BP's Deepwater Oil Spill - Hooking up Helix Producer and Plans for New Cap - and Open Thread

Posted by Gail the Actuary on July 10, 2010 - 10:00am

Topic: Environment/Sustainability
Tags: deepwater horizon, oil spill [list all tags]

Update: The cap was removed at 12:37 pm CDT today.

The weather is finally good for a few day, and BP has received the go-ahead from the administration on changing the containment cap to a different type of cap that should allow BP to seal the well. With the new cap, while the well will continue to discharge hydrocarbons, all of the oil and gas will be collected, once adequate collection capability is on line. With the new system in place, it should be possible to accurately measure the amount of oil and gas escaping for the first time.

According to BP, installing the new cap is expected to take five to eight days. During part of that time, the flow of hydrocarbons is expected to increase.

Even before the change in cap begins, the hook-up to the Helix Producer is in progress. At yesterday's press conference Admiral Allen said,

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That hookup is in progress today. We hope that we will finish checking for leaks purging the lines. We have a possibility to be able to produce out of the Helix Producer sometime on Sunday. As you all know, that will raise the total capacity for our current containment cap system that is online between 50-53,000 barrels a day.
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A few more details below the fold.

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According to Admiral Allen at yesterday's press briefing, the "weather window" is potentially 7 to 10 days in length.

Whether or not the change to the new cap will begin today is not entirely certain. At yesterday's press briefing, Admiral Allen said that he expected a letter from BP, with more details. According to Admiral Allen:

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And subject to any issues that need to be clarified we'll be able to proceed. That means
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that we could at the earliest start removing the current capping device upon the wellbore sometime tomorrow. That would be followed a period where there would be no capping device, and we continue to produce through the Q4000 and the Helix Producer when it comes online.

The **letter has now been received** from BP. According to it,

As weather has impacted our ability to execute these activities in series we, in conjunction with government experts, have proposed that the capping stack procedure be implemented in parallel with the start-up of the Helix Producer. This timing takes advantage of a projected weather window of some 8 days as projected by NOAA. As noted in your letter, if the capping stack installation is executed in parallel with and ahead of the Helix Producer start-up, the Q4000 would be the sole oil collection system running during a substantial part of the operation.

With respect to starting the capping operation, the letter says:

In addition, the timelines in Attachment 1 describe two boundary conditions for the start of the capping stack operation. Those two conditions are the completion of the installation of the 1200ft flexible and the installation of the blue pod. We do not intend to start the capping stack operation until we have met both of these boundary conditions. Day 1 for commencement of capping stack operations may be adjusted forward depending on the timing for the completion of these two boundary conditions.

Attachment A indicates that meeting these two boundary conditions may take up to two days, although it is not clear when measurement of those two days begins.
Attachment A also shows the expected timing of various steps in the capping operation, under two scenarios, a "No Contingency" scenario, and a "Contingency" scenario. Under the no contingency scenario, installing the new "capping stack" would take five days from the time the boundary conditions are met. Under the Contingency Scenario, the new installation would take eight days after the boundary conditions have been met.

Attachment B of the same letter shows the expected timeline for the installation and startup of Helix Producer.

In Appendix B, there are actual dates given, rather than days from the time when boundary conditions have been met. The chart indicates that BP sees Helix Producer being online on Sunday, July 11. This is the same timing Admiral Allen talked about.
Appendix C gives a timetable for relief well drilling. The estimated completion date is August 13.

Dave Summers (Heading Out) points out a few things about Appendix C. First, according the schedule given, the final casing run has yet to be made, and that this is scheduled to take 8 days.

Second, the Appendix C sketch correlates the measured depths (MD) with the true vertical depths (TVD). We these numbers, the different illustrations that he has used in the past, and the Admiral’s briefing numbers can now be correlated.

Dave also notes that the lower sections of both wells are shown with rough walls indicating that the wells are not lined over those intervals, and that the walls of the hole are relatively rough rock - albeit perhaps not as rough as the scale might imply.

Oil collection continues at similar levels to the recent past. According to BP:

For the first 12 hours on July 9 (midnight to noon), approximately 7,930 barrels of oil were collected and approximately 4,140 barrels of oil and 28.5 million cubic feet of natural gas were flared.

• On July 8, total oil recovered was approx. 24,395 barrels:
  • approx. 16,305 barrels of oil were collected,
  • approx. 8,090 barrels of oil were flared,
  • and approx. 55.5 million cubic feet of natural gas were flared.