

RAÚL M. GRIJALVA
7TH DISTRICT OF ARIZONA

COMMITTEE ON NATURAL RESOURCES
Subcommittee on National Parks, Forests and Public
Lands, Chair
Subcommittee on Water and Power

COMMITTEE ON EDUCATION AND LABOR
Subcommittee on Workforce Protections
Subcommittee Early Childhood, Elementary and
Secondary Education

CONGRESSIONAL PROGRESSIVE CAUCUS,
Co-Chair



Congress of the United States
House of Representatives
Washington, DC 20515-0307

January 25, 2011

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President Barack Obama
The White House
1600 Pennsylvania Avenue, N.W.
Washington, D.C., 20500

Dear Mr. President,

As a member of the House Natural Resources Committee, it is my duty to carry out effective oversight of the executive branch to ensure taxpayer money is spent appropriately. As part of that duty, I recently requested information from the National Oceanic and Atmospheric Administration (NOAA), the U.S. Coast Guard, and the U.S. Geological Survey (USGS) regarding the federal response to last summer's Deepwater Horizon oil spill. After those agencies initially failed to honor my request, I sent a second round of letters co-signed by Rep. Nick Rahall, then the Chairman of the House Natural Resources Committee, on Nov. 30. The responses we received prompt my letter to you today. They have raised several concerns that I hope to address as soon as possible.

My request centered on the release of a federal report ("Deepwater Horizon Oil Budget") suggesting that approximately three quarters of the spilled oil had evaporated or was otherwise no longer an environmental or economic threat. Because of the economic damage caused by the Horizon spill, it is our duty as public servants to ensure that such an accident never happens again. I am concerned not only about the federal government's response to the spill, but about the many other offshore oil rigs that are not being effectively monitored around the country. How federal agencies inspect rigs and respond to potential safety threats is of paramount importance, as Horizon showed us.

My staff has carefully reviewed hundreds of e-mails and other requested records pertaining to the preparation and dissemination of the Oil Budget report. I would like to apprise you of our findings to date. These findings are based on the documents currently in my possession – if other documents would expand or clarify the picture presented here, I would appreciate a chance to review them.

Unacceptable Redactions

As president, you have promised heightened levels of transparency and accountability. I am therefore disappointed to see that NOAA's response to my request involved unjustifiable redactions to many of the transmitted documents, including entire pages blacked out in the middle of pertinent e-mail conversations.

As you know, presidential assertions of confidentiality in the face of legitimate congressional inquiries have been viewed skeptically by the courts over the past several decades. I believe NOAA's redactions violate the spirit and principle of the accountability you promised. These redactions are unacceptable and overreaching. I have provided a selection of representative examples for your review [see Attachment A]. These selections are by no means exhaustive.

I request advisement from you as to whether, by redacting these and other documents, you claim executive privilege over the material in question. I take my oversight duties seriously, and I feel it appropriate to inform you that I will continue my efforts with all colleagues interested in doing the same. Such redactions concern me, and I hope not to face similar obstacles in the future.

Ignoring Federal Scientists

Under President Bush, federal scientists were routinely ignored in favor of political requests by corporations with an ambitious deregulatory agenda. Rep. Henry Waxman held multiple hearings and pursued several lines of inquiry that revealed the extent to which agency experts were sidelined when their findings on important scientific topics such as climate change¹, groundwater risks², endangered species³ and prescription drug safety⁴ clashed with Bush administration priorities.

In this same vein, I am deeply disturbed by written warnings from NOAA Administrator Jane Lubchenco to the White House that seem to have been ignored. Specifically, she wrote that the Oil Budget report's conclusion that approximately 75 percent of the spilled oil had been rendered harmless was in error. On the morning of Aug. 4, when the report was released, she wrote an e-mail to several Department of Commerce officials and White House communications staffer Jennifer Austin stating:

I'm concerned to hear that the oil budget report is being portrayed as saying that 75% of the oil is gone and that this is a NOAA report. Please help make sure that both errors are corrected: It's not accurate to say that 75% of the oil is gone. 50% of it is gone – either evaporated or burned, skimmed or recovered from the wellhead. 24% has been dispersed, and although much of this is in the process of being degraded, it is not 'gone' yet. The residual 26% is light sheen, weathered tarballs, washed ashore or captured on beaches. And I would hope that everyone would emphasize that this was an interagency report, not just a NOAA report [see Attachment B].

Despite Ms. Lubchenco's urge to be cautious, the public nevertheless heard that 75 percent of the oil was indeed "gone." Carol Browner, special adviser to the president for energy and climate change, said on the *Today Show* and in other venues later that same day: "I think it's also

¹ <http://www.firstamendmentcenter.org/news.aspx?id=18078>

² <http://www.riverreporter.com/issues/08-03-06/head3-gas.html>

³ <http://www.washingtonpost.com/wp-dyn/content/article/2007/05/01/AR2007050101920.html>

⁴ <http://abcnews.go.com/Health/story?id=3250137>

important to note that our scientists have done an initial assessment, and more than three quarters of the oil is gone. The vast majority of the oil is gone.”⁵

The White House, for whatever reason, was apparently unable to understand Ms. Lubchenco’s warning. It ignored explicit technical advice from one of its highest ranking scientific officials. This suggests that the federal government is not yet prepared to effectively regulate offshore drilling, whether because of the scientific complexities involved or because various offices cannot effectively communicate with one another. In either case, this raises serious concerns about whether our current federal scientific regulatory framework is strong enough to reduce the danger of another oil spill.

Industry Influence

There have been longstanding concerns, in the public and in Congress, about the comfortable relationship between federal agencies and the drilling industry. The excessively close ties between the now defunct Minerals Management Service and regulated companies like BP may have added to the climate that allowed the Deepwater Horizon spill to happen in the first place. Therefore, I am concerned about the influence BP may have had on the report itself. Early drafts of the Oil Budget report list BP official Peter Carragher as an “independent scientist” who reviewed the report [see Attachment C].

His name was removed from later drafts and was not included in the final version of the report [see Attachment D].

I am concerned not only about any changes BP may have suggested to the report that were not publicly disclosed, but about how a report of this magnitude can be considered independent when the company under investigation had a staffer review a pre-publication draft. Please inform me as to what influence BP had on the final report released to the public and why a BP scientist was listed in early drafts as an “independent” reviewer.

This issue goes to the heart of how federal employees charged with protecting taxpayer dollars handle sensitive information. Companies under investigation should not be allowed to review federally generated scientific reports that put them in potential financial jeopardy before the public can review those reports. Such activity calls into question whether our federal government is looking out for the public interest first and foremost. The fact that NOAA felt the need to solicit BP’s technical assistance to write a report on BP’s own failings suggests that the federal government is not yet prepared to effectively and independently regulate offshore drilling.

