

Greenpeace MPs briefing: Evidence Session with Arctic Oil Industry, 14th March 2012

1) SPILL RESPONSE PLANS CONTAIN WORST CASE SCENARIOS THAT AREN'T WORST CASE

Shell's spill plan for the Alaskan Beaufort Sea claims that oil would only "be released to a relatively small area of water"¹ and uses a worst case scenario of 25,000 a day in its Chukchi oil spill response plan over 30 days (750,000 barrels). However, the US Bureau of Ocean Energy Management's (BOEM) worse case discharge for a Chukchi Sea well blow out estimate a discharge of up to 61,000 barrels a day.²

Shell's "worst case" discharge case models a spill between 7th August and 6th September,³ which only relates to a summer spill scenario. Shell provides no oil spill modelling for a spill on or around 31st October or estimate the movement of oil trapped under ice subject to subsea currents. Surely these are worst case scenarios? Shell's spill response meekly explains that as weather and ice conditions become more severe in later October, oil spill response simply becomes "no longer possible."⁴

Cairn Energy outlines a worst case spill of 5,000 barrels a day for 37 days, but Professor Richard Steiner argues that this rate is highly questionable. Its plan also notes that the worst-case maximum pressure expected is 10,987 psi, which is close to the pressure of BP's ill-fated Macondo well (12000 psi). Rick Steiner notes that a blow out at one of Cairn's wells could release comparable amounts of oil per day (60,000 barrels a day for around 85 days) meaning the maximum discharge could be 10-20 times larger than 5000 barrels a day over 37 days and should be used for response planning purposes.

Questions for the oil industry:

- *Do you agree that it would be impossible for a blowout occur off Alaska at the end of the drilling season?*
- *If you do not, why haven't you modelled the impact of a late-season accident in your "worst case" spill plan?*
- *What is there in your plan to prove you could deal with a late season accident?*
- *Do Cairn / Shell accept their worst case scenario modelling does not adequately reflect a worst case?*
- *Do Shell accept the US authorities' estimate of a one-in-five chance of a major spill occurring over the lifetime of activity in just one block of leases in the Alaskan Arctic?*

2) PLANS CONTAIN UNREALISTIC ASSESSMENTS OF TIME TAKEN TO DRILL A RELIEF WELL

Both Shell's and Cairn Energy's plans contain information about the time taken to drill a relief well in the event of a blowout.

Cairn estimate 34 days to drill a relief well, but by their own admission, this estimate is taken from another large operator's arctic plan and the estimate covers all wells, despite them being of varying

depths and hundreds of miles apart. Shell estimates 38 days to drill a relief well in the Chukchi Sea, yet BP took 85 days to drill a relief well for the Macondo blowout, much higher than their estimated time, as operations had to be suspended several times due to bad weather. BOEM's worst-case relief well operation in the Arctic would take 74 days for a very large discharge.⁵

In a pre-hearing submission to the Canadian National Energy Board earlier this year, Imperial argued the building season in the Arctic is too short for a relief well to be finished in the same season. A main well, it added, takes two or three summers to complete.⁶

Shell's Chukchi response plan says that "a prudent operator can conduct a Chukchi Sea drilling program using a single drill ship. In the event of a blowout, the drillship would immediately cease its then-current operations and relocate to a safe location to initiate a relief well and intersect the blowout well." As the Pew Trust notes, there is no evidence of any case in history where a rig involved in a catastrophic well blowout was able to drill its own relief well.

Questions for the oil industry:

- *How much experience do you have of same-season drilling of relief wells with a single rig in the Arctic?*

3) CAPPING AND CONTAINMENT SYSTEMS – THEY HAVEN'T BEEN TESTED AND THEY WON'T WORK

The Chukchi and Beaufort oil spill response plans do not provide sufficient technical or design information about Shell's Arctic Well Capping and Containment System. The plans include no final construction date, no schedule for Arctic testing and no firm inspection plans prior to Summer 2012. In Shell's written submission to the Committee they confirmed the system would not be tested in icy conditions, despite the company's admission that ice can be present during the drilling season (see below).

Shell's oil spill response plans for 2009 and 2010 ruled out subsea well capping as 'technically infeasible for offshore wells drilled from moored vessels with a BOP sitting below the Mud Line Cellar⁷ (a 40ft hole drilled into the sea floor).⁸

We should recall, however, that BP's attempts to use various capping domes in the 2010 Gulf of Mexico were entirely unsuccessful.

