Ottawa Forum Synopsis

It is impossible to try to summarize the proceedings of two concurrent week-long events in a few paragraphs or pages. Instead, I offer my personal synopsis of what I saw, heard and learned.

I have some perspective on large energy projects, risk management and mitigation, and maintaining and mobilizing a response force. This comes from my time working as the Nuclear Liability Act (Canada) Administrator, and subsequent work as a consultant in several sectors, including the energy sector. I hold a Certificate in Energy Programming and Evaluation, and am the author of the award-winning book, *The Emperor's New Hydrogen Economy*. I am currently the President of the Electric Vehicle Council of Ottawa, the Historian for the Electric Auto Association (U.S.), and a consultant in the community services and health care sectors. By Arctic standards, I am a 'southerner', and I believe those who will be most impacted by oil spills in the Arctic should have the greatest say in what will be done.

During the week, the oil industry made a lot of positive claims regarding their operations and practices. For example:

1. they share information related to safe operation, and have embraced a 'safety culture' for years
2. they are constantly learning from previous experience (i.e., mistakes that cause disasters)
3. they can recover upwards of 95% of oil spilled in icy water
4. ice covered water helps to contain a spill by acting as a natural boom
5. they are prepared to remediate spills effectively in ice-covered or icy water
6. they are prepared to accept full responsibility for all costs and claims related to spill damage and remediation (but only after the fact, not via insurance or posting collateral or guarantees)
7. the current arsenal of oil response techniques (booms, skimmers, in situ burning and dispersants – essentially unchanged since the 1970s) will be fully effective in the Arctic

Sadly, pretty much all the facts and evidence point to the contrary.

1. At the Inuvik Roundtable, when asked to provide information about their safety equipment and response plans to the public, industry representatives backpedalled and said they would provide the required information only to the Canadian National Energy Board (NEB), and the NEB indicated they could not make that information public due to the confidentiality requirements of the oil companies submitting the information. That's not sharing. If the oil industry truly embraced a 'safety culture', even just two years ago, eleven people would not have died at the Deepwater Horizon rig. In the oil industry, the 'safety culture' is clearly trumped by the 'greed culture', and that is well-documented and pervasive. The standard practice of the oil industry is sufficiently consistent and proven that it has a name: 'the resource curse'.
2. Clearly, the oil industry adamantly refuses to learn from previous experience, either their own or that of others (e.g., International Tanker Owners Pollution Federation - ITOPF). Otherwise, they would not be trotting out the same failed solutions that were shown to be

ineffective around the world in the 1970s, 1980s, 1990s, and again in 2010 in the warm, calm water of the Gulf of Mexico as being appropriate and effective today for use in icy waters in the Arctic.

3. The primary proposed solutions from the oil industry for dealing with a spill (boom & skim, in situ burning and dispersants) recovered only 3% of the oil spilled in the Gulf of Mexico in 2010. [The oil industry speaks of 'processing' up to 20% of the oil from the Macondo blowout. That includes the oil burned in place – changed from highly visible water pollution to less visible air pollution – and the oil combined with dispersant and sunk – changed from highly visible water pollution to less visible sea-bottom pollution. The amount actually *recovered* was about 3%, not 15 to 20%. So, even if the 20% figure was valid, where's the other 80%? Is there any other field of endeavour where 20% - let alone 3% - is considered a passing grade?] Nowhere in the world in a real-world spill situation have they ever recovered anything close to 95% of the oil spilled. They have never successfully demonstrated an ability, even under ideal test conditions, to recover 95% of the oil spilled in icy water. The 95% recovery claim simply is not true. Period. No matter how many times oil company representatives repeat it.
4. Real world spills (e.g., the Runner 4 or Godafoss ships sinking and running aground) in icy water and test spills (see Oceana video) prove the claim that ice creates natural booms to enhance oil recovery is simply rubbish and completely contrary to what actually happens. To make this statement before seeing the evidence is misleading. For the oil industry to repeat it after seeing this evidence is a wilful lie.
5. The oil industry has no significant capacity for dealing with oil spills in icy waters, e.g., a Class-5 ice-capable ship which can also recover oil. They have no proven ability to conduct operations in extended periods of dark, cold or inclement weather – all regular features of the Arctic. They don't even maintain recovery capabilities in the region.
6. The oil industry has never willingly accepted full financial responsibility for any major oil spill they have caused. They have left abandoned sites in the Canadian north from ventures in the 1970s and since. For example, more than twenty years after the Exxon Valdez spill, Exxon has not fully remediated the spill shoreline, or paid the full compensation related to claims.
7. In situ burning will create immense amounts of soot. In the event of a major spill, it could rival the smoke plumes from the Iraqi burning of the Kuwaiti oil wells. The oil companies do not address the impact of that soot on the albedo (reflectivity) of Arctic snow and ice, or on wildlife that may be exposed to the soot. Booms don't work in icy water. Current skimmer technology used by the oil companies is entirely inadequate for the job. The combination of oil and dispersants (notably Corexit) creates a toxic compound with severe and fast-acting health effects on humans that are exposed to it. Even short term exposures have been shown to cause deformities in other lifeforms exposed during their developmental period.