The Report as Public Relations

On several occasions, it appears the White House overruled government experts’ advice in favor of report language that oversimplified scientific issues for public consumption. Science is not public relations, and precision is vital. Communicating an effective federal response to the public is not the same as reducing the relevant issues to a few bullet points. Gaining public trust is

⁵ <http://www.politifact.com/truth-o-meter/statements/2010/aug/16/carol-browner/carol-browner-says-three-quarters-oil-spilled-gulf/>

necessary in disaster response, and the preparation of the Oil Budget report suggests the White House chose to shortcut that process.

For instance, an early draft of the report apparently sent to the White House for review found that the size of the spill should be expressed as a range of between three and five million barrels of oil [see Attachment E].

Days later, a NOAA official wrote, “We have received strong pushback from WH on the cumulative total used in our graphic being more than the official 4.93 M bbls.” [see Attachment F].

A subsequent draft of the report substituted a precise figure of 4.9 million barrels for the previously recommended ranges [see Attachment G].

This substitution suggests that White House “pushback” subjugated expert opinion to political expediency.

There have been multiple independent analyses of the oil spill that raise further concerns about the executive branch’s characterization of the fate of the oil. To take just one example, the Georgia Sea Grant Program released a report Aug. 17 (“Outcome/Guidance from Georgia Sea Grant Program: Current Status of BP Oil Spill”)⁶ that found millions of barrels of oil may, as of the report’s release, have still been in the ocean:

[A]fter accounting for oil that has been skimmed and burned (10% collectively), evaporated (8-12%) and degraded (4-8%), we estimate that the oil remaining at or below the surface is between 70 and 79% or between 2.9 and 3.2 million barrels.

We note that this does not account for oil that we know has washed into coastal wetlands. This is a particularly difficult form to quantify, since much of it has settled in tidal creek and bay bottoms or has been buried in salt marsh and creek bottom sediments.

While I hesitate to offer a definitive scientific opinion on any of these issues, I am concerned that the draft and review process led to an oversimplification of the complexities of spill response for the sake of public relations. As the next section of this letter shows, these were not isolated incidents.

EPA Objections

I am concerned about several e-mails from Environmental Protection Agency experts cautioning officials at other agencies against misleading characterizations of federal oil dispersion efforts. Specifically, several officials wrote back and forth about how to express the effectiveness of chemicals inserted into the spilled oil to disperse and break up what was at that point a thick sludge. EPA official Bob Perciasepe wrote on July 31:

⁶ http://uga.edu/aboutUGA/joye_pkit/GeorgiaSeaGrant_OilSpillReport8-16.pdf

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 [see Attachment H].

A USGS official later responded:

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 [see Attachment I].

While there is room for legitimate internal debate about scientific issues, this exchange gives the distinct impression that the White House was more concerned about public image than scientific accuracy in describing the effectiveness of its cleanup efforts. I request an explanation of why EPA objections to the Oil Budget report's language were overruled, and why the EPA was not even listed as an authoring agency on the final report. EPA officials were intimately involved in pre-publication conversations with other agencies, and their absence in report credits is curious.

Refusal to Work With My Staff

When my staff received the documents in question and began to review them, it became clear that many of the records I had requested were redacted. I had asked my communications director, Adam Sarvana, to head the investigation and put my confidence in him to get the information I sought. Mr. Sarvana works out of my personal office, not the House Committee on Natural Resources. This fact was repeatedly used by Department of Commerce officials to delay and undermine the federal response to my inquiry.

As Mr. Sarvana wrote to Commerce officials April Boyd and Jonathan Wright on Dec. 18:

Jonathan called me last night to say that the heavily redacted documents we received in response to the request from my boss and Chairman Rahall are all we're going to get. He said such redactions are common and fall under "agency privilege." He informed me that he would no longer communicate with me, only committee or subcommittee counsel, and would do this no earlier than Monday [Dec. 20]. I asked him to put all of this in writing to memorialize the conversation. Instead, he wrote a short note: "Per our conversation, we can begin to address the questions below with Committee or Subcommittee staff next week. Please feel free to send along the our [sic] contact information" [see Attachment J].

This was not the only instance in which Mr. Sarvana was told he could no longer communicate with executive branch officials or otherwise move forward with my inquiry. I encourage you to read the full correspondence between my staff and Commerce representatives to appreciate the seriousness of my concern about how this was handled by the executive branch. I request an explanation of why my staff was repeatedly rebuffed by

Commerce and why Commerce officials refused to deal with Mr. Sarvana, in writing or otherwise, in following through on my request. The Department of Commerce does not decide how my office does its business, nor who it responds to during a formal Congressional inquiry.

Changes in Policy

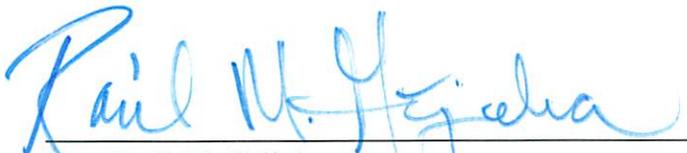
As the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling recently found in its final report (“Deep Water: The Gulf Oil Disaster and the Future of Offshore Drilling”)⁷:

The blowout was not the product of a series of aberrational decisions made by rogue industry or government officials that could not have been anticipated or expected to occur again. Rather, the root causes are systemic and, absent significant reform in both industry practices and government policies, might well recur. The missteps were rooted in systemic failures by industry management (extending beyond BP to contractors that serve many in the industry), and also by failures of government to provide effective regulatory oversight of offshore drilling.

These failures were no surprise to industry observers. I and many of my House colleagues pushed strongly for the reforms contained in last year’s Consolidated Land, Energy, and Aquatic Resources (CLEAR) Act of 2010, which would have done a great deal to improve federal oversight and management of oil drilling. Senate Republicans refused to allow the CLEAR Act to come to the floor for a vote, and it was terminated. This year, I hope to see another vigorous effort on behalf of these and other needed environmental and worker safety reforms. As many scientists and professional engineers involved in spill response have attested, the status quo is unworkable. I request advisement from you on what further regulatory or legislative improvements you aim to pursue in federal oil drilling management during the 112th Congress so that we might improve the chances of success in this vital area.

I look forward to your response.