The first plan was to put an "untested" 125-tonne concrete dome called the Subsea Oil Recovery System over the stricken Macondo well, "depending on the weather," to capture up to 85% of leaking oil.⁹ However, when deployed, icy hydrates made up of gas and water soon began to form at the top of the device, blocking the flow of oil to the surface, and the plan was soon abandoned.

BP's next plan was to drop a capping device on to the well. This 100-tonne dome, called a "Top Hat,"¹⁰ was specifically designed to be smaller so as to stop large amounts of hydrates forming inside it again. However, after lowering the Top Hat to the sea floor, BP decided again that the containment plan was probably not best suited to stopping the leak and left it sitting idle on the seabed.^[x] At first the company admitted that "what we attempted to do...didn't work,"¹¹ but it was soon obvious that all attempts to stem the blow-out using a containment dome had totally failed.

Cairn Energy's plan mentions capping the well but does not specify exactly what capping equipment will be used and how. The plan claims that its operations meet various design standards and requirements of oil well control, but the lack of detail in the plan makes it difficult to ascertain which standards Cairn has met and to what extent. Both Shell and Cairn's plan also omit critical technical information including the exact Blow-Out Preventer (BOP) design, the number of centralisers that will be used and precise formation of cement slurry.

Questions for the oil industry:

- *Why won't Shell test its dome in icy conditions when it admits these conditions could be present in the up-coming Alaskan drilling window?*
- *Why are sub-sea caps now technically feasible when they judged it not to be in 2009 and 2010?*
- *Why is Shell challenging the US government decision to shorten the drilling window by 38 days, when during the end of the drilling season there will be greater risk of ice encroachment?*

4) IT IS IMPOSSIBLE TO CLEAN UP AN OIL SPILL IN ICE

Shell's Chukchi Sea oil spill response plan admits that "the range of open water is variable from year to year and ice could be present at the drill site."¹² It adds that "there is extreme variability in the timing of breakup and freeze-up in the Chukchi Sea... summer ice conditions are highly variable from year to year. For example the duration of the summer open water period ranged from 8 to 24 weeks, reflecting the variability in breakup and freeze up dates." Furthermore, "the offshore transition period from very open drift ice to 9/10 or more ice concentrations is highly predictable, taking anywhere from one week to one month." The plan for the Beaufort Sea admits "ice incursions can occur at any time" during the summer drilling season.¹³

The oil industry admits mechanical recovery is useless when ice is present. The long term ecotoxicological impacts of chemical dispersants are not well understood, and the inefficacy of dispersants in the Gulf of Mexico spill was well documented.¹⁴

The US Geological Survey conclude that "there is no comprehensive method for clean-up of spilled oil in sea ice."¹⁵ Shell contends that they can clean up 95% of oil using in-situ burning. JIP research, funded by Shell, showed that oil weathered more than six days in field conditions was un-ignitable and unrecoverable with mechanical devices, that in-situ burning was only a viable option for approx. 5 days after oil is spilled and that it is not effective at all in 30-70% ice conditions, reporting that "after six days the oil was so mixed with slush that both mechanical recovery and in-site burning were evaluated as not effective."¹⁶ Therefore neither mechanical recovery nor in-situ burning will be effective weeks or months after the initial spill.

Questions for the oil industry:

- *Does Shell accept that that sea-ice can be present during the open water season off Alaska?*
- *Given this, why isn't Shell testing its capping and containment system in ice conditions?*

- *Does Shell accept that there is no known way of dealing with an oil spill when ice is present, and that JIP research, funded by Shell, concluded that they would not be able to clean it up using in-situ burning even if they waited until the ice thawed in the Spring?*
- *Do you disagree with the US Geological Survey estimate¹⁷ that between 1-20% of an Arctic oil spill could be recovered?*
- *How much of Shell's Alaska equipment has been tested in 'real' conditions, for example on a large scale, in ice conditions?*

5) INADEQUATE RESOURCES TO RESPOND TO A LARGE SCALE SPILL

The US coastguard has admitted that almost no infrastructure exists in the region. Admiral Robert Papp Jr,¹⁸ a senior official, said that "there is nothing up there to operate from at present...no way we could deploy several thousand people as did in the Deepwater Horizon spill."¹⁹ The response to the Gulf of Mexico spill involved 6500 vessels and tens of thousands of personnel.

