REGIONAL ASSESSMENT OF OFFSHORE OIL AND GAS EXPLORATORY DRILLING EAST OF NEWFOUNDLAND AND LABRADOR
Technical Advisory Group (TAG) Session
Oil Spills, Unauthorized Discharges and Other Unplanned Events
September 12, 2019
QUESTIONS AND ITEMS FOR DISCUSSION
PARTICIPANT INPUT FORM

Name and Affiliation: Mark Brooks, WWF-Canada

1) If a completed Regional Assessment will obviate the need for activity specific assessments, is there a need to move the conduct of spill fate and behavior modeling to the operations authorization application process?

The study area is too large to exempt individual drilling proposals from the requirement to carry out specific project-level assessments. The entire area of the Regional Assessment will need to be subject to oil spill trajectory modelling and impact analysis at various scales of oil spill and in relation to areas that have been identified as being ecologically and/or biologically significant.

2) Do you have any suggestions or comments on the list of mitigation measures and their implementation for future exploratory drilling activities in the Study Area?

According to a Scandower report based on SINTEF data, among the various phases of offshore operations, exploration drilling entails the highest risk of blowout.[1] According to the U.S. Bureau of Safety and Environmental Enforcement, of the 37 deepwater drilling blowout incidents between 1980-2015 in U.S. waters, 27 were the result of exploration drilling. Some of the conditions that can increase the risk of a well blowout are present in the north Atlantic such as deep water, extreme weather and the need for a significant amount of exploration drilling.

For instance, in the case of the 2018 Husky Sea Rose FPSO accident off the coast of Newfoundland, which was the largest spill in the province's history, a violent storm (not uncommon in the region) appears to have resulted in a flowline being disconnected on the rig. Despite current regulations requiring a contingency plan from operators that includes an oil spill response plan, weather conditions at the time of the Sea Rose spill meant that almost no oil was recovered and response capacity was severely compromised. This was the second serious incident by Husky Energy's SeaRose FPSO in a year and a half. In May 2017, a huge iceberg came within 180 metres of the same vessel, so close that the crew were told to "brace for impact," yet oil production was not halted. Investigations into the most recent Hibernia spills are still ongoing and the official investigation into the cause of the Husky Sea Rose accident has not yet been completed.

What is clear is that current offshore regulations and oversight are not working effectively. That two serious incidents could occur over such a short time span indicates the hazards common in extreme environments and highlights the need for a higher set of regulatory and governance standards for companies operating in harsh and remote conditions such as those found in the north Atlantic offshore. For example, currently in Canada the offshore Boards and the Canadian Environmental Assessment Agency (CEAA) do not require offshore operators to have some basic safety equipment on hand, such as capping stacks, which is a device that has been proven effective in stopping well blowouts and is required in Alaskan offshore operations. Documents filed to CEAA in relation to drilling projects in the

[1] https://officerofthewatch.com/2013/08/06/the-probability-of-an-offshore-accident/

Flemish Pass indicate that, if there were a well blowout, the capping stack would have to be shipped from Norway or Brazil, a process that could take between 14 and 36 days.[2]

Operating procedures that were deemed acceptable by the offshore regulator have resulted in three serious incidents in one year and WWF-Canada believes stronger regulations are now required to protect marine wildlife from oil and gas operations, including the proposed exploratory drilling program in the study area. We are also calling for an independent offshore safety authority, similar to what exists in Norway and Australia and as recommended by the inquiry looking into the 2004 Terra Nova spill. The authority would monitor adherence to environmental and safety protocols and impacts to seabirds (e.g. light pollution and flaring if practiced).

Extreme conditions and the fact that companies are drilling in deeper and deeper water mean that every reasonable measure must be taken to prevent accidents from happening in the first place. Proposed regulations under the Frontier and Offshore Regulatory Renewal Initiative (FORRI) state that "*The contingency plan shall set out the procedures, including emergency response procedures, practices and resources and monitoring necessary to effectively prepare for and mitigate against the effects of <u>any foreseeable event</u> that might compromise safety or environmental protection*…" (emphasis added).

The question of "foreseeability" can be contentious in the courts. If a possible hazard has been identified and ignored, the operator would certainly be considered negligent. However, oil and gas drilling operations in deepwater offshore environments can encounter many potential events and hazards, some of which may be considered reasonably "foreseeable" by the courts, while others may not. If a serious accident were to take place as the result of a *force majeure* (chance occurrence or unavoidable accident), it is conceivable that the government (i.e. taxpayers) would be liable for clean-up costs above $1 billion as per the liability rules set out in Canada's Energy Safety and Security *Act*. It is worth noting that the Deepwater Horizon blowout in 2010 resulted in total liability and clean-up costs of more than $50 billion USD and it is quite likely that a major spill in the north Atlantic would be extremely difficult to clean up with potentially devastating impacts to the marine environment. The burden of proof would be on the Canadian government to prove the operator had been negligent for clean-up costs greater than $1 billion.