With respect and very sincerely,



Rep. Raúl M. Grijalva
House Committee on Natural Resources

⁷ <http://www.oilspillcommission.gov/final-report>

ATTACHMENT A

000595

From: Griffis, Kevin [mailto:KGriffis@doc.gov]
Sent: Wednesday, August 04, 2010 11:22 AM
To: Smith, Sean; Lubchenco, Jane; Smullen, Scott
Cc: Kenney, Justin; Austin, Jennifer; Heather_R._Zicha [redacted]; Fetcher, Adam;
Nicholas_S._Shapiro [redacted]
Subject: RE: FW: Topline of release

[redacted]

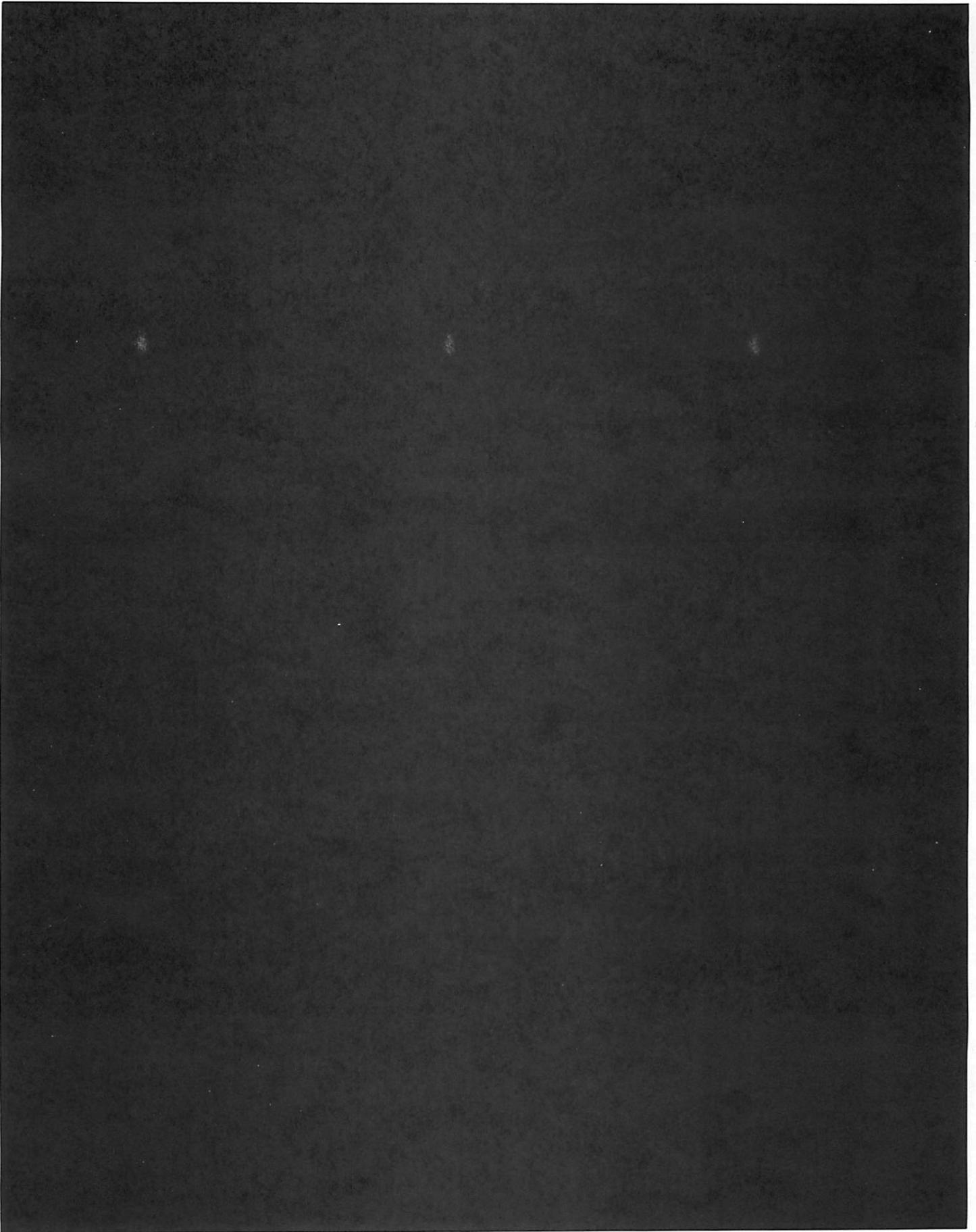
[redacted]

[redacted]

[redacted]

[redacted]

000596



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

From: Smith, Sean [mailto:Sean.Smith@dhs.gov]
Sent: Wednesday, August 04, 2010 11:09 AM
To: Lubchenco, Jane; Smith, Sean; Griffis, Kevin; Smullen, Scott
Cc: Kenney, Justin; Austin, Jennifer; Heather_R_Zicha [REDACTED] Fetcher, Adam;
Nicholas_S_Shapir [REDACTED]
Subject: Re: FW: Topline of release

[REDACTED] [REDACTED] [REDACTED]

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

From: Jane Lubchenco <Jane.Lubchenco@noaa.gov>
To: Smith, Sean <Sean.Smith@dhs.gov>; KGriffis@doc.gov <KGriffis@doc.gov>;
Scott.Smullen@noaa.gov <Scott.Smullen@noaa.gov>
Cc: justin.kenney@noaa.gov <justin.kenney@noaa.gov>; Jennifer.Austin@noaa.gov
<Jennifer.Austin@noaa.gov>; Heather_R_Zicha [REDACTED]
[REDACTED] Fetcher, Adam <Adam.Fetcher@dhs.gov>;
Nicholas_S_Shapiro@ [REDACTED]
Sent: Wed Aug 04 11:06:51 2010
Subject: RE: FW: Topline of release

[REDACTED]

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

From: Smith, Sean [mailto:Sean.Smith@dhs.gov]
Sent: Wednesday, August 04, 2010 11:05 AM
To: -Jane.Lubchenco@noaa.gov; KGriffis@doc.gov; Scott.Smullen@noaa.gov; Smith, Sean
Cc: justin.kenney@noaa.gov; Jennifer.Austin@noaa.gov; Heather_R_Zicha [REDACTED];
Fetcher, Adam; Nicholas_S_Shapir [REDACTED]
Subject: Re: FW: Topline of release

[REDACTED]

[REDACTED]

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

From: Jane Lubchenco <Jane.Lubchenco@noaa.gov>
To: Griffis, Kevin <KGriffis@doc.gov>; Smullen, Scott <Scott.Smullen@noaa.gov>; Smith,
Sean <Sean.Smith@dhs.gov>
Cc: Kenney, Justin <Justin.kenney@noaa.gov>; Austin, Jennifer <Jennifer.Austin@noaa.gov>
Sent: Wed Aug 04 10:56:43 2010
Subject: RE: FW: Topline of release

[REDACTED]

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

From: Griffis, Kevin [mailto:KGriffis@doc.gov]
Sent: Wednesday, August 04, 2010 10:54 AM

Justin Kenney

From: Shapiro, Nicholas S. [REDACTED]
Sent: Wednesday, August 04, 2010 11:05 AM
To: Smith, Sean; Jane.Lubchenco@noaa.gov; KGriffis@doc.gov; Scott.Smullen@noaa.gov
Cc: Justin.kenney@noaa.gov; Jennifer.Austin@noaa.gov; Zichal, Heather R.; Fetcher, Adam
Subject: RE: FW: Topline of release

Guys, its about to blast, is this not right?
WASHINGTON - The vast majority of the oil from the BP oil spill has either evaporated or been burned, skimmed, recovered from the wellhead or dispersed using chemicals - much of which is in the process of being degraded. Much of this is the direct result of the federal response efforts.