The Pew environment group question the ability to support a major offshore oil spill response, noting that "there are insufficient airports, ports and roads along the Chukchi Sea coastline to support a spill response effort...there are no roads connecting the Chukchi Sea coast to the rest of Alaska."²⁰

Shell's worst-case discharge estimate more than quadrupled from 5,500 barrels a day in the 2009 Chukchi Sea plan, to 25,000 barrels a day in the 2011 plan, yet there hasn't been a comparable increase in resources – only an extra two vessel of opportunity skimming systems (VOSSs) staged 42 hours away were added to the response fleet, alongside two other skimmers.²¹

Questions for the oil industry:

- *Do you think the US Coast Guard's assessment that there is no capacity to respond to an Arctic accident is wrong?*
- *If BP needed 6,500 ships and 50,000 people to mount a response to Deepwater Horizon, what is your secret that gives you such confidence you could do the job with so comparatively few resources?*
- *How many vessels do you anticipate you need for a spill the size of Deepwater Horizon?*
- *How many vessels could you mobilise to the Beaufort and Chukchi Seas in what timeframe?*
- *How much does Shell estimate it would cost to clean up a Deepwater Horizon-style oil spill in the Arctic?*
- *What financial preparations have Shell made to cover this?*
- *What is your Shell's expectation about how much of any potential costs it would have to cover itself?*

- *Much of your oil spill response equipment is located in Wainwright, Alaska. When does Wainwright become ice-bound?*

6) OIL COMPANIES LOBBY AGAINST TIGHTER DRILLING REGULATIONS IN THE ARCTIC

The US Bureau of Ocean Energy Management (BOEM) attached a condition to the approval of Shell's Chukchi Sea exploration plan in December which means that Shell must cease drilling 38 days before the earliest expected ice encroachment at the drill site. That date is estimated as 1st November (based on 5 years of weather data). The 38 day requirement means Shell would have to suspend drilling in late September. The condition is intended to give Shell more time to respond to an oil spill before sea-ice appears in the area.

Shell has consistently opposed this measure. A media spokesperson said: "We're still looking at this. It essentially takes away one-third of the time we would be able to drill, which means the elimination of one well from our three-well exploration plan. This would have a significant effect," Shell spokesman Curtis Smith said. "We believe the restriction is unwarranted. There is no such restriction in our approved Plan of Exploration for the Beaufort Sea, and we are confused as to why it would be imposed for the Chukchi Sea."²²

Post-Deepwater Horizon, the oil industry lobbied to relax regulations that required a relief well to be drilled in the same season, instead insisting it could take up to 2-3 years.²³

7) THE OIL INDUSTRY IS ENGAGING IN LEGAL TACTICS TO SHUT DOWN PUBLIC SCRUTINY OF THEIR OPERATIONS

Both oil companies have been particularly litigious in response to efforts to expose the inadequacy of their oil spill response plans.

Last month, in response to a protest by Greenpeace New Zealand on Shell's drill ship the Nobel Discoverer, the company filed for an extraordinarily wide ranging injunction against Greenpeace USA based thousands of miles from where the protest took place, which sought to prevent its 500,000 email subscribers from taking action at any petrol station, regional office or other venue in the country. The Alaskan courts rejected the request as too broad but agreed to grant a limited interim injunction which applies only to the oil company's two drilling vessels. A full hearing takes place on the 14th March 2012.

Shell has filed a second lawsuit against a broad range of NGOs which seeks to prevent a possible legal challenge of their Chukchi oil spill response plan in the US courts in the future. Such a legal move is unprecedented, and shows Shell's wilful obstruction of any public scrutiny of their plan.

Cairn Energy sought and achieved a wide ranging and draconian injunction against Greenpeace UK and Greenpeace International following Greenpeace activists entering the company's headquarters to search for the oil spill response plan.²⁴ The injunction forced Greenpeace UK and Greenpeace International to retract photographs of protestors dressed as polar bears that were issued to national newspaper picture desks, as well as retracting tweets and Facebook posts, to protect "commercial confidentiality." It also prevents Greenpeace from "instructing, procuring, assisting, facilitating or encouraging or doing any act calculated to disrupt or to attempt to disrupt or to

prevent, impede or interfere with the petitioner’s lawful business operations”. Such a draconian order is an attempt to silence legitimate and lawful protest.

Questions for the oil industry:

- *What is it about your oil spill response plan that makes you so keen to have it ring-fenced from possible legal challenges?*
- *If you are as confident about the robustness of your oil spill response plan as you claim, surely any case brought against it by NGOs will quickly be thrown out, and there will be no risk of delaying the start of drilling?*

8) ARCTIC OIL HAS NOTHING TO DO WITH DOMESTIC ENERGY SECURITY

Shell has described Arctic oil as “a vital link in our US energy security system,”²⁵ echoing the argument that the USA must ramp up domestic oil production to ensure the country becomes less reliant on potentially unstable regimes in places like the Middle East.²⁶ However, there is absolutely no substance to this. Exploiting Arctic oil has nothing to do with energy independence for the USA. It is all about generating export markets for refined U.S. petroleum – supplying petrol not for Hummers in North Dakota, but for Chery QQs in Wuhan.