Oil companies at the Inuvik Roundtable claiming to have a 'safety culture' and an excellent track record regarding a commitment to clean operations, strong maintenance, and an exemplary operational track record were Chevron, Imperial Oil (Exxon-Mobil), ConocoPhillips, and the industry umbrella organization, Canadian Association of Petroleum Producers (CAPP). ...

During the course of the week of these events – a fleeting 5-day window in history – Chevron admitted one of their pipelines in the Gulf of Mexico ruptured, spilling unknown amounts of oil into the Gulf. (http://af.reuters.com/article/energyOilNews/idAFS1E78C1PP20110913)

During the course of the week, Imperial Oil was in court in Yellowknife pleading guilty to charges of environmental damage related to their land-based oil operations in the Northwest Territory, and fined $185,000. (http://nnsl.com/northern-news-services/stories/papers/sep19_11oil.html)

Immediately following the week of these events, on September 18th, ConocoPhillips acknowledged they would have to provide more money to settle claims arising from the Bohai Bay incident. (http://www.conocophillips.com/EN/newsroom/news_releases/2011news/Pages/09-18-2011.aspx)

CAPP is best known to Canadians for presenting 'feel-good' commercials about the Alberta tar sands. Sadly, the tar sands were also making their own news while the Inuvik Roundtable and Ottawa Forum were under way. (http://www.water.ca/oil-sands.asp)

While actually making themselves available to the public for a week was a unique event for the oil industry representatives, spilling oil and damaging the environment was just a routine occurrence for the industry.

During the week other credible people in Inuvik and Ottawa said things like:

The Arctic Ocean will be ice-free within 10 years, and probably 5.

The oil industry does not know how to operate without spilling oil – it is a common occurrence in their operations.

The oil industry already has a history of exploring for, and producing oil, in the Canadian north. The legacy is industry profits and abandoned, despoiled drill sites that have not been cleaned up more than 3 decades after operations were closed. That's business-as-usual for the oil industry, and they have given no reason to believe this will change in their proposed, new operations.

The only safe approach to oil exploitation would be based on the Precautionary Principle, and the oil industry rejects the Precautionary Principle wholly and without reservation.

If the industry is permitted to drill, there is no question there will be oil spills. The questions are when, where, and how much will be spilled.

Small spills are part of how the oil business operates. There are spills as the first oil is produced. There are spills when transferring oil to tankers. There are spills at pipeline pumping stations. There are spills when aging or poorly maintained pipelines break or rupture. There are spills when ships are fuelled. There are spills when vehicles are fuelled. There are spills when ships go aground (2 major events in the Canadian north in 2010 alone).

The environment in warmer regions can recover from small spills in a matter of years or decades. In cold climates, especially where things freeze for extended periods annually, the recovery time

from a small spill could be several human generations. For a large spill in a cold climate, there is no credible estimate on how long it would take the environment to recover. Oil is easily found just below the surface on the shore of Prince William Sound today, more than 20 years after the Exxon Valdez spill, in a considerably more temperate area than the Beaufort Sea. (According to ITOPF, the Exxon Valdez wasn't even a particularly big spill – just 37,000 tonnes– which doesn't even make their top 30 list. And that list is only for ship-based spills, it doesn't include events like Macondo or other drilling releases or the Kuwaiti well fires. ITOPF doesn't even bother to collect data on spills less than 7 tonnes (50 barrels) – too small, and presumably too common, to warrant reporting.)

In the Macondo event (2010 Gulf of Mexico), the oil industry recovered approximately 3% of the oil released. That was in calm, sheltered, warm waters during long, sunny summer days, surrounded by the heart of the American oil industry, including its stores of remediation equipment and expertise. They won't do nearly so well in icy waters, where darkness can be continuous for weeks, storms are a regular weather feature, and it can be very cold.

The anticipated high content of natural gas in the sub-sea deposits in the Beaufort sea will increase the risk of a blowout dramatically relative to exploration wells in the Gulf of Mexico.

There is no publicized plan on how to deal with the natural gas that will be released, as the objective is to produce only the oil in the off-shore drilling operations. Natural gas is primarily methane (with a few poisons, toxins and carcinogens mixed in), which is a potent greenhouse gas. From a greenhouse gas perspective, even flaring the gas would be preferable to venting it into the atmosphere (although flaring will produce some soot which will affect the albedo (reflectivity) of the ice and snow, which will further acceleration climate change).

Exxon spent more than 18 years in court fighting all efforts to get them to pay for the damage caused by the Exxon Valdez spill. In the final judgement, Exxon is required to pay out less than 10 cents on the dollar for the claims submitted. Even with that whittled down judgement, claimants are having to go back to court to force Exxon to actually pay out the claims as established by the U.S. Supreme Court decision. (http://thinkprogress.org/romm/2010/06/15/206151/the-exxon-valdez-spill-bp-escrow/) That's how the oil industry really responds to damages by oil spills that they cause.

