Gulf of Finland Oil Transport / Spill Issues
Summary and Recommendations from May 2004 visit

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Having visited Estonia, Finland, and NW Russia briefly from May 22 - May 30, 2004 to give presentations and hold meetings on oil transportation safety / spill prevention and response preparedness, I wanted to very briefly summarize some of my impressions and recommendations.

One initial caveat -- I feel the primary objective / accomplishment of the mission was to transfer information about our experience here in Alaska, the Exxon Valdez spill, and the many safety improvements made in our oil transport system subsequently - essentially to convey the "Lessons of the Exxon Valdez" to Baltic regional authorities / citizens. The visit also may have helped to further heighten the awareness of the risks of oil shipping to the Baltic marine environment. Embassy / Consulate staff did a remarkable job in organizing presentations, meetings with appropriate authorities, and tours of three oil terminals - Fortum (Porvo) in Finland, and Vysotsk and Primorsk in Russia.

The visit was extremely brief (one week) and at this point, I have only a limited understanding of the current state of oil transport safety in the region. Thus, I hesitate to draw many substantive conclusions. I have high regard for the many dedicated individuals in the region who have committed a great deal of time and effort to this issue. In particular, the existence of HELCOM is a big step in the right direction. I would like to respectfully offer a few general impressions and recommendations for further consideration. These are offered in a sense of constructive, cooperative problem solving, and not in critique. To the extent that some of these recommendations have already been considered / adopted / dismissed in region, they may simply be disregarded. The following general recommendations are simply offered in the hope that they may help further improve the safety of the oil transport system in the region.

Prevention

1. First, there seems to exist general concern in government, industry, and the NGO community regarding the region's increasing vulnerability to large oil spills. This is good. However, I feel the level of concern is still not as high as it should be. This is understandable, in that there has yet to be a large spill in the region. But it seems with the increase in shipping volume, the attitude should be "not if, but when" a large spill will occur. There is unfortunately a level of complacency that needs to be removed. The threat of a catastrophic spill is very real, and must be taken more seriously than at present.

2. On a scale of 1 - 10 (with 10 being the highest level of prevention / response

preparedness possible, and 1 being the lowest), I would subjectively rank the Gulf of Finland region at about a **6** from my limited information at this point. By comparison, I feel the system in place in Prince William Sound, Alaska is at about an **8** at this point, and feel it is necessary to improve the transport systems in both regions accordingly. There is certainly need for improvement.

3. Of the three nations, apparently only Finland has an established oil spill fund, and that a particular fund, in my opinion, may be insufficient to accomplish the many additional prevention / response preparedness tasks necessary. Estonia and Russia should be encouraged to establish similar funds, from a tax / levy on tonnage of oil shipments, to be used to improve the safety of the oil transport system in region, and to assist in the immediate response to a spill. These funds could be modeled on our Oil Spill Liability Trust Fund here in the U.S., which is capped at $1 billion USD. Alternatively, perhaps there could be consideration for a joint fund among all Baltic states. This fund could be a shared fund to improve spill prevention and response preparedness across the entire Baltic region. The Baltic fund could accrue revenues similar to the national funds – from a levy on tonnage of oil shipped – and collected by each coastal state. The amount should be on the order of $1 billion USD. A $0.05 / barrel tax (as in the U.S.) is nominal compared to $40 / barrel oil, and the public generally accepts the small marginal additional cost for spill prevention / response.

4. As I recommended while in region, it seems very important for authorities from all three nations to jointly sponsor a Comprehensive Risk Assessment for large spills in the region. Perhaps HELCOM is the appropriate entity to administer / sponsor such an initiative. The Risk Assessment should identify potential causes, sources, locations, size and types of oil that may be spilled, potential flow rates, spreading characteristics, for all seasons. At a minimum, the Risk Assessment should include a systematic identification of vessel traffic patterns, identify navigational convergences/restricted areas that are at higher risk of grounding or collision; evaluate need for additional improvements in the new Vessel Traffic System, and include a rigorous analysis of spill risk from disabled tankers. The Disabled Tanker Study should analyze the full spectrum of power and rudder failures - various recognition times, sea conditions, wind speed and direction, ice conditions, size and speed of laden tankers, proximity to hazard situations, etc. The disabled tanker study should also focus on the types of tug escorts that would be able to render a save in the higher risk scenarios identified by the study - including the tug size, propulsion type and power, where they should be stationed / or in escort, when they should be tethered to the laden tanker, etc. The tugs must have sufficient power / maneuvering capability to bring a disabled tanker under control, even in the most extreme conditions.