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

From: Smith, Sean
Sent: Wednesday, August 04, 2010 11:05 AM
To: Jane.Lubchenco@noaa.gov; KGriffis@doc.gov; Scott.Smullen@noaa.gov; Smith, Sean
Cc: justin.kenney@noaa.gov; Jennifer.Austin@noaa.gov; Zichal, Heather R.; Fetcher, Adam; Shapiro, Nicholas S.
Subject: Re: FW: Topline of release

[REDACTED]

[REDACTED]

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

From: Jane Lubchenco <Jane.Lubchenco@noaa.gov>
To: Griffis, Kevin <KGriffis@doc.gov>; Smullen, Scott <Scott.Smullen@noaa.gov>; Smith, Sean <Sean.Smith@dhs.gov>
Cc: Kenney, Justin <Justin.kenney@noaa.gov>; Austin, Jennifer <Jennifer.Austin@noaa.gov>
Sent: Wed Aug 04 10:56:43 2010
Subject: RE: FW: Topline of release

[REDACTED]

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

From: Griffis, Kevin [mailto:KGriffis@doc.gov]
Sent: Wednesday, August 04, 2010 10:54 AM
To: Smullen, Scott; Smith, Sean; Lubchenco, Jane
Cc: Kenney, Justin; Austin, Jennifer
Subject: RE: FW: Topline of release

[REDACTED]

[REDACTED]

To: Smullen, Scott; Smith, Sean; Lubchenco, Jane
Cc: Kenney, Justin; Austin, Jennifer
Subject: RE: FW: Topline of release

[Redacted]

[Redacted] signi [Redacted]

Griffis, Kevin wrote:

> -----Original Message-----
> From: Jane Lubchenco [mailto:Jane.Lubchenco@noaa.gov]
> Sent: Wednesday, August 04, 2010 10:45 AM
> To: Smith, Sean; Griffis, Kevin
> Cc: Kenney, Justin
> Subject: RE: Topline of release

[Redacted] simply [Redacted]

> -----Original Message-----
> From: Smith, Sean [mailto:Sean.Smith@dhs.gov]
> Sent: Wednesday, August 04, 2010 10:36 AM
> To: Jane.Lubchenco@noaa.gov; KGriffis@doc.gov
> Subject: Topline of release

[Redacted] spill [Redacted]
[Redacted] being [Redacted]

--
Scott Smullen
Deputy Director
NOAA Communications & External Affairs
202-482-1097 o / 202-494-6515 c

Timothy Bagley

From: [REDACTED] on behalf of [REDACTED]
Sent: Sunday, June 13, 2010 5:29 AM
To: [REDACTED] Hayes, David
Cc: Rod.OConnor@hq.doe.gov; Jane.Lubchenco@noaa.gov; cbrowner@[REDACTED]; Zichal, Heather R. [REDACTED].gov
Subject: FW: FLOW RATE ESTIMATE

Secretaries,
Per discussion at Principals Call last night. I will have this conversation today.
Thad

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

From: [REDACTED]
Sent: Sunday, June 13, 2010 5:25 AM
To: 'mcnutt@usgs.gov'
Subject: FW: FLOW RATE ESTIMATE

[REDACTED]

[REDACTED]
Sent: Saturday, June 12, 2010 11:26 AM
To: Grawe, William; Neffenger, Peter RDML; Watson, James RADM; Nash, Roy RDML; 'Kayyem, Juliette'
Cc: 'Marcia K McNutt'; Martha Garcia; Greene, Lawrence CDR; Ormes, David; Brown, Baron CDR; Wiedenhoef, Paul CAPT; Gould, Austin CAPT; McKenna, Robert CDR; Lindgren, Lance LCDR; 'Mark K Sogge'; McPherson, James CAPT; LaBrec, Ronald CAPT; O'Neil, Christopher LCDR; Rooke, Connie CDR; Parsons, Roger; Hubble, Solange; Gautier, Peter CAPT; Kelley, Brian CAPT; Moland, Mark CDR
Subject: RE: FLOW RATE ESTIMATE

[REDACTED]

ATTACHMENT B

007769

From: Jane Lubchenco
To: HO Deep Water Horizon Staff; DWH Leadership
Subject: oil budget report
Date: Wednesday, August 04, 2010 8:49:48 AM

I've asked the WH folks with whom we're working to please correct two errors about the report. Just fyi.

From: Jane Lubchenco
Sent: Wednesday, August 04, 2010 8:45 AM
To:
Cc: Margaret.spring@noaa.gov; KSarri@doc.gov; KGriffis@doc.gov; justin.kenney@noaa.gov; SGilson@doc.gov; Jennifer Austin
Subject: RE: NYT: U.S. Finds Most Oil From Spill Poses Little Additional Risk

Sean and Heather,

I'm concerned to hear that the oil budget report is being portrayed as saying that 75% of the oil is gone and that this is a NOAA report.

Please help make sure that both errors are corrected:

It's not accurate to say that 75% of the oil is gone. 50% of it is gone - either evaporated or burned, skimmed or recovered from the wellhead. 24% has been dispersed, and although much of this is in the process of being degraded, it is not 'gone' yet. The residual 26% is light sheen, weathered tarballs, washed ashore or captured on beaches.

And I would hope that everyone would emphasize that this was an interagency report, not just a NOAA report.
Many thanks.

From: Zichal, Heather R. [REDACTED]
Sent: Wednesday, August 04, 2010 9:44 AM
To: Griffis, Kevin; Smith, Sean
Cc: Smullen, Scott; Gilson, Shannon; 'Adam.Fetcher [REDACTED] 'Bobby.Whithorne [REDACTED]
Subject: Re: FW: DEEPWATER/Oil budget calculator draft release

Its the flow rate change -- that can go back. But what was the other edit?