The International Energy Agency’s World Energy Outlook 2010 admits that demand for oil in countries like the USA is now falling,²⁷ while the industry itself has said they will never sell more petrol than in 2007.²⁸ At the same time Deutsche Bank believes that “this is the end of the 20th Century of Oil,” suggesting that global improvements in efficiency and demand reduction will “spell the end of the oil age.”²⁹ But whilst domestic oil demand in the USA is declining, production and exports have gone through the roof. Exports of refined petroleum products (e.g. petrol, diesel) from the USA have risen by over 130% in the last four years alone.³⁰ Last year, refined petroleum products were the top American export and the last time the U.S. exported more fuel than it imported, as it now does, was just after World War II.³¹

This massive rise in exports completely undercuts the oil industry’s claims about energy security. Shell is using increasing domestic production to feed the illusion that the United States can free itself of “foreign oil” or “dependence on OPEC” when demand for oil is actually falling.

1 http://www-static.shell.com/static/usa/downloads/alaska/plan_shell_odpcp_january_2010.pdf, p276

2 <http://www.petroleumnews.com/pntruncate/238251293.shtml>

3 http://www-static.shell.com/static/usa/downloads/alaska/plan_shell_odpcp_january_2010.pdf, 1-55

4 http://www-static.shell.com/static/usa/downloads/alaska/plan_shell_odpcp_january_2010.pdf, 1-88

5 http://alaska.boemre.gov/ref/EIS%20EA/Revised_2010_034/appD.pdf, D1

6 <http://www.globalpost.com/dispatch/global-green/100602/canadians-worry-about-oil-spilling-beaufort-sea>

7 [http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Other_Resource/Pew-Comments-Shell-Chukchi-2012-](http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Other_Resource/Pew-Comments-Shell-Chukchi-2012-EPandODPCP.pdf)

[EPandODPCP.pdf](http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Other_Resource/Pew-Comments-Shell-Chukchi-2012-EPandODPCP.pdf), p7. Because the Arctic Ocean ices over for part of the year and sea ice sometimes pushes down into the seafloor, the blowout preventer and other wellhead equipment would be located in a 40-foot-deep hole — known as a mud line cellar - in the seafloor.

This helps protect the equipment from ice but makes efforts such as placing a new capping system on a leaking well not feasible.

8 <http://www.chron.com/business/energy/article/Shell-spill-plan-upgrade-part-of-Alaska-request-1717708.php>

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- 9 <http://uk.advn.com/news/DJN/2010/article/42627314>
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- 15 <http://pubs.usgs.gov/circ/1370/pdf/circ1370.pdf>
- 16 Brandvik, J., Daling, S., Faksness, L.G., Fritt-Rasmussen, J., Daae, R.L., and Leirvik, F., JIP Report No. 26. Experimental Oil Release in Broken Ice – A Large-Scale Field Verification of Results From Laboratory Studies of Oil Weathering and Ignitability of Weathered Oil Spills, *SINTEF A15549 Unrestricted Report, Oil in Ice – JIP*, SINTEF Materials and Chemistry, April 20, 2010.
- 17 <http://thinkprogress.org/green/2011/07/13/268645/murkowski-plugs-shells-dangerous-plan-to-drill-the-arctic-ocean/?mobile=nc>
- 18 <http://www.uscg.mil/seniorleadership/>
- 19 <http://af.reuters.com/article/energyOilNews/idAFN1E7511OG20110620?sp=true>
- 20 http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Other_Resource/Pew-Comments-Shell-Chukchi-2012-EPandODPCP.pdf, p32
- 21 http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Other_Resource/Pew-Comments-Shell-Chukchi-2012-EPandODPCP.pdf, p17
- 22 <http://www.alaskajournal.com/Alaska-Journal-of-Commerce/AJOC-December-25-2011/Shell-will-try-to-modify-Chukchi-exploration-plan/#ixzz1oVs7TzmE>
- 23 <http://www.globalpost.com/dispatch/global-green/100602/canadians-worry-about-oil-spilling-beaufort-sea>
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- 28 <http://www.reuters.com/article/2010/01/28/us-iea-oil-idUSTRE60R5R720100128>
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- 30 http://www.eia.gov/dnav/pet/hist_xls/MTTEXUS2m.xls
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