5. Salvage tugs - there is clearly need for additional salvage assets and agreements in region. These vessels should be located strategically so that they can take in tow a disabled tanker anywhere along the route, and be of sufficient power / maneuverability to operate effectively in extreme weather conditions. The tugs should also have adequate fire-fighting capability on board.

6. Careful consideration should be given to the navigational challenges of the North-South vessel crossing area between Helsinki / Tallinn, with perhaps additional communication protocols for crossing vessels to avoid collision, and/or time/area traffic exclusions when loaded tankers are transiting East – West in conditions of low

visibility (fog, snow, rain, etc.). Additionally, there may be need to establish tighter navigational protocols for passage through the Danish Straits, and other high-risk passages.

7. The Vessel Traffic System (or Vessel Traffic Management and Information System – VTMIS) should be thoroughly audited by a team of independent mariners, to detect potential holes in the system and make recommendations for improving coverage. This should include an assessment of continuous tracking / monitoring of all laden tankers, regular communication between the VTS and vessels, adequacy of radars, adding automatic surveillance systems, VTS watchstander procedures / training, alcohol screening for watchstanders, etc.

8. The current rules / locations for mandatory pilotage should be reviewed and improved for high-risk areas where necessary.

9. HELCOM should establish a vessel casualty risk matrix and vessel screening program by which each and every vessel hauling hazardous cargo in the region is well known to regional authorities - including the flag, owner, casualty history, hull configuration / vessel particulars, age, most recent inspection / classification society reports, crew, etc.

10. All tankers should be fitted with emergency tow packages that can be easily deployed to a tug in the vent of a power / rudder failure. These should consist of adequate tow wire and pick-up line and buoy. In PWS Alaska, the tow package required on all tankers consists of 400 feet of 2 1/4" wire rope, 720 feet of 6" circumference polypropylene floating pick-up line, pick-up buoy, and 2 1/4" D shackle connecting the pick-up line to tow wire. The tow package should be stored in such a manner, such as on a reel, that would allow two crewmen to deploy it within 15 minutes, without power.

11. The three oil terminals I briefly toured - Fortum, Vysotsk, and Primorsk - all appeared well designed, constructed, and operated. However, I feel a complete engineering / safety audit of all Baltic oil terminals should be commissioned by HELCOM. Additionally, the condition of the terminals is but one component of the entire transport system. I should remind all of us that the condition of the Trans Alaska Pipeline System (TAPS) terminal in Valdez, Alaska was not at issue in the grounding and disastrous spill of the Exxon Valdez, just 20 miles outside the terminal.

12. All terminals in the region should establish and clearly enforce weather restrictions on vessel transit / loading to and from their terminals.

13. Regional authorities should establish a near-miss casualty reporting system, by which any near-casualty is to be reported (such as they Marine Accident Reporting System (MARS) by the Nautical Institute of London). As well, there should be established a system for confidential reporting by ship crew, other mariners, etc…such as a 1-800 phone number.

14. Substance abuse protocols should be improved and standardized throughout the Baltic. All tanker masters should be tested for alcohol before disembarking from terminals with a load of oil.

15. The program of aerial surveillance of all tankers should be expanded to the entire Gulf of Finland / Baltic.

16. All tankers should have helms fitted with auto-pilot alarms, capable of indicating that if the helm is turned with auto-pilot engaged, that the rudder is not responding and an alarm will notify the watchstander (note: this simple piece of equipment likely would have prevented the Exxon Valdez disaster).

17. Every tanker calling at Baltic ports should be boarded by appropriate government authorities. These boardings should verify all ship documents, and operability of ship systems / emergency equipment -- backup generator, backup steering gear, inert gas system, vent systems, pumps, oily-water separator, ballast water onboard, engine systems, navigational equipment, etc…and all tanker should be required to be boomed while loading / unloading.

18. Consideration should be given by all Baltic states to advancing the current IMO phase out of single-hulled oil tankers, and phase-in of new double-hulled tankers. The new fleet should also have double-rudders and two engines each, to maximize safety margins with redundant systems.

Response Preparedness

1. While there is some very good response equipment / personnel in region, there is simply not enough of it to respond to a large spill. The response planning standard should be set at least at 300,000 barrels (40,000 tons) of oil to be recovered in a 72 hour period. And, shippers should demonstrate that they are able to cascade sufficient equipment into the region to contain / recover a Maximum Probable Discharge – an entire 150,000 ton tanker load. Perhaps the establishment of a regional spill response center, strategically located, should be considered.