From: Griffis, Kevin <KGriffis@doc.gov>
To: Smith, Sean; Zichal, Heather R.
Cc: Smullen, Scott <Scott.Smullen@noaa.gov>; Gilson, Shannon <SGilson@doc.gov>; Fetcher, Adam [REDACTED] Whithorne, Bobby [REDACTED]
Sent: Wed Aug 04 09:39:32 2010
Subject: FW: FW: DEEPWATER/Oil budget calculator draft release

NOAA is not good with the edits that came back from OMB. Are we good to change it back to the original?

From: Scott Smullen [mailto:Scott.Smullen@noaa.gov]
Sent: Wednesday, August 04, 2010 9:05 AM
To: Griffis, Kevin
Cc: Austin, Jennifer; Kenney, Justin; Miller, Mark
Subject: Re: FW: DEEPWATER/Oil budget calculator draft release

No. There is only one flow estimate - the one from Monday. There is no longer a high and a low.

Griffis, Kevin wrote:
Please see below. Are we good with these edits?

From: Zaidi, Ali A. [mailto:Ali A. Zaidi@omb.eop.gov]
Sent: Wednesday, August 04, 2010 8:39 AM
To: Griffis, Kevin
Subject: Fw: DEEPWATER/Oil budget calculator draft release

If you can make the edits two emails down -- we're good.

From: Weatherly, Mark A.
To: Levenbach, Stuart; Zaidi, Ali A.
Cc: Quinlan, John P.; Lyon, Randolph M.; Kumaraiah, Divya; Crutchfield, J C.; Irwin, Janet E.
Sent: Tue Aug 03 18:37:57 2010
Subject: RE: DEEPWATER/Oil budget calculator draft release

Thanks Stu. I agree a discussion of the alternative flow should be in there. If for some reason there is strong resistance to that, at a minimum your edits to this included.

From: Levenbach, Stuart
Sent: Tuesday, August 03, 2010 6:18 PM
To: Weatherly, Mark A.

Justin Kenney

From: Justin Kenney [Justin.kenney@noaa.gov]
Sent: Wednesday, August 04, 2010 10:11 AM
To: 'scott.smullen@noaa.gov'; 'kgriffis@doc.gov'
Subject: Re: [Fwd: Re: FW: DEEPWATER/Oil budget calculator draft release]
Attachments: Message Text.txt; ATT00001.gif

She wants to talk to Sean.

Justin Kenney
 NOAA Director of Communications
 and External Affairs
 Office: 202-482-6090
 Cell: 202-821-6310
 Facebook: www.facebook.com/noaa.lubchenco
 (Sent from my BlackBerry)

From: Scott Smullen <Scott.Smullen@noaa.gov>
To: Justin kenney <Justin.kenney@noaa.gov>; kgriffis@doc.gov <kgriffis@doc.gov>
Sent: Wed Aug 04 10:08:35 2010
Subject: [Fwd: Re: FW: DEEPWATER/Oil budget calculator draft release]

If Jane is dead set against this... we need to weigh in now as to why

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

Subject: Re: FW: DEEPWATER/Oil budget calculator draft release
Date: Wed, 04 Aug 2010 10:04:10 -0400
From: Smith, Sean <[REDACTED]>
To: KGriffis@doc.gov, Heather R. Zicha [REDACTED] "Smith, Sean" [REDACTED]
CC: Scott.Smullen@noaa.gov, SGilson@doc.gov, "Fetcher, Adam" <Adam.Fetcher@dhs.gov>, "Whithorne, Bobby D" [REDACTED], Nicholas S. Shapiro [REDACTED]

+ Nick.

Let's change the opening line to the following:

Seventy-four percent of the oil from the BP oil spill is either evaporated, burned, skimmed, recovered from the wellhead or has been dispersed, much of which is in the process of being degraded. Much of this is the direct result of the federal response efforts.

From: Griffis, Kevin <KGriffis@doc.gov>
To: Zicha, Heather R. <Heather R. Zicha [REDACTED] Smith, Sean [REDACTED]
Cc: Smullen, Scott <Scott.Smullen@noaa.gov>; Gilson, Shannon <SGilson@doc.gov>; 'Adam.Fetcher@dhs.gov' <Adam.Fetcher@dhs.gov>; 'Bobby.Whithorne [REDACTED]
Sent: Wed Aug 04 09:45:33 2010
Subject: RE: FW: DEEPWATER/Oil budget calculator draft release

ATTACHMENT C

007759

From: Mark Miller
To: NOS ORR HAZMAT SSC; William Conner; Glen Watabayashi; John Tarnley; Debbie Payton; Amy Merten; Mark Dix; Bill Lehr; Doug Helton; Alan Mearns
Subject: "Pie Chart" Doc
Date: Thursday, July 29, 2010 9:30:29 PM
Attachments: Oil Budget description 7 29 v 7.doc

The Oil Budget document has just started clearance by the White House. It is positioned as a public information document and contains general description of the oil fate. If there are changes I will route the final version. Obviously not for release until after clearance.

Mark

Deepwater Horizon/BP Oil Budget Calculator: Where did the oil go?

The National Incident Command has assembled the best scientific minds in the government and independent scientific community to produce an estimate of just how much oil has been skimmed, burned, contained, evaporated and dispersed. They have developed a tool, called the Oil Budget Calculator to determine where the oil has gone. The numbers are based on best estimates of how much oil was released and how this oil is moving and degrading.

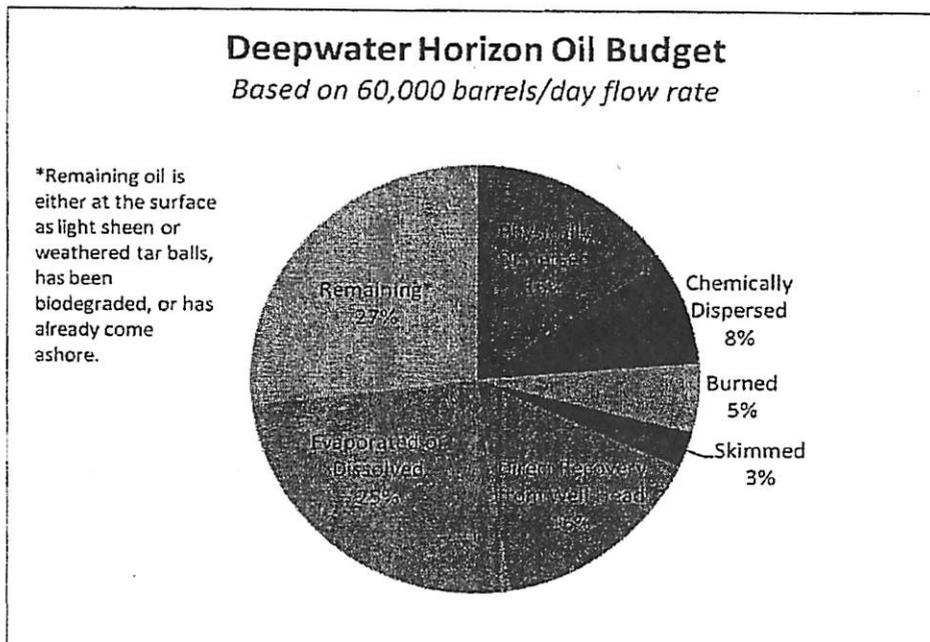


Figure 1: Oil Budget Calculator- Shows what has happened to the oil.

