

3915562405-34274-19923-162-16

From: Marcia K McNutt <mcnutt@usgs.gov>
Sent: Wed, 4 Aug 2010 15:10:31
To: GS FOIA 0105 <foia0105@usgs.gov>
Subject: Fw: NIST uncertainty estimate

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----- Forwarded by Janet N Arneson/DO/USGS/DOI on 08/04/2010 03:10 PM -----

From: "wereley, Steven T." <wereley@purdue.edu>

To: ira leifer <ira.leifer@bubbleology.com>

Cc: "Espina, Pedro I." <pedro.espina@nist.gov>, Bill Lehr
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<kevin.kimball@nist.gov>, "Boehm, Jason" <jason.boehm@nist.gov>, "Wright, John D." <john.wright@nist.gov>, "Johnson, Aaron"

<aaron.johnson@nist.gov>, "Moldover, Michael R." <michael.moldover@nist.gov>

Date: 05/26/2010 08:30 PM

Subject: RE: NIST uncertainty estimate

Getting a hold of a flow that's oil for a long time would give us a worst-case estimate of the oil release. Given the aerobics Bill and others had to go through to get what we've got now, I'm not hopeful for getting those images...

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From: ira leifer [mailto:ira.leifer@bubbleology.com]

Sent: Wednesday, May 26, 2010 4:58 PM

3915562405-34274-19923-162-16

To: Wereley, Steven T.

Cc: Espina, Pedro I.; Bill Lehr; Juan Lasheras; Marcia McNutt;
pete@gso.uri.edu; Alberto Aliseda; James J Riley; Franklin Shaffer;
Savas@newton.berkeley.edu; Paul Bommer; Gallagher, Patrick D.; Kimball,
Kevin A.; Boehm, Jason; Wright, John D.; Johnson, Aaron; Moldover, Michael
R.

Subject: Re: NIST uncertainty estimate

Hi Steve,

only if you assume that the flux is representative based on the 1.5 cycles recorded. True one could make that assumption. But . . .

BP was streaming (decent quality) video this AM from the riser which looked largely unchanging over the three hours I had it in the corner of my desktop. I would propose using that data for an upper estimate and applying Pedro's calculation to get the uncertainty.

Warmest regards,

Ira

On May 26, 2010, at 1:52 PM, Wereley, Steven T. wrote:

Hi all. In a moment of calm I was reflecting on our conversation this afternoon. Doesn't Pedro's uncertainty analysis give us a route to calculating some kind of upper bound? If the lower bound is x and the uncertainty is 40%, $x/0.4$ gives us the expected value and $x/0.8$ gives us the upper bound, to 95% confidence interval. If that isn't the case, then what does the uncertainty mean?

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From: Espina, Pedro I. [mailto:pedro.espina@nist.gov]

Sent: Wednesday, May 26, 2010 11:24 AM

To: Bill Lehr

Cc: Juan Lasheras; Marcia McNutt; pete@gso.uri.edu; Alberto Aliseda; James J Riley; Franklin Shaffer; ira.leifer; Savas@newton.berkeley.edu; Paul Bommer; Wereley, Steven T.; Gallagher, Patrick D.; Kimball, Kevin A.; Boehm, Jason; Wright, John D.; Johnson, Aaron; Moldover, Michael R.

Subject: Re: NIST uncertainty estimate

Bill,

Enclosed the NIST uncertainty estimate for the PIV estimation of the leak on top of the BOV. Bottom line: whatever the PIV guys say +/- 40% (see final page). Because the gas/oil ratio dominates the uncertainty, similar values are likely for PIV estimates at other leak sites.

I am yet to respond to the questions of Ira and Peter, but I will look at those now.

Pedro

On 5/26/10 9:59 AM, "Bill Lehr" <bill.lehr@noaa.gov> wrote:
Attached is mydraft report to the FRTG

•Please send corrections to me as soon as possible

- Juan, your ppt will be included as an appendix
- Pedro, I put you old version in as a placeholder because the new one was not displaying properly. Perhaps you could send it to me as a pdf file?
- Jim, Alberto, and Omer, I need you bio's

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