

464789194-34879-18799-174-220

From: Marcia K McNutt <mcnutt@usgs.gov>  
Sent: Wed, 4 Aug 2010 15:10:58  
To: GS FOIA 0105 <foia0105@usgs.gov>  
Subject: Fw: CNN video of bent pipe leak this evening...

\*\*\*\*\*

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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: Franklin Shaffer <Franklin.Shaffer@NETL.DOE.GOV>

Cc: "Bill.Lehr@noaa.gov" <Bill.Lehr@noaa.gov>, ira leifer  
<ira.leifer@bubbleology.com>, "pete@gso.uri.edu" <pete@gso.uri.edu>, Paul Bommer  
<pmbommer@mail.utexas.edu>, "Savas@newton.berkeley.edu"  
<Savas@newton.berkeley.edu>, Aaron Johnson <aaron.johnson@nist.gov>, Jason  
Boehm <jason.boehm@nist.gov>, "John D. Wright" <john.wright@nist.gov>,  
"Kevin A. Kimball" <kevin.kimball@nist.gov>, "Michael R.

464789194-34879-18799-174-220  
Moldover" <michael.moldover@nist.gov>, "Patrick D. Gallagher"  
<patrick.gallagher@nist.gov>, "Pedro I. Espina" <pedro.espina@nist.gov>,  
Alberto Aliseda <aaliseda@u.washington.edu>, James J Riley  
<rileyj@u.washington.edu>, Juan Lasheras <lsheras@ucsd.edu>, Marcia McNutt  
<mcnutt@usgs.gov>

Date: 05/26/2010 11:20 PM

Subject: Re: CNN video of bent pipe leak this evening...

That kink is slowly breaking off. Initially there were no leaks there. The video that most of us analyzed of the kink flow showed two leaks. One of the videos BP provided was taken Monday and there were three leaks. Today on the spillcam I saw 4 leaks. It's going to fall completely off soon...

Steve Wereley, Associate Professor of Mechanical Engineering  
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On May 26, 2010, at 11:01 PM, "Franklin Shaffer"  
<Franklin.Shaffer@NETL.DOE.GOV

> wrote:

> I was watching CNN this evening, and they showed a video of the leak  
> from the bent pipe. There were three strong jets, each the size of  
> the single strong jet we saw in the video analyzed. If we analyzed  
> the video I saw on CNN, the bend pipe flow rate would be three times  
> higher... unless I'm missing something. The video certainly made me  
> wonder.

>

>>>> <Bill.Lehr@noaa.gov> 5/26/2010 8:35 PM >>>

> Steve, not so. The stuff on the hard drive we got today looks good  
> so far. Should know better shortly. While I don't do damage  
> assessment, others in government do.

>

> ----- Original Message -----

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

> Date: Wednesday, May 26, 2010 5:30 pm

> Subject: RE: NIST uncertainty estimate

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

> Cc: "Espina, Pedro I." <pedro.espina@nist.gov>, Bill Lehr  
<Bill.Lehr@noaa.gov

> >, Juan Lasheras <lasheras@ucsd.edu>, Marcia McNutt

> <mcnutt@usgs.gov>, "pete@gso.uri.edu" <pete@gso.uri.edu>, Alberto

> Aliseda <aaliseda@u.washington.edu>, James J Riley  
<rileyj@u.washington.edu

> >, Franklin Shaffer <Franklin.Shaffer@NETL.DOE.GOV>,  
"Savas@newton.berkeley.edu

> " <Savas@newton.berkeley.edu>, Paul Bommer

> <pmbommer@mail.utexas.edu>, "Gallagher, Patrick D."  
<patrick.gallagher@nist.gov

> >, "Kimball, Kevin A." <kevin.kimball@nist.gov>, "Boehm, Jason"

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<jason.boehm@nist.gov

> >, "Wright, John D." <john.wright@nist.gov>, "Johnson, Aaron"

<aaron.johnson@nist.gov

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

>

>> 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...

>>

>> Steve Wereley, Professor of Mechanical Engineering  
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>> web page:

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>> From: ira leifer [  
>> Sent: Wednesday, May 26, 2010 4:58 PM  
>> 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 . . .

>>

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>> 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. [

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

>> To: Bill Lehr

>> Cc: Juan Lasheras; Marcia McNutt; pete@gso.uri.edu<>; Paul Bommer;

464789194-34879-18799-174-220

>> 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

>>

>> Pedro I. Espina, Ph.D.

>> Program Analyst

>> Program Office, Office of the Director

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