Explanation of Findings

The Flow Rate Technical Group (FRTG), assembled by the National Incident Command, estimates that as of July 15, between 3-5 million barrels of oil had been released from the Deepwater Horizon/BP wellhead.

As shown in the pie chart (Figure 1), aggressive response efforts have been successful in recovering a significant portion of the spilled oil. 16 percent of the oil was captured directly from the wellhead by the riser pipe insertion tube and top hat systems. In addition, burning and skimming operations collected approximately 11 percent of the oil.

It is estimated that 25 percent of the oil volume quickly evaporated or dissolved into the water column. The volatile components of oil evaporate, while the components that are not volatile dissolve into the water column or form residues such as tar balls. The evaporation rate estimate is based on scientific research and observations conducted during the Deepwater Horizon incident. A different evaporation rate is used for fresh and weathered oil to provide the most accurate number.

16 percent of the oil has dispersed physically into the water column, and 8 percent of the oil was dispersed by the application of nearly 50,000 barrels of chemical dispersants. Physical dispersion occurs as a result of the oil coming out of the broken riser pipe at high speed into the water column, which caused some of it to spray off in small droplets (less than 100 microns – the diameter of a human hair).

Some portion of the dispersed oil that is in droplets smaller than 100 microns remained below the surface. Previous analyses have shown evidence of a diffuse cloud of dispersed oil between 3300 and 4300 feet. (citation: Federal Joint Analysis Group Report 1 and 2, <http://ecowatch.ncddc.noaa.gov/JAG/reports.html>).

We know that naturally occurring bacteria have consumed and biodegraded a significant amount of the oil. Bacteria that break down the dispersed and weathered surface oil are naturally abundant in the Gulf of Mexico in large part because of the warm water there, the favorable nutrient and oxygen levels, and the fact that oil enters the Gulf of Mexico through natural seeps regularly. While there is more analysis to be done to quantify the exact rate of biodegradation in the Gulf, early indications are that the light crude oil from this well is biodegrading quickly.

After accounting for operations, dispersion and evaporation, 27 percent remains. This oil is either at the surface as light sheen or weathered tar balls, has been biodegraded, or has already come ashore on beaches.

In summary, burning, skimming and direct recovery from the wellhead have removed roughly one quarter of the oil. Around a quarter of the total has been naturally evaporated and just less than one quarter dispersed into Gulf waters. The remaining amount, just over one quarter is on the surface, in tar balls, on the shore, already removed from the shore or has been biodegraded.

NOAA continues to track the movement of the remaining oil. It will issue daily surface oil trajectories for as long as necessary and continue subsurface sampling to monitor the concentration and distribution of oil there. NOAA responders are working with the Unified Command to develop monitoring strategies for tar balls and near shore submerged oil.

Even though the threat to shorelines has decreased since the capping of the BP wellhead, federal scientists remain extremely concerned about the impact to the Gulf ecosystem. Fully understanding the impacts of this spill on wildlife, habitats, and natural resources in the Gulf region will take time and continued monitoring and research.

Note on degree of confidence in calculations: The Oil Budget calculations are based on direct measurements where possible and the best available scientific estimates where measurements were not possible. The numbers for direct recovery and burns were measured directly and reported in daily operational reports. The rest of the numbers were based on previous scientific analyses, best available information and a broad range of scientific expertise. These numbers will continue to be refined based on additional information and further analysis.

Attachments

Appendix A: Deepwater Horizon Gulf Incident Budget Tool Report from July 28, 2010, contains detailed explanation of calculation methods. The tool was created by the US Geological Survey in collaboration with US Coast Guard, NOAA, and NIST.

Appendix B: Acknowledgements

**Deepwater Horizon/BP Oil Budget Calculator:
Where did the oil go?
Appendix B: Acknowledgements**

Authors

Jane Lubchenco, NOAA, DOC
Marcia McNutt, USGS, DOI
William Conner, NOAA, DOC
Mark Sogge, USGS, DOI
Steven Hammond, USGS, DOI

Credits

The following scientists were involved in developing the Oil Budget Calculator tool:

David Mack (USGS) – Lead application developer
Jeff Allen (USGS) – Interface designer
Bill Lehr (NOAA) – Lead mass balance and oil budget scientist
LCDR Lance Lindgren and CDR Peter Hoffman (USCG) – Application requirements
Steve Hale, Kent Morgan, Kevin Laurent, and Jerry McFaul (USGS) – Technical advisors
Sky Bristol and Tim Kern (USGS) – Project vision and management
Kevin Gallagher and Martha Garcia (USGS) – Executive sponsors

The Following Scientists created and reviewed the calculation methods used in the oil budget calculator:

Federal Scientists

Bill Lehr, NOAA
Robert Jones, NOAA
Albert Venosa, EPA
Antonio Possolo, NIST

Independent Scientists

Ron Goodman, U. of Calgary
Al Allan, SpilTec
James Payne, Payne Env.
Tom Coolbaugh, Exxon Mobil
Ed Overton, LSU
Juan Lasheras, UCSD
Merv Fingas, Env. Canada(ret)
Ali Khelifa, Env. Canada
Pat Lambert, Env. Canada
Per Daling, SINTEF
David Usher, ISCO
Peter Carragher, BP
Michel Boufadel, Temple Univ.

007780

From: Bill.Lehr@noaa.gov
To: William.Connor
Cc: Mark.W.Miller@noaa.gov
Subject: usual suspects
Date: Friday, July 30, 2010 11:55:27 PM

From my original report:

The degree and detail of the response varied. In many cases the expert simply promised a more thorough analysis at a later date. One expert was unable to respond due to a confidentiality agreement with BP. Response by an expert does not indicate agreement with the assumptions or conclusions in this document.

For Bill. C.