An attendee at the Ottawa Forum said something to the effect that the oil industry will say whatever regulators and stakeholders want to hear to get the permits to drill and produce, but once they have the permits, they immediately revert to business as usual.

There are better ways to deal with oil spills. Two of these were presented at the Ottawa Forum (Spill Green's neutralizing polymer solidifier and Extreme Spill Technology(EST) vacuum skimmer ship). The oil industry is aware of these technologies, and their potential effectiveness, but is not prepared to embrace them even though they are far less expensive than the ineffective technologies they continue to promote. In 2007, Shell Oil unveiled its Arctic oil response fleet that cost $100 million and consisted of the same 40 year-old technology that recently was a complete failure in BP's Gulf of Mexico spill. An EST Polar Class 5 oil skimmer ship equipped with Spill Green's neutralizing polymer solidifier would cost about $40 million and vastly outperform Shell Oil's fleet.

One of the reasons RESTCo sponsored the Ottawa Forum was to ensure that the scientific findings from the Beaufort Sea Project in the 1970s were made known to the NEB and the participants in the current hearings. They were never mentioned during the course of the week in the broadcasts from Inuvik. That is truly an egregious oversight, as the Beaufort Sea Project reports cover the real science of oil spill effects in icy waters in five volumes (Birds and Marine Mammals, .Crude Oil in Cold Water, Fish, Invertebrates and Marine Plants, Oil, Ice and Climate Change, and, Oil Spill Countermeasures).

The NEB claims they will not permit drilling unless it is safe for the environment and local population. However, they do not embrace the Precautionary Principle in their review of the proposals. It feels like the NEB has already decided to grant the permits (as AAND has done in recent years), and this review is meant to gauge how much resistance there is in the local population, and what conditions will be applied to the drilling permits.

In 1970, the Nuclear Liability Act was passed, and required every operator of a nuclear installation to carry insurance to cover claims in the event of a nuclear incident. For most installations, that amount was $75,000,000, which was a cap beyond which the government would pay additional claims. This figure was based on the insurance industry's ability to participate, not any credible estimate of what damage could actually occur. In current dollars, that figure would be in the range of $500,000,000 to $1,000,000,000, just allowing for inflation, and not the increased consequences associated with more people living in proximity to the installations. If the insurance industry is not prepared to underwrite the oil industry to cover the likely consequences of a demonstrated accident scenario, or the oil industry is not prepared to pay a premium established in the free market, that should be sufficient message to us all that we should not proceed with such projects.

I understand the attraction of the mirage of increased local employment. To understand how it really works, consider the workforce at the Alberta oil sands today around Fort McMurray. The great majority of the workers there are transplants from elsewhere, and many are platooned in and out on a regular basis. This is a pattern repeated around the world in the oil industry, and will likely be the case with off-shore drilling in the Canadian Arctic.

There are many factors to be considered, and much at stake. For the sake of the environment, the wildlife and the local residents that harvest their food from the sea around the proposed drilling locations and nearby land and ice, I hope the residents and the NEB choose wisely.

My Recommendations to the NEB.

1) Given the primary cause for this NEB review is the extraordinary hazards associated with drilling in icy waters, and that the companies have indicated they will not be ready to drill for at least 3 years, and the current expectation by climatologists that the Arctic Ocean will be ice-free within as little as 5 years, issue no permits for off-shore drilling in the arctic until the Beaufort Sea is ice-free at least 6 months out of the year, and fully ice-free for at least 2 years wherever the proposed drilling is to occur.

2) No permits should be issued for further oil exploration or production, on-shore or off-shore, in the Canadian North until all past sites are remediated to an acceptable standard determined by the local population.
3) No permit should be issued that does not include a fully-capable same-season relief well as part of the proposal. This is the only measure that finally worked in helping staunch the flow of oil in the Macondo incident. (The 'safety culture' did not work. The drilling mud and cement did not work. The monitoring and regulation systems did not work. The blow-out preventer did not work. The first cap did not work. The junk shots did not work. The second cap worked (so far, we think). The relief well worked.)
4) Each new drilling permit should require a performance bond or escrow account or equivalent financial guarantee in the amount of Cdn$40,000,000,000.00 (40 billion dollars). This fund must be immediately accessible by the government, regulator or other clean-up authority in the event of a spill. This is the amount we know BP has spent on the Macondo clean-up today, however ineffectual, and which is not yet complete. We can be sure a major event in arctic waters will cost more than that to clean up. This bond (or equivalent) does not relieve the company of its obligation to pick up the entire clean up cost and related claims, but it at least proves the money will be available when it is required, not 20 years later and at 10 cents on the dollar. The oil companies cannot self-insure – this will only encourage them to set up under-funded shell corporations to 'own' the well and the related liabilities, which they will fold as soon as there is an incident, leaving the environment and taxpayers to bear the costs.

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