One way to mitigate against the risks of offshore deepwater drilling would be to introduce unlimited strict or absolute operator liability even in the case of unforeseeable accidents, which would help to ensure that operators take every necessary precaution to prevent accidents from occurring. Other jurisdictions do not have liability caps, regardless of fault. For instance, in Norway operators are liable for all pollution damages without regard to fault, although liability can be reduced at the discretion of the government.[3]

Canadian regulations also make repeated use of the ALARP ("as low as reasonably practicable") risk reduction principle when discussing safety and environmental protection measures. The test of what would be considered a "reasonable" measure would be determined by the courts *after* an accident takes place. However, courts have ruled in other cases that they are not necessarily equipped to make determinations on issues that even experts in the field cannot agree upon. With respect to Canadian jurisdiction, we are not aware of any Supreme Court ruling specifically clarifying the meaning of ALARP. However, Canadian courts can rely on the English common law to guide decisions

[2] CBC News Staff. Weeks to cap a subsea oil leak? It's industry standard, says official. https://www.cbc.ca/news/canada/newfoundland-labrador/oil-capping-timelines-nl-1.4933106
[3] Norwegian Petroleum Act, section 7(3).

where there is no previous precedent. As such, in *Edwards v. National Coal Board (U.K.,* 1949), the court ruled that there must be a "gross disproportion" between the risk reduction and the sacrifice, for it to be considered not reasonably practicable, but did not specify what would constitute such a disproportion.

As indicated by the U.K.'s Health and Safety Executive, ALARP provides great flexibility but also has drawbacks. Crucially, "Deciding whether a risk is ALARP can be challenging because it requires duty-holders to exercise judgement."[4] To sufficiently mitigate risk, the actual determination of ALARP should flow from a "social process" that is explicitly described in regulations and involves collaborations with representatives of the following four groups:

1) the affected public;
2) governments of those affected (local, provincial/territorial, federal);
3) commercial/industrial groups;
4) civil society including Indigenous organizations.

There is very limited capacity to respond to a major spill in the Newfoundland-Labrador offshore. How will the CNLOPB prepare for Tier 2 Regional Resource responses in such a vast and remote region? A 2012 audit by the Office of the Auditor General's Commissioner of the Environment and Sustainable Development found a long list of concerns regarding the Atlantic offshore Boards and federal departments' ability to respond to oil spills, as well as the Board's regulatory role in ensuring operators were prepared to respond.[5] The Auditor General also flagged urgent questions about the Board's level of preparedness for a major spill, which have not been addressed. The recent spills raise those same questions again and WWF-Canada is calling for the urgent adoption of the following measures to help ensure that a similar accident does not occur in the future:

- review and strengthen extreme weather protocols, including the creation of Arctic-specific regulations under the Canada Oil and Gas Operations *Act*;
- review of and changes to decision-making authority for disconnecting and reconnecting flowlines;
- creation of an independent offshore safety authority to monitor adherence to environmental and safety protocols;
- improved spill preparedness tools on site, including capping stacks;
- improved coordination between the offshore regulator and the operator and other government departments;
- clearly defined roles and responsibilities of government authorities and the operator;
- regular spill preparedness drills;
- better monitoring for species at risk and more oversight by the offshore Boards;

[4] http://www.hse.gov.uk/risk/theory/alarpglance.htm
[5] http://www.oag-bvg.gc.ca/internet/English/parl_cesd_201212_01_e_37710.html

- better transparency and mandatory reporting of all spills including small spills; and
- the requirement for drift block deployment to obtain a perspective of the impact of spills on seabirds.

3) Are current physical/environment monitoring programs of drilling programs, and the results obtained, transparent and accessible to facilitate continuous improvement of our understanding of the effects of oil?

4) Do you have any other input or recommendations that you would like to provide to the Committee on this topic?

The impact of a well blowout or major spill in the north Atlantic would be catastrophic due to heightened sensitivity of the cold water marine environment to pollution and the tremendous difficulty of ensuring adequate oil spill response in remote locations under potentially extreme weather conditions. Although medium to large spills are unlikely to occur, the effects of oil spills on the environment would be extremely adverse, thus increasing the overall risk calculation. Equipment malfunctions, extreme weather and mistakes are unavoidable risk factors that can be minimized to some extent but will always be present in offshore operations. Efficient spill response can help minimize the consequences of an oil spill (and thus reduce overall risk), but current response capacity is inadequate, as demonstrated by the Husky SeaRose incident, and a number of important steps need to be taken to improve spill response before offshore oil and gas drilling proceeds.

According to the SINTEF database, an average of 2.3 well releases or blowouts per year occurred in the U.K. and Norwegian waters between 1980 and 2008.[6] Even after the Deepwater Horizon catastrophe, there were seven losses of well control – the precursor to a blowout – in the Gulf of Mexico between 2010 and 2015. Operators are attempting increasingly technically ambitious operations; they are expanding their operations to new, often environmentally sensitive areas, and the industry continues to tackle ever more challenging projects.

It would be useful for the Committee to provide a numeric estimate of the potential likelihood of a well blowout or major spill should more oil and gas activity proceed offshore of Newfoundland and Labrador. For instance, in 2014 the U.S. Bureau of Ocean Energy Management (BOEM) estimated that, based on "considerable historical data" and "statistical estimates," there is a 75 per cent chance of one or more large spills (over 1000 barrels of oil) occurring

[6] https://www.sintef.no/en/projects/sintef-offshore-blowout-database/

over the course of 64 years of production (project lifespan) if leases are developed in the Chukchi Sea area north of Alaska, and a 25 percent chance of no spills occurring over this time.[7]

[7] U.S. Bureau of Ocean Energy Management. October 2014. Chukchi Sea Planning Area Oil and Gas Lease Sale 193. https://www.boem.gov/uploadedFiles/BOEM/About_BOEM/BOEM_Regions/Alaska_Region/Leasing_and_Plans/Leasing/Lease_Sales/Sale_193/Lease_Sale_193_DraftSSEIS_vol1.pdf