Ron Goodman	U. of Calgary	Written comments
Al Allan	SpiITec	Written comments
James Payne	Payne Env.	Phone conversation
Tom Coolbaugh	Exxon Mobil	Written comments
Ed Overton	LSU	Phone conversation
Juan Lasheras	UCSD	Supplied technical paper
Albert Venosa	EPA	AI's thinking about it
Merv Fingas	Env Canada(ret)	Written comments

From: Mark Miller
To: Bill.Lehr@noaa.gov
Cc: William Conner
Subject: Re: Fwd: Oil budget tool update - coordination
Date: Saturday, July 31, 2010 6:25:07 AM

I deleted everyone who was not on your second list. That includes:

- Ali Khelifa, Env. Canada
- Pat Lambert, Env. Canada
- Per Daling, SINTEF
- David Usher, ISCO
- Peter Carragher, BP
- Michel Boufadel, Temple Univ.

Mark

Bill.Lehr@noaa.gov wrote:

> Mark,
>
> Did you get the revised words on the way to describe the expert group? From Steve's comments yesterday, I am comfortable deleting the BP guy, although Steve is the one who originally gave me his name. Al Venosa was going to check with his bosses to make sure he could be listed. Give him a call before you include him.

>
> Bill

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

> From: Mark Miller <Mark.W.Miller@noaa.gov>
> Date: Saturday, July 31, 2010 3:11 am
> Subject: Re: Fwd: Oil budget tool update - coordination
> To: Sky Bristol <sbristol@usgs.gov>, Stephen E Hammond <sehammon@usgs.gov>, Bill Lehr <Bill.Lehr@noaa.gov>

>
>
>> Sky,

>>
>> I agree with your take on this. Maybe a quick call with the small
>> group
>> - Steve, you, me and Bill just to get the "eyes on, everything looks
>> good" take would be good. Unfortunately our work starts when yours ends.

>>
>> Mark

>>
>> Sky Bristol wrote:

>>
>>> Mark,
>>>
>>> Looks like my last ended up with the wrong forwarding address. Cheers.

>>> <.((((<<<NNNN<.((((<<<NNNN<.((((<<<

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

>>> [REDACTED] <.((((<<<
>>>

>>> Begin forwarded message:

>>>

>>>

>>>> *From: *Sky Bristol <sbristol@usgs.gov <>>

>>>> *Date: *July 30, 2010 9:54:59 PM MDT

>>>> *To: *Stephen E Hammond <sehammon@usgs.gov <>>

>>>> *Cc: *sean.k.obrien@uscg.mil <>,

>>>> bill.lehr@noaa.gov <>,

>>>> mark.w.miller@noaa.mil <>,

>>>> [REDACTED] <>,

>>>> antonio.possolo@nist.gov <>, "Tim

>>>> Kern" <kernt@usgs.gov <>>

>>>> *Subject: **Re: Oil budget tool update - coordination*

>>>>

>>>> Here's the message I just sent with some thoughts on our approach.

>>>>

>>>> Depending on what Bill and/or Antonio think about the approach, we

>>>>

>>>> may not need to get everyone together. If you all like the

>>>>

>> direction,

>>

>>>> we can put things together and beta and get a review before going

>>>> live. In particular, we should make sure we get some input from CDR

>>>>

>>>> O'Brien on any changes to the message the report will be putting

>>>>

>> out

>>

>>>> under the new scenario.

>>>>

>>>> ----

>>>>

>>>> From Marcia McNutt's description of the approach and Mark Sogge's

>>>> input, I'm pretty sure this is a relatively simple modification.

>>>>

>> The

>>

>>>> current application (attached FYI) sets oilFlowRate as a constant

>>>> value for low and high discharge at 35,000 and 60,000 bbl/day,

>>>> respectively. When we run it from the Web application, we send it

>>>>

>> an

>>

>>>> array of values from the daily variable input:

>>>>

>>>> -- the day

>>>> -- Oily Water Collected (VOW)

>>>> -- Oil Burned (VBU)

>>>> -- Oil Collected via RITT/TopHat (VDT)

>>>> -- Dispersants Used, Surface (VCS)

>>>> -- Dispersants Used Subsurface (VCB)

>>>>

>>>> It sounds like what we are doing is changing oilFlowRate from a

>>>> constant to a variable that will start at some estimated initial

>>>>

>> flow

>>

>>>> rate and then decrease daily by a small fraction (less than 1% from

>>>>

ATTACHMENT D

006625

From: Mark.W.Miller
To: Bill Conner; Bill Lehr; Mark K Sooge; Hammond, Stephen E; Sky Bristol; Parsons, Roger; Nathalie Valette-Silver; Anastas.Paul@epa.gov; Perciasene.Bob@epa.gov; Venosa.Albert@epamail.epa.gov; Allen.Harry@epamail.epa.gov; Wilson.Gregory@epamail.epa.gov; Sami, Kristen; Scott Smullen; Zicha, Heather R.; Gilson, Shannon; Margaret Spring; KGriffis@doc.gov
Subject: Final Submission, Oil Budget
Date: Tuesday, August 03, 2010 3:21:26 PM
Attachments: Oil Budget description 8.3 FINAL.docx

This is the copy just transmitted to the White House. Actual schedule for release is not known but should be shortly.

Mark

BP Deepwater Horizon Oil Budget: What Happened To the Oil?

The National Incident Command (NIC) assembled a number of interagency expert scientific teams to estimate the quantity of BP Deepwater Horizon oil that has been released from the well and the fate of that oil. The expertise of government scientists serving on these teams is complemented by nongovernmental and governmental specialists reviewing the calculations and conclusions. One team calculated the flow rate and total oil released. Led by Energy Secretary Steven Chu and United States Geological Survey (USGS) Director Marcia McNutt, this team announced on August 2, 2010, that it estimates that a total of 4.9 million barrels of oil has been released from the BP Deepwater Horizon well. A second interagency team, led by the Department of the Interior (DOI) and the National Oceanic and Atmospheric Administration (NOAA) developed a tool called the Oil Budget Calculator to determine what happened to the oil. The calculator uses the 4.9 million barrel estimate as its input and uses both direct measurements and the best scientific estimates available to date, to determine what has happened to the oil. The interagency scientific report below builds upon the calculator and summarizes the disposition of the oil to date.

In summary, it is estimated that burning, skimming and direct recovery from the wellhead removed one quarter (25%) of the oil released from the wellhead. One quarter (25%) of the total oil naturally evaporated or dissolved, and just less than one quarter (24%) was dispersed (either naturally or as a result of operations) as microscopic droplets into Gulf waters. The residual amount — just over one quarter (26%) — is either on or just below the surface as light sheen and weathered tar balls, has washed ashore or been collected from the shore, or is buried in sand and sediments. Oil in the residual and dispersed categories is in the process of being degraded. The report below describes each of these categories and calculations. These estimates will continue to be refined as additional information becomes available.