2. Spill drills for training of personnel / testing equipment should be expanded, and called at times on a surprise basis in inclement weather. These should be conducted jointly among all Baltic spill responders.

3. Response equipment should be pre-staged in locations where there is a higher probability of oiling in spill scenarios, particularly in areas that are remote, present more difficult access problems, and are near critical habitat.

4. Lightering standards should be established. Casualties seldom damage all the cargo tanks on a vessel, and thus there is need to quickly lighter / offload the remaining oil onto other vessels to avert additional spillage. Tankers and escort tugs need sufficient oil transfer equipment, with manifolds, reducers, hoses, adapters that fit each other.

5. There should be consideration for nighttime response capabilities, as this could present formidable problems. Responders may need to locate, track, contain, and recover spilled oil at night. Forward looking infrared sensor technology can be useful in locating and tracking spilled oil at night.

6. Governments of the Baltic should establish a standard for closing / opening beaches after oil spills – beyond the standard of when oil can no longer be seen, smelled, or

felt in beach sands, the beach may be considered safe. Quantitative hydrocarbon analysis should be used to derive a clean-beach standard to be used by all Baltic states.

7. The governments / industry in the region should continue to invest in spill recovery technology research and development for broken ice conditions.

8. A wildlife response strategy should be adopted Baltic-wide. This protocol should agree to precise strategies, including hazing of wildlife to remove them from the path of an on-coming slick, shore-side and/or floating wildlife treatment centers, training of wildlife responders, etc.

9. A Natural Resource Damage Assessment (NRDA) plan should be discussed and agreed to in advance of any large spill event. As part of this plan, agencies should agree who will do what, with what funds in the event of a spill. As well, pre-spill baseline data should be collected now, so that comparisons of post-spill impacts may be more credible.

Liability

I recommend that all Baltic states ratify the IMO / *IOPC Fund* Convention and the new *Supplementary Fund* bringing the amount available in an oil pollution disaster up to approximately $1.093 billion USD. In addition, I strongly urge all Baltic states to advocate the removal of the current limitation to liability that exists in the IMO Funds which precludes *most* environmental damage as an admissible claim.

The current international regime restricts compensation for environmental damage (other than loss of profit) to *"costs actually incurred or to be incurred for reasonable measures to reinstate the contaminated environment*." Such language is certainly open to interpretation, but as most environmental injury is simply not capable of being "reinstated", this provision severely limits a spiller's liability. This is an enormous loophole, and should be plugged. Indeed, the bulk of environmental injuries are presently not considered compensable in the international regime, as there normally does not exist a cost-effective means of directly addressing those injuries. Nonetheless, evolving corporate ethics around the world holds that corporations should be held liable for *all* damage caused by their business. Indeed in US Law, oil shippers are liable for the full extent of natural resource injuries caused in the event to a spill. This same provision should be incorporated into the international compensation regime. If not, then I urge all Baltic states to denounce the conventions and establish such liability protocols in national legislation.

Public Oversight / Involvement

It is incumbent upon all Baltic governments and oil industry operators to involve the citizens in the region in the effective oversight of oil transport safety. One means of doing so is to establish a citizens advisory council similar to those established in Alaska. A Baltic Regional Citizens Advisory Council (RCAC) should be broadly representative of all citizens in the region, have sufficient funding from industry, independence, and access to facilities. Essentially, a Baltic RCAC should become the eyes, ears, and voice for the citizens of the Baltic with regard to all oil transport / spill prevention issues in the region. As there are several adjacent nations, all with common purpose in this context, I

recommend that a Baltic-wide RCAC be established. The Baltic RCAC could be modeled on the Prince William Sound RCAC in Alaska (www.pwsrcac.org), with a paid staff, annual budget of approximately $3 million USD (from oil industry contributions), a broadly representative board, technical committees, etc. It should advise HELCOM, state governments, and the oil industry with regard to all oil transport / safety issues in the Baltic.

National Legislation

I urge all Baltic states to thoroughly reexamine their national laws and regulations regarding oil spill prevention, response preparedness, and liability, and to the extent necessary, improve such legislative mandates. This seems particularly important for the Russian Federation, and I reiterate my recommendation that Russia draft and adopt a Russian Oil Pollution Act to improve all aspects of oil transport safety.