Final draft FRTG Qs and As

Vic Hines to: mcnutt 06/09/2010 03:23 PM

Cc: Bill.Lehr, mark_sogge, jnowakowski, Lori_Caramanian, bwainman

History: This message has been replied to.

Marcia -- please review attached questions and proposed answers related to the plume team's work and let me know if you've changes. Bill Lehr has reviewed and provided input, but I didn't want to clear DOI to use unless you had the opportunity to comment.
Thanks,
Vic

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Begin forwarded message:

> **From:** "Rodriguez, Julie" <Julie_Rodriguez@ios[illegible].gov>
> **Date:** June 9, 2010 12:12:50 PM PDT
> **To:** "Hines, Vic" <vhines@usgs.gov>
> **Subject: Final draft FRTG Qs and As**
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> Vic,
>
> Attached is the final draft. Ca[illegible] you [illegible] check with Marcia ASAP so I can send them through the clearance process?
>
> Thanks,
>
> Julie
>
> Julie Chavez Rodriguez
> Deputy Press Secretary
>
> U.S. Department of Interior
> 1849 C Street, NW, Suite 6013
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6.9.10 FRTG (rev)vh.doc

Flow Rate Technical Group Question and Answers
6.9.10

Q1: Why didn't we have this video before?

The scientists who have been working on the video analysis have been requesting and receiving video from BP to develop and update their assessments. The Plume Team communicated to BP that it needed to provide more video data and higher resolution data to develop better estimates, and BP has been delivering additional video information. It does take time to obtain video footage from ROVs because the ROV must come to the surface, swap the tape, and then it must be delivered to the science team. The scientists will continue to provide direction to BP on what their video needs are.

Q2: When did we get it and why didn't we make it public th[en]?

We did receive videos from BP reasonably early that pr[ov]ed to be unst[a]ble for analysis by the experts. Once clarifying our needs, we received vid[eo] of suff[i]ent resolution on May 25th that was filmed from May 11th to May 16th. That footage w[as] ed to make the present pre-riser cut estimate. We also received high resolution v[i]deo footage [o]n June 8 showing the flow after the riser was cut that is still being analyzed.

Q3: Why does the estimate keep [c]hangi[ng]?

As we've recognized all along, meas[u]rement of the flow of oil is extremely challenging, given the environment, unique[ ]ature[ ]f the [f]ow and lack of human access to BP's leaking oil well. The preliminary estim[a]es provided [b]y the FRTG are based on new methodologies being employed to understand [a] highly dy[n]amic and complex situation. These methodologies have not been used to calculate t[h]e flo[w] rate of oil at this depth before. As the FRTG collects more data and improves their scientific modeling they are continuing to refine and update their range of oil flow rate estimates. Also, as the situation changes and as new containment efforts are initiated, that may impact the rate of oil flowing from the BP well, it is important for the FRTG to provide as accurate estimates as possible, with the new data they receive.

Q4: Why is this number so different from original pre-cut estimates?

The team received better quality video of longer duration that allowed them to establish both a higher and a lower bound estimate of flow before the riser was cut. Additionally, team members were able to better refine their assessments of the ratio of oil-to-gas in the plume, which ultimately raised their assessments. High resolution video footage provided on June 8th showing the flow after the riser was cut is still being analyzed.

Q5: How much has evaporated?

In the process of rising through the water column and weathering on the sea surface, oil loses many constituents to dissolution and evaporation. Since this oil contains a high fraction of volatile compounds, we expect that a large fraction of the oil is lost to evaporation. After the more volatile compounds have evaporated, the remaining oil tends to persist without evaporative change for many months. Government oil behavior models suggest that as much as 46% of the oil can be lost to evaporation over several weeks on the sea surface.

Scientists measured the composition of weathered oil collected from the sea surface on 16 May using laboratory analysis and analyzed the results using a standard evaporation model. They found that the weathered oil sample had lost 38% of its mass to the combination of evaporation and dissolution. The estimate for evaporation and dissolution as of May 17th was 95,000 to 170,000 barrels, as determined by the Mass Balance team.

Q6: Why were only 6 members involved in the recent analysis of the Plume Team?

While the Plume team includes experts across a range of topics necessary in this assessment, six were uniquely qualified to provide assessments of oil flow based on analyzing the video, doing Particle Image Velocemetry Analysis. Their work was cross-checked by other team members, who were experts in petroleum engineering, spilled oil fate and behavior, and well blowouts. These cross-checks were consistent with the conclusions of the PIV findings.