

From: bill.lehr@noaa.gov
To: "Marcia K McNutt" <mcnutt@usgs.gov>
Cc:
Bcc:
Date: Sun, 01 Aug 2010 02:41:08 AM
Subject: Re: Flow Rate Calculation
Attachments:

Marcia,

Considering the uncertainties we have in determining the other oil budget terms. I think that the DOE estimates for flow are satisfactory. The 53 K bbl/day at shut-down seem pretty solid. As you point out, if we use the WHOI liquid-gas ratios, then the Plume Team numbers are compatible with the new standard. I would like to see more details someday on the 4% reduction due to riser impedance (as compared to the BP guess of 20%) and justification for the use of a different compressibility than the reported value of 6.

Regards,

Bill Lehr

----- Original Message -----

From: Marcia K McNutt
Date: Saturday, July 31, 2010 12:32 pm
Subject: Re: Flow Rate Calculation
To: Steve Chu , "OConnor, Rod"
Cc: Tom Hunter [REDACTED], Tom Hunter , Ken Salazar , Bill.Lehr@noaa.gov

> I'm ok. I don't think you need to widen the uncertainty bounds for the
> Plume team, but I will copy to Bill Lehr for input. Original PIV used
> 0.29 for oil to gas and new WHOI in situ data raises that by 50
> percent, raising the Plume Team flow rate estimates correspondingly.

>
> Over and out.

>
> Marcia

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

> From: SCHU [REDACTED]
> Sent: 07/31/2010 03:19 PM AST
> To: "OConnor, Rod"
> Cc: "Tom Hunter [REDACTED]" ; "Hunter, Tom
> (Sandia)" ; Marcia McNutt; "Ken Salazar
> [REDACTED]"
> Subject: RE: Flow Rate Calculation

>
>
>
> I am OK. Tom, Marcia and Ken should weigh in.
>
> Steven Chu

> Department of Energy
> From: OConnor, Rod
> Sent: Saturday, July 31, 2010 3:17 PM
> To: SCHU
> Subject: RE: Flow Rate Calculation
>
> Are you okay with this chart going public?
>
> From: SCHU
> Sent: Saturday, July 31, 2010 3:14 PM
> To: OConnor, Rod; Owens, Missy; Tom Hunter; Marcia K McNutt
> Cc: Ken Salazar ([REDACTED])
> Subject: RE: Flow Rate Calculation
>
> Should have listened!
>
> We think the uncertainty of the flow just before the sealing cap was
> used to stop the flow was 53,000 barrels, probably good to $\pm 5\%$.
> However, there are uncertainties with change in pressure due to well
> depletion. Also, since the plume team was on the low side and the
> nodal teams had large uncertainties, we decided to expand the
> uncertainty to $\pm 10\%$ to be safe.
>
> [cid:image001.png@01CB30C3.C56AAE10]
>
> Steven Chu
> Department of Energy
> From: OConnor, Rod
> Sent: Saturday, July 31, 2010 3:07 PM
> To: SCHU; Owens, Missy; Tom Hunter; Marcia K McNutt
> Subject: RE: Flow Rate Calculation
>
> One more change in red-is this okay
>
>
> Total flow ~4.9 million barrels with an estimated uncertainty of \pm
> 10%. That makes the daily range equivalent to 53,000-62,000 barrels
> over 84 days (with the flow rate declining towards the lower bound
> over that period). We will continue to refine this estimate and its uncertainty.
>
>
> Missy Owens
> Deputy Chief of Staff
> Department of Energy
> 202.586.4251 work
> [REDACTED] cell