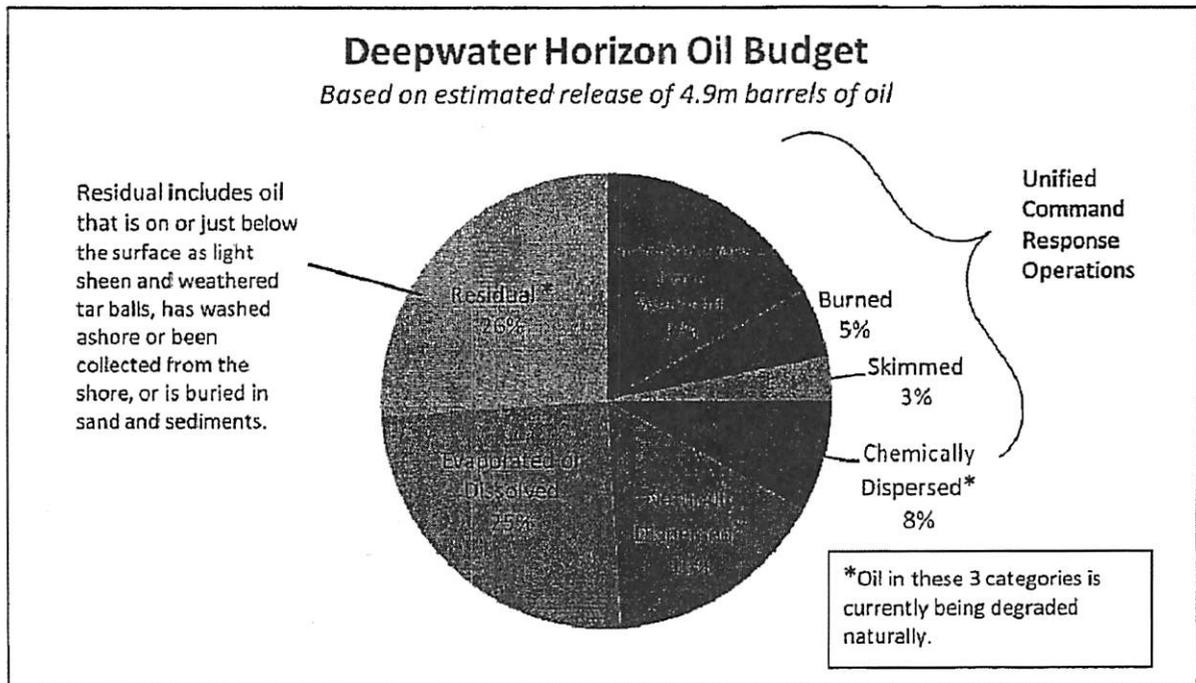


Figure 1: Oil Budget - Shows current best estimates of what happened to the oil.

Explanation of Findings

Unified Command Response Efforts: Response efforts to deal with the oil have been aggressive. As shown in the pie chart (Figure 1), response efforts were successful in addressing 33% of the spilled oil. This includes oil that was captured directly from the wellhead by the riser pipe insertion tube and top hat systems (17%), burning (5%), skimming (3%) and chemical dispersion (8%). Direct capture, burning and skimming remove the oil from the water entirely, while chemically dispersed oil remains in the water until it is biodegraded, as discussed below.

Dispersion: Based on estimates, 16% of the oil dispersed naturally into the water column and 8% was dispersed by the application of chemical dispersants on and below the surface. Natural dispersion occurs as a result of the oil coming out of the riser pipe at high speed into the water column, which caused some of the oil to spray off in small droplets. For the purpose of this analysis, 'dispersed oil' is defined as droplets that are less than 100 microns — about the diameter of a human hair. Oil droplets that are this small are neutrally buoyant and thus remain in the water column where they then begin to biodegrade. Chemical dispersion also breaks the oil up into small droplets to keep it from coming ashore in large surface slicks and makes it more readily available for biodegradation. Chemical dispersants were applied at the surface and below the surface; therefore, the chemically dispersed oil ended up both deep in the water column and just below the surface. Dispersion increases the likelihood that the oil will be biodegraded, both in the water column and at the surface. Until it is biodegraded, naturally or chemically dispersed oil, even in dilute amounts, can be toxic to vulnerable species.

All of the naturally dispersed oil and some of the oil that was chemically dispersed remained well-below the surface in diffuse clouds where it began to dissipate further and biodegrade. Previous analyses have shown evidence of diffuse clouds of dispersed oil between 3,300 and 4,300 feet in very low concentrations (parts per million or less), moving in the direction of known ocean currents and decreasing with distance from the wellhead. (citation: Federal Joint Analysis Group Report 1 and 2, <http://ecowatch.ncddc.noaa.gov/JAG/reports.html>). Oil that was chemically dispersed at the surface moved into the top 20 feet of the water column where it mixed with surrounding waters and began to biodegrade.

Evaporation and Dissolution: It is estimated that 25% of the oil volume quickly and naturally evaporated or dissolved into the water column. The evaporation and dissolution rate estimate is based on scientific research and observations conducted during the Deepwater Horizon incident.

Dissolution is different from dispersion. Dissolution is the process by which individual hydrocarbon molecules from the oil separate and dissolve into the water just as sugar can be dissolved in water. Dispersion is the process by which larger volumes of oil are broken down into smaller droplets of oil.

Residual: After accounting for the categories that can be measured directly or estimated (i.e., recovery operations, dispersion, and evaporation and dissolution), an estimated 26% remains. This figure is a combination of categories all of which are difficult to measure or estimate. It includes oil still on or just below the surface in the form of light sheen or tar balls, oil that has washed ashore or been collected from the shore, and some that is buried in sand and sediments and may resurface through time. This oil has also begun to degrade through natural processes.

Biodegradation: Dispersed oil in the water column and oil on the surface of the water biodegrade naturally. While there is more analysis to be done to quantify the rate of biodegradation in the Gulf, early observations and preliminary research results from a number of scientists show that the oil from the BP Deepwater Horizon spill is biodegrading quickly. Scientists from NOAA, EPA, DOE and academia are working to calculate more precise estimates of this rate. It is well known that bacteria that break down the dispersed and weathered surface oil are abundant in the Gulf of Mexico in large part because of the warm water, the favorable nutrient and oxygen levels, and the fact that oil regularly enters the Gulf of Mexico through natural seeps.

Explanation of Methods and Assumptions

Flow Rate: The Oil Budget Calculator starts with an estimate of the cumulative amount of oil released over the course of the spill. The newest estimates reflect the collaborative work and discussions of the National Incident Command's Flow Rate Technical Group (FRTG) led by United States Geological Survey (USGS) Director Marcia McNutt, and a team of Department of Energy (DOE) scientists and engineers, led by Energy Secretary Steven Chu. This group estimates that approximately 4.9 million barrels of oil flowed from the BP Deepwater Horizon wