

Attachment A

To: Stephen E Hammond <sehammon@usgs.gov>
From: Perciasepe.Bob@epamail.epa.gov
Date: 08/01/2010 01:59PM
cc: "bill lehr" <bill.lehr@noaa.gov>, "mark w miller" <mark.w.miller@noaa.gov>, "Mark K Sogge" <mark_sogge@usgs.gov>, "Sky Bristol" <sbristol@usgs.gov>, "sean k o'brien" <sean.k.o'brien@uscg.gov>, Stephen E Hammond <sehammon@usgs.gov>
Subject: Re: Oil Budget - EPA Comments - follow up and a request

OK

Here is a little more from Paul Anastas and Al Venosa.

Regarding Suggestion 1, EPA agrees that the ultimate message to the public will likely be that the oil was successfully dispersed with chemical dispersants, but until we know with some degree of certainty how much was chemically dispersed vs. physically dispersed, we are hesitant to assign distinct percentages at this time. The existing evidence shows that the droplet size from deep sea dispersant injection is very small, which is usually consistent with chemical dispersion under normal circumstances of surface application. However, the deep sea injection is unique to us all due to the extreme turbulence at the wellhead, and EPA feels the evidence is currently not sufficient to enable us to distinguish accurately chemical from physical dispersion mechanisms.

Regarding Suggestion 3, EPA indeed feels strongly that biodegradation will turn out to be an extremely important ultimate oil fate mechanism in the oil budget calculations. We would be happy to take the lead in writing the story on this in the planned follow-on report, and a simple mention at this juncture seems appropriate.

Regarding Suggestion 2, EPA feels that USGS and NOAA have enough information from their models to enable distinct descriptions of oil fate due to dispersion and evaporation/dissolution. We think it would be more accurate if someone from USGS or NOAA write this section because the modeling effort was not conducted by EPA scientists.

I recognize we have suggested additional explanation here on this matter (number 2), so I am going to have to leave it in your judgement

Bob Perciasepe
Deputy Administrator

(o) +1 202 564 4711

From: Stephen E Hammond <sehammon@usgs.gov>
To: Bob Perciasepe/DC/USEPA/US@EPA
Cc: "mark w miller" <mark.w.miller@noaa.gov>, "bill lehr" <bill.lehr@noaa.gov>, "Sky Bristol" <sbristol@usgs.gov>, "Mark K Sogge" <mark_sogge@usgs.gov>, "sean k o'brien" <sean.k.o'brien@uscg.gov>, Stephen E Hammond <sehammon@usgs.gov>
Date: 08/01/2010 08:32 AM
Subject: Re: Oil Budget - EPA Comments - follow up and a request

Bob,

Thanks for the feedback, greatly appreciated. Based on areprot I received, it sounds like we have another day or two before the WH makes a press release on the subject. We may have a bit more time now to discuss how to improve documentation.

Steve

Stephen E. Hammond
US Geological Survey
Chief Emergency Operations Office,
National Geospatial Program
Reston, VA
703-648-5033 (w)
[REDACTED]
703-648-5792 (fax)

-----Perciasepe.Bob@epamail.epa.gov wrote: -----

To: "Stephen E Hammond" <sehammon@usgs.gov>
From: Perciasepe.Bob@epamail.epa.gov
Date: 07/31/2010 10:10PM
cc: "mark w miller" <mark.w.miller@noaa.gov>, "bill lehr" <bill.lehr@noaa.gov>, "Sky Bristol" <sbristol@usgs.gov>, "Mark K Sogge" <mark_sogge@usgs.gov>, "sean k o'brien" <sean.k.o'brien@uscg.gov>
Subject: Re: Oil Budget - EPA Comments - follow up and a request

Thanks Steve.

I will try to get some language but NOAA science folks like Steve Murawski know this better than I. The basic idea is that this will be the first government input into the fate of the oil issue and biodegradation is a big part of that. That should be pretty easy to discuss. I will think how I can help on the other item 2. I agree it is a tough one.

I think you are making a mistake on the separate estimates of dispersal but I have no additional arguments other than it is not verifiable and we will be trying to explain it for the rest of our time on this. I will take it up with white house.

I greatly appreciate your attention to our concerns.

Bob Perciasepe
Office of the Administrator
(o)202 564 4711
[REDACTED]

From: Stephen E Hammond [sehammon@usgs.gov]
Sent: 07/31/2010 07:53 PM AST
To: Bob Perciasepe
Cc: mark.w.miller@noaa.gov; bill.lehr@noaa.gov; Sky Bristol <sbristol@usgs.gov>; Mark K Sogge <mark_sogge@usgs.gov>; sean.k.o'brien@uscg.gov; Stephen E Hammond <sehammon@usgs.gov>
Subject: Fw: Oil Budget - EPA Comments - follow up and a request

Hi Bob,

I'm with USGS and serve as a member of the Interagency Solutions Group as a liaison between the FRTG and the the NIC. USGS spent some time this afternoon with NOAA and USCG discussing the three suggestions you made below in preparation to update and modify the oil budget tool that has been developed. I'll give you a quick update on the discussion of suggestion 1 & 3, then ask you to provide some additional feedback on suggestion 2.

Suggestion 1 - combine natural and chemical into one category of dispersed oil on charts and in narrative.

010845

Decision - Based on how NOAA is developing a communication product with the WH, the dispersion types (Natural & Chemical) will not be combined. We appreciate the case for combining them however the goal is to show chemical dispersion as part of the Federal response to the spill.

Suggestion 3 - if no estimate can be made of biodegradation at least have a robust discussion about it both in terms of oil that will remain in marshes to be biodegraded and in terms of our expectations and evidence of the dispersed oil subsea.

Decision - NOAA is in general agreement that more is needed here. They indicated that they tried to make this explanation as robust as possible. We believe that a second document will be prepared in the near future that addresses biodegradation as the primary focus. It will include as much as it can on biodegradation rates.

Suggestion 2 - clear up the dissolution and dispersion potential confusion with some additional explanation.

Decision - There is agreement on this yet we have found it difficult to describe in a short paragraph. We'd like to ask you to provide a short write-up that we can consider for this explanation in the oil budget tool.

We are working to get the toll updated by this evening. Any feedback you can offer quickly is greatly appreciated.

Steve

Stephen E. Hammond
US Geological Survey
Chief Emergency Operations Office,
National Geospatial Program
Reston, VA
703-648-5033 (w)
[REDACTED]
703-648-5792 (fax)

-----Forwarded by Stephen E Hammond/GEOG/USGS/DOI on 07/31/2010 07:24PM -----

To: Stephen E Hammond/GEOG/USGS/DOI@USGS
From: Mark K Sogge/DO/USGS/DOI
Date: 07/31/2010 04:19PM
Subject: Fw: Oil Budget - EPA Comments

Forgot to cc you...

Mark

----- Forwarded by Mark K Sogge/DO/USGS/DOI on 07/31/2010 03:19 PM -----

From: Mark K Sogge/DO/USGS/DOI
To: Sky Bristol/RGIO/USGS/DOI@USGS
Date: 07/31/2010 03:16 PM
Subject: Fw: Oil Budget - EPA Comments

Hi Sky,

I just got the chance to read through this. These changes are clearly within the decision domain of Bill Lehr and the USCG, rather than USGS.

I see that Bill was referred to in Bob's email, but was not cc'ed on the messages. A logical next step is to get this feedback to him. Do you prefer to do that, or have me take lead on it?

Mark

Mark Sogge
Deputy Chair, NIC Flow Rate Technical Group
Chief of Staff, USGS Western Region
2255 Gemini Drive, Flagstaff, AZ 86001
[REDACTED] FAX: 928-556-7266
mark_sogge@usgs.gov

----- Forwarded by Mark K Sogge/DO/USGS/DOI on 07/31/2010 03:12 PM -----

From: Marcia K McNutt/DO/USGS/DOI

To: Perciasepe.Bob@epamail.epa.gov, jane.lubchenco@noaa.gov, Heather_R_Zicha [REDACTED],
Rod.OConnor@hq.doe.gov, david_hayes@ios.doi.gov, [REDACTED], oster.seth@epa.gov,
Sean.Smith@dhs.gov, Larry.Robinson1@noaa.gov, anastas.paul@epa.gov,
[REDACTED].gov, richard.r.windgrove@noaa.gov

Cc: Mark K Sogge/DO/USGS/DOI, sbristol@usgs.gov

Date: 07/31/2010 10:56 AM

Subject: RE: Oil Budget - EPA Comments

Bob -

Thanks for these very helpful and constructive points. I will pass these on to Mark Sogge and Sky Bristol to take into account in the next iteration of the tool. We are happy to follow the lead of NOAA and EPA as to how to deal with what we agree are a lot of poorly constrained areas currently with what was happening to the oil in the subsurface. I think your point about the low flow rates resulting in low dispersant application is a good one, although in my conversations with BP and the ROV pilots it seems that the efficiency of dispersant application accounts for everything. For example, surface dispersant application on a thin sheet of oil has one rate of efficiency which is low, Very high rates of dispersion were seen by the pilots when they were able to put dispersion wands directly into concentrated oil plumes such as inside the end of the broken riser or a narrow jet from the kill line.

Marcia

USGSUSGSUSGSUSGSUSGSUSGSUSGSUSGSUSGSUSGSUSGS
Dr. Marcia K. McNutt
Director, U.S. Geological Survey
12201 Sunrise Valley Drive MS 100

Reston, VA 20192
(703) 648-7411 (office)
(703) 648-4454 (fax)

www.usgs.gov

USGSUSGSUSGSUSGSUSGSUSGSUSGSUSGSUSGSUSGS

From: Perciasepe.Bob@epamail.epa.gov [mailto:Perciasepe.Bob@epamail.epa.gov]
Sent: Saturday, July 31, 2010 9:12 AM
To: jane.lubchenco@noaa.gov; "Zichal, Heather R." [REDACTED]; "OConnor, Rod" <Rod.OConnor@hq.doe.gov>; Marcia K McNutt <mcnutt@usgs.gov>; david_hayes@ios.doi.gov; [REDACTED] Seth Oster <oster.seth@epa.gov>; "Smith, Sean" <Sean.Smith@dhs.gov>; Larry.Robinson1@noaa.gov; anastas.paul@epa.gov; "Allen, Thad ADM" <[REDACTED]>; richard.r.windgrove@noaa.gov
Subject: Oil Budget - EPA Comments

Jane and Marcia:

After last evening's "5 o'clock call" Jane followed up quickly to get EPA access to the information and model work that has been used to develop the oil budget. I mentioned on the call last night that Lisa and I were not comfortable with some of the distinctions and omissions in the budget. With Jane's help our science team was able to review materials and discuss with NOAA's Bill Lehr into the night. Here are our comments summarized by me from Paul Anastas, Al Venosa and Greg Williams:

High Points:

-- The physically dispersed versus chemically dispersed has a logical basis, however, that is different from saying it is accurate. It is reasonable to say that too little dispersant was applied when the flow rate was thought to be lower and therefore not all of the oil was chemically dispersed. That which was not chemically dispersed would be at least partially naturally dispersed and there is research (for example from Norway) that looked at deep water natural dispersion. **The percentages are very rough and should not be considered accurate**. We still do not believe we should in a public document try to distinguish between naturally and chemically dispersed oil in the ocean. These calculations are extremely rough estimates yet when they are put into the press - which we want to happen - they will take on a life of their own. **We should combine these two categories.**

-- I believe there will be confusion between dispersion (natural and chem) with dissolution and evaporation as they are used in some of the charts.

-- Finally, no biodegradation rates are used at all which is a tremendous limitation. We have made a decision during this ongoing event to enhance dispersions with chemicals to reduce oil particle size and make it more bio available. We have evidence of biological activity through dissolved oxygen levels indicative of aerobic digestion and some researchers have seen oil droplets in zooplankton. Biological digestion and metabolism is what we were seeking.

Paul and Al can provide details from the science team to Bill Lehr at NOAA, but for now based on these and after consultation with Paul, EPA suggests in the interest of getting these out this weekend that we:

- 1) combine natural and chemical into one category of dispersed oil on charts and in narrative.
- 2) clear up the dissolution and dispersion potential confusion with some additional explanation.
- 3) if no estimate can be made of biodegradation at least have a robust discussion about it both in terms of oil that will remain in marshes to be biodegraded and in terms of our expectations and evidence of the dispersed oil subsea.

Remember Admiral Allen's three battle objectives were:

- Stop the leak
- keep it off the shore, and
- clean up what gets to the shore.

I think the information in the oil budget will show success.

Bob Perciasepe
Deputy Administrator

(o) +1 202 564 4711
(c) +1 202 368 8193

Sky Bristol
sbristol@usgs.gov
Office: 303-202-4181

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Begin forwarded message:

From: "Stephen E Hammond" <sehammon@usgs.gov>
Date: August 1, 2010 6:59:04 AM MDT
To: Sky Bristol <sbristol@usgs.gov>
Cc: Mark Miller <mark.w.miller@noaa.gov>
Subject: Re: Need feed back from USCG and NOAA on potential changes to oil budget tool

Sky,

Can you add my name to that of Kevin & Matha as an executive sponsor?

Also, I suggest that the definition of "Inland Recovery" be added to information in the executive summary output.

Stephen E. Hammond
US Geological Survey
Chief Emergency Operations Office,
National Geospatial Program
Reston, VA
703-648-5033 (w)
[REDACTED]
703-648- 5792 (fax)

-----Sky Bristol <sbristol@usgs.gov> wrote: -----

To: Mark Miller <mark.w.miller@noaa.gov>
From: Sky Bristol <sbristol@usgs.gov>
Date: 07/31/2010 09:36PM
cc: Stephen Hammond <sehammon@usgs.gov>
Subject: Re: Need feed back from USCG and NOAA on potential changes to oil budget tool

I don't mean to be picky and it's not a huge deal, but I made some modifications to the credits section here to better represent the folks involved with the Oil Budget Tool.

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Sky Bristol
sbristol@usgs.gov
Office: 303-202-4181