



BP's Deepwater Oil Spill - Waiting for the Cement to Set - and Open Thread 2

Posted by [Heading Out](#) on August 7, 2010 - 10:30am

Topic: [Environment/Sustainability](#)

Tags: [deepwater horizon](#), [oil spill](#) [[list all tags](#)]

This is a second copy of this thread. The previous one can be found at <http://www.theoildrum.com/node/6818>.

BP began pumping cement into the Deepwater well at [9:15 am CDT](#) on Thursday and stopped the operation [at 14:15 CDT](#), having thereby pumped cement into the well for a period of 5 hours. The intent was to fill the well and any wormholes and voids that had developed in the reservoir during the leak. The cement has to harden before it can be tested to insure that it has integrity.

During the process Admiral Allen held [his press conference](#) and commented that the wait for the cement to harden would likely be in the 24 – 36 hour time frame, after which the relief well will start to drill forward into the annulus. The process of going down, intersecting and then cementing the annulus, and then doing the same for the production casing is apparently further confirmation that the well flowed up the production casing, which implies a shoe failure, rather than the annular failure which was the predominant theory of failure earlier in the summer.

Note the Admiral's comment on where the mud and cement from the static kill went.

Absent of what we've done in top kill, the assumption is you would have to go in, pump mud and cement into the annulus. But that hardens. So you've got that locked down. And you will come in and drill again into the casing.

Once we get in there we will know how much of an effect we've had with the mud and the cement from the top. That could shorten and make more simpler the bottom kill. That was one of the reasons to do it, and also reduce the risk of the bottom kill. Exactly.

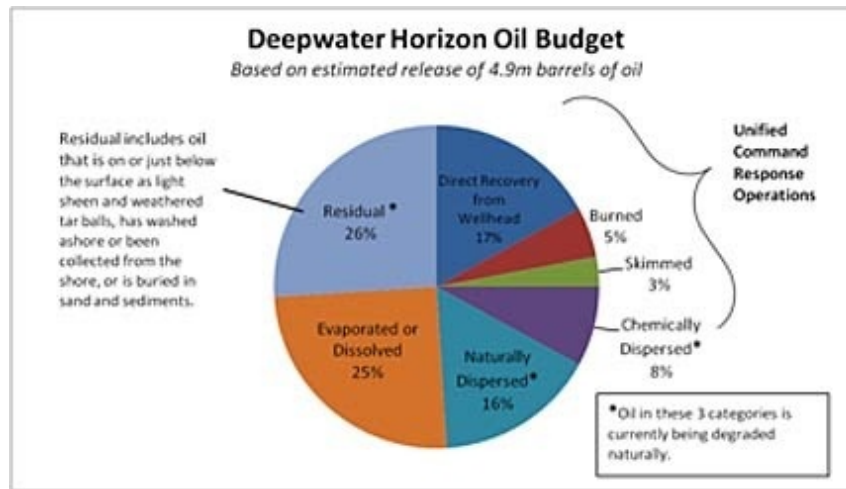
However, the final confirmation will not come until the relief well finalizes the kill, which is still the plan.

I have stated over and over again, let me be perfectly clear. I am the National Incident Commander. I issue the orders. This will not be done until we complete the bottom kill.

With the well cemented shut, once the pressure tests are carried out to validate the seal will hold, then the well can be considered effectively sealed, even though it is going to take another two weeks (one week to intersect, check and cement the annulus, then another week to do the same for the production casing) before the fleet of ships can disperse, leaving the well itself to history.

At the same time the fleet of ships that has been capturing the spill will move closer to shore, as the last of the oil that flowed into the Gulf is likely to be more evident now at some distance from the well.

The latest distribution of how the oil has fared is shown in this pie chart:



There will continue to be a lot of controversy over these numbers. Some of them are based on actual measurement, some on models, and the residual is a catch-all covering the difference between the estimated flow and the volumes in the other slices of the pie. I would still like to see the inside of the BOP, presuming that it will at some time come to the surface, to see how much erosion went on, and thus whether there was a build in the flow rate or, as has been suggested by the Admiral, a higher earlier peak in the flow.

It is welcome news that the well can now, if necessary, be left without any further risk of oil leakage into the Gulf. Given that the [possible storms are multiplying](#), and that we are moving into the more intense period for hurricanes, the relief felt by most at having reached this stage (assuming that the cement proves out, or is – if necessary – re-injected with a finer grade to ensure a seal if not) must be tangible.



Potential storms and Colin ([NHC](#))

It will also allow me to start looking again at some of the other concerns that are developing around the world that are of concern as we stare into the tea leaves predicting the available fuels for our energy future.



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