exercise to ensure it has adequate information on the type and quantity of goods carried by ships in the Arctic, and follow this up with a risk assessment exercise (similar to the *Risk Assessment for Marine Spills in Canadian Waters Phase 1, Oil Spills South of the 60th Parallel* performed by Genivar) that would compile information on Arctic trades and the environmental sensitivity of Arctic waters. The results of this assessment could then be overlaid with information on future short-term developments in the region, with a view to assessing their cumulative pressures on the Arctic environment and developing appropriate spill prevention, preparedness and response measures.

- 2. Are there particularities and/or differences between regions of the Canadian Arctic that should be considered?**

This question does not relate to our organizations' direct interests or mandate. From a commercial navigation point of view, see our responses to question 3 below.

- 3. Are there sensitive areas where vessel traffic presents particular concerns? Where are they? What makes them sensitive areas?**

There are several areas of concern from a commercial navigation perspective. These include very low air temperatures and poor weather, varying ice conditions (and forecasting limits), shallow depths, insufficient and outdated navigation charts, and limited aids to navigation and infrastructure. While the vast majority of operators transiting in the Canadian Arctic are well aware of these challenges and prepare accordingly, must be developed to overcome these challenges if prior to the expansion of commercial navigation operations in the Arctic.

- 4. What mechanisms are in place for outreach and engagement of Northern communities in spill preparedness and response?**

This question does not relate to our organizations' direct interests or mandate.

Prevention

- 5. What measures and resources are currently in place to prevent marine spills in the Arctic?**

As mentioned in the comments we submitted to the Panel in June 2013 and March 2014, the safety of marine transportation is the first line of prevention with respect to marine spills, and is based on a multi-layered system involving: 1) the ship and its equipment; 2) the crew, ship management and



operations; 3) the flag administration, port state control and enforcement; 4) waterways management, marine communication services and other marine services in support of marine safety (icebreaking, pilotage, tugs, etc.); 5) classification societies and insurers; and 6) the development of best practices.

More specifically, some of the key marine safety measures for vessel operations include:

- Vessel Shipboard Oil Pollution Emergency Plan (SOPEP) and Shipboard Marine Pollution Emergency Plan (SMPEP)
- Procedural checklists for safe operations
- Regulated vessel construction
- Certified handling equipment
- Certification of marine personnel
- Up-to-date charts, publications and information on navigational aids
- ISM (International Safety management) Code documentation
- LRIT (Long Range Identification Tracking)
- AIS (Automated Identification System)
- Navigational and collision avoidance technology
- Marine Pilotage
- Regulated vessel certification and insurance

This is by no means an exhaustive list for vessels transiting in Arctic waters. Several regulatory requirements applicable to navigation in the Arctic are part of the *Arctic Waters Pollution Prevention Act* and associated regulations, including the use of the Zone/Date System and of the Arctic Ice Regime Shipping System. In addition, the *Arctic Shipping Pollution Prevention Regulations* require certain vessels sailing in the Arctic to have Ice Navigators on-board. Other measures that enhance safety in Arctic waters include reporting under the Northern Canada Vessel Traffic Services Zone (NORDREG), the provision of information on ice conditions, the use of icebreaker escorts, and the requirement that ships navigating in Canadian waters where ice may be present have a copy of the Canadian Coast Guard publication entitled *Ice Navigation in Canadian Waters* on board. All of these measures contribute to the prevention of marine oil spills by ensuring additional safety of the vessel's operations while in Arctic waters.

6. What additional navigation support and resources are needed for safe shipping in the Arctic?

As mentioned in our previous comments to the Panel, we firmly believe that the first line of incident prevention is inextricably linked to the safety of ship operations. In addition to the foregoing (and speaking from a shipowners' perspective), we believe that an important means of further improving ship safety in Canadian waters is for the Canadian Hydrographic Service to undertake more soundings and update/produce new charts for the Canadian Arctic. Although it is our understanding that a significant number of the current charts need to be updated, we recommend that the charting of current Arctic routes be a priority. As well, we would recommend for the Canadian Coast Guard to deploy additional aids to navigation.

We also believe that Canadian government vessels and aircraft used to monitor/manage spill response should have stable funding resources for Arctic surveillance, and that Transport Canada's *National Preparedness Plan*, its *National Places of Refuge Contingency Plan*, and the Canadian Coast



Guard's *National Response Plan*, should be updated and reviewed on a regular basis in view of the changing environment. As mentioned in our June 2013 and March 2014 comments, we hope that enforcement levels will remain at their current levels within a balanced budget context, as they foster a culture of regulatory compliance.

7. What preventative practices could be undertaken at HNS and oil handling facilities and/or during HNS and oil transfers?

This question does not relate to our organizations' direct interests or mandate.

8. What more can shipowners and/or oil handling facility operators do to prevent or reduce potential impacts of incidents?

We have already addressed matters relating to operational safety in our answers to questions 5 and 6, and believe that these will play a significant role in preventing incidents in the first place. With respect to reducing the impacts of such incidents, the most efficient tool at the ship operator's disposal is the rapid response strategy that is included in the provisions of the Vessel Shipboard Oil Pollution Emergency Plan (SOPEP). This plan should include provisions for addressing emergencies in Arctic waters.

9. Should the current practice of overwintering fuel in barges in landfast ice be reconsidered? Why or why not?

This question does not relate to our organizations' direct interests or mandate.

Existing Response Capabilities

10. Are the vessels currently operating in the Arctic capable of responding to a spill of their bunkers or oil/HNS cargos? If not what do they need?

Ships above 150 GRT certified to carry oil are obliged to have a Shipboard Oil Pollution Emergency Plan as per the requirements of MARPOL Annex I. Similarly, ships above 150 GRT certified to carry noxious liquid substances are required to have a Shipboard Marine Pollution Emergency Plan, as per MARPOL Annex II. These documents are designed to help the crew undertake practical measures to control and minimize a spill from the ship. When fully implemented, these plans would also assist in the response to oil/HNS incidents.

11. What private-sector and public-sector resources are available currently to respond to ship-source spills in the Arctic?

This question does not relate to our organizations' direct interests or mandate.



12. Are there facilities in place in the Arctic to treat or dispose of waste from an oil spill or release of HNS? How could these waste products be dealt with in the event of a spill?

This question does not relate to our organizations' direct interests or mandate. However, as mentioned in our comments on Canada's marine oil spill preparedness and response regime (submitted in June 2013), there is a lack of waste reception facilities for materials recovered during a response effort. It is our understanding that such capacity is under provincial responsibility, and we strongly encourage the government to at least perform an evaluation of what is available on a provincial basis so that these materials can be disposed of quickly should a response effort occur.

13. Is there any existing capability in the Arctic to treat wildlife affected by HNS or oil?

This question does not relate to our organizations' direct interests or mandate.

Preparedness and Response

14. What preparedness and response requirements are necessary for the Arctic?

As noted earlier in this submission, the first step in developing appropriate preparedness and response requirements for the Arctic is to carry out a comprehensive risk assessment in the region. Once such an assessment has been completed, the next step would be to compile information on developments in the short term and their anticipated impact, and to use this data as a basis for developing appropriate spill prevention, preparedness and response measures. This process should also include serious consideration of how best to use available resources, with a view to maximizing efficiencies in preparedness and response measures.

As stated in our comments of March 2014, we believe that Canada's preparedness and response regime could include the following elements:

- Requirements for both ships and handling facilities to have emergency plans;
- A national and regional systems for preparedness and response, which would integrate (amongst other things) the Canadian Coast Guard's 2011 National Contingency Plan;
- Reports on oil/HNS shipments;
- Training and certification requirements for private-sector personnel and response organizations;
- Financing and governance provisions in terms of defining who pays how much, how money is collected/managed, and ensuring that appropriate reporting and control mechanisms are in place;
- An awareness plan for facility and vessel operators and other interested stakeholders (including local authorities);
- An inventory of chemical and operational expertise;
- An inventory of available aircraft and vessels in case of intervention;
- An inventory of samplers;
- Forecasting models (air and water movements).



Referring back to our comments of June 2013, we would direct your attention to a document entitled *Oil Spill Preparedness and Response* published by IPIECA, the global oil and gas industry association for environmental and social issues, which notes that any response process must take into account the circumstances of the spill, the practicalities of the clean-up response, the relative impacts of the oil and clean-up options, and the relative importance of social, economic and environmental factors. According to IPIECA, prior consideration and prioritization of environmental and socio-economic information would help make response efforts more efficient³. Similarly, the International Tanker Owners Pollution Federation (ITOPF), in its document entitled *Leadership, Command & Management of Marine Oil Spills*⁴, highlights the importance of ensuring that the organisational structure is appropriately scaled to the situation at hand, which allows for an efficient management of the response.

In a Canadian context, a number of practical initiatives would help enhance the efficiency of preparedness and response efforts, including:

- Appropriate placement of icebreakers and mandatory icebreaker escort requirements in certain ice infested waters, without reducing services available to vessels south of 60°;
- Regular oil spill response exercises with municipal and public participation⁵;
- Constant readiness of Canadian government vessels and aircraft to be able to monitor / manage spill response, including in remote areas;
- Regular exercises and updates to Transport Canada's *National Preparedness Plan* and *National Places of Refuge Contingency Plan*, and to the Canadian Coast Guard's *National Response Plan*;
- Provision of waste reception facilities for materials recovered during a response effort.

15. To whom should these requirements apply?

This question does not relate to our organizations' direct interests or mandate.

16. Should the Arctic be treated differently than the parts of the country south of 60° in terms of response capacity and response time requirements? Why or why not?

This question does not relate to our organizations' direct interests or mandate. However, we are of the opinion that the basis of the regime should be the same north and south of 60°, meaning that the response capacity should be both risk-based and timely (through the availability and proximity of specialized response capacity so as to reduce any delays in response), and focused on minimizing environmental impacts (through the availability of information on the Arctic environmental conditions and the physical and chemical properties of the oil/HNS involved in the spill). As well, we would recommend that in order to maximize efficiencies at all levels, the deployment of the response capacity could be achieved through cascading and the use of a network approach, when appropriate.

³ <http://www.ipieca.org/publication/oil-spill-preparedness-and-response-report-series-summary> (p. 22).

⁴ <http://www.itopf.com/information-services/publications/documents/TIP10LeadershipCommandandManagementofMarineOilSpills.pdf> (p. 2-3).

⁵ The above-mentioned IPIECA document provides additional guidance on oil spill exercise planning, such as parties to be involved, exercise categories, planning process, design phase, development phase, conducting the exercise and its review (p. 32-33).



17. How should the placement of spill response equipment be determined for the Arctic?

This question does not relate to our organizations' direct interests or mandate.

18. What spill response techniques are appropriate and effective for oil spills and HNS incidents in Arctic waters?

This question does not relate to our organizations' direct interests or mandate.

19. Should the use of dispersants, in-situ burning and other response techniques be permitted in the Arctic if they yield a net environmental benefit?

This question does not relate to our organizations' direct interests or mandate.

20. Are the availability, the frequency and the quality of training and exercises in the Arctic adequate? Who should participate in training and exercises?

This question does not relate to our organizations' direct interests or mandate.

Roles, Responsibilities and Legal Framework

21. Should the regime(s) for Arctic oil spill and HNS incident preparedness and response be structured the same way as the Ship-source Oil Spill Preparedness and Response Regime in place south of 60°?

In order to maximize efficiencies and consistency across all regimes, we believe that the regime for Arctic oil spills and HNS incident preparedness and response should be structured as much as possible as the existing regime for ship-source oil spill preparedness and response. Because of the vastness of the territory, environmental conditions and limited traffic, some adjustments are likely to be necessary. This being said, we also believe that the financing of the oil spill response regime and the HNS regime should remain distinct, as each type of risk should finance its own preparedness, response strategies and costs.

22. What should be the role of private stakeholders (e.g., potential polluters, response contractors) in terms of ship-source oil spill or HNS incident preparedness and response in the Arctic?

As mentioned previously in our comments, the safety of marine transportation is the first line of prevention with respect to marine spills. As such, vessel-specific measures as presented in our answer to question 5 should be implemented in order to prevent ship-source oil/HNS spills in the Arctic.



23. What should be the role of the Canadian Coast Guard (CCG) in ship-source oil spills or HNS incidents in the Arctic?

This question does not relate to our organizations' direct interests or mandate. Despite this, we would suggest that the Canadian Coast Guard play the same role in a ship-source oil spill or HNS incident in the Arctic as it plays south of 60°.

24. To what extent and how should local communities participate in spill preparedness and response?

This question does not relate to our organizations' direct interests or mandate.

25. Are there roles for other local parties to play in the response to an oil spill or HNS incident in the Arctic?

This question does not relate to our organizations' direct interests or mandate.

26. Do the *Arctic Waters Pollution Prevention Act*, *Canada Shipping Act 2001*, and *Marine Liability Act* provide an effective basis for a ship-source preparedness and response regime in the Arctic? Are there changes required to create a coherent spill preparedness and response regime?

The *Environmental Response Arrangement Regulations* under the *Canada Shipping Act 2001* do not apply north of 60°, as the Canadian Coast Guard covers preparedness and response. It is doubtful that existing Arctic traffic could support the extension of arrangements with response organizations as currently implemented south of 60°.

The *Marine Liability Act* applies north of 60° and its provisions prevail over those of the *Arctic Waters Pollution Prevention Act* in the event of an inconsistency between the two Acts. The *Marine Liability Act* incorporates into Canadian law international liability conventions which channel and cap liability on the shipowner, while the *Arctic Waters Pollution Prevention Act* does not cap liability in marine pollution cases and provides for joint and several liability of the owner of the ship and cargo. These latter provisions would not apply in case of a tanker spill, as a tanker would be covered by the *Marine Liability Act* provisions.

The Arctic ship-source preparedness and response regime should therefore be as effective and efficient as possible, given that the costs of bringing human and material resources in remote areas escalate very quickly, as well as the fact that there is a cap on the amount of money that the Coast Guard will be able to recover under the *Marine Liability Act*.

27. How could a spill preparedness and response regime for the Arctic be funded?

As mentioned in our comments of both June 2013 and March 2014, we believe that the financing of the oil spill response and HNS regimes should remain distinct, as each type of risk should finance its own preparedness, response strategies and costs through contributions from both ships and receivers (i.e. through contracts of coverage with response organizations where applicable,



mandatory insurance for ships, and access to the oil/HNS international fund in case of excess liability).

The taxpayer's contribution should be limited to ensuring that the regime's regulations are enforced and that Canada fulfills its international obligations arising from the relevant International Maritime Organization conventions. As is the case in the event of an oil spill, the cost to public authorities of monitoring a ship-source HNS spill response is recoverable from the polluter. This current policy of a privately funded regime should not change. However, we do not know whether a privately operated regime would be economically viable north of 60°, or whether such a regime would have to remain essentially government operated.

28. How could a regulatory preparedness and response regime for the Arctic be overseen and enforced?

This question does not relate to our organizations' direct interests or mandate.

29. What opportunities exist for bilateral, multilateral, or circumpolar cooperation in the Arctic (e.g., Denmark, Alaska, and Arctic Council)? How should this influence Canada's regime?

This question does not relate to our organizations' direct interests or mandate.

30. Are there international best practices (ship-source or other) that should be considered when creating a regime in the Arctic?

Various organizations around the world have already developed substantial information on this subject. Some relevant information sources include IMO manuals, the REMPEC Manuals for the Mediterranean, the Helsinki Baltic Sea Convention manuals, the North Sea Bonn Agreement manuals and other documents developed by the European Maritime Safety Agency. The Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP), ITOPE, IPIECA and the Centre of Documentation, Research and Experimentation on Accidental Water Pollution (Cedre) are also potential sources of valuable information. We note that several Canadian universities and research centers such as ArcticNet, the Arctic Institute of North America, the Marine & Environmental Law Institute, the Munk School of Global Affairs and the Marine Environmental Observation Prediction & Response Network all perform research on various topics that might inform the work of this panel, along with programs under the umbrella of the National Research Council of Canada, work by the Bureau of Safety and Environmental Enforcement and the Arctic Oil Spill Response Technology Joint Industry Program. Last, but not least, all documents published by the Arctic Council can provide useful references. When considered together, these resources can provide a wealth of information that can be used in a Canadian context.



Research and Development

31. Are there gaps in knowledge on the behaviour, fate and effects of oils and HNS in icy waters?

This question does not relate to our organizations' direct interests or mandate.

32. Are there gaps in knowledge on response techniques to address these spills in icy waters?

This question does not relate to our organizations' direct interests or mandate.

33. Who should be responsible for funding and conducting this research?

As per our comments on Canada's Marine Oil Spill Preparedness and Response Regime and those submitted on Canada's Marine HNS Preparedness and Response Regime, we believe that the government should foster support for research and development in the field of oil/HNS spill response, along with factual and pilot project testing of prevention and preparedness measures. The results of these projects should support not only risk assessments, but also improvements to the regulatory regime, and be made available to the public.

Concluding Comments

As previously mentioned, we believe it is crucial that the government undertakes a detailed risk assessment of current and future trends in Canada's Arctic waters, and use the resulting information as the basis for developing a preparedness and response regime that reflects both the quantities and types (oil vs HNS) of substances being carried, as well as the environmental sensitivities of the waters involved. We also believe that Canada's future preparedness and response regime must abide by the international agreements developed by the International Maritime Organization (IMO), and in particular with the regulatory provisions provided in the Polar Code and with negotiated agreements with other Arctic states such as the *Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic*. Finally, we recommend that the government develop a comprehensive communication strategy on how such a regime has been developed and will be implemented, in order to foster a sense of security with the general public that Arctic waters are being adequately protected.



We trust that that the foregoing comments will be helpful in the development of a ship-source spill preparedness and response regime for Canadian Arctic waters. We also take this opportunity to reiterate our willingness to collaborate with Transport Canada in its efforts to develop such a regime. In the meantime, we would be pleased to provide any additional clarification or information you may require, and remain available to provide input in the future.

Respectfully submitted,

A handwritten signature in black ink that reads "Caroline Gravel". The signature is written in a cursive, flowing style.

Caroline Gravel
Director, Environmental Affairs
Shipping Federation of Canada

The Shipping Federation of Canada (The Federation), incorporated by an Act of Parliament in 1903, acts as the pre-eminent voice of shipowners, operators and agents involved in Canada's world trade. Its overall objective is to work towards a safe, competitive and environmentally sustainable marine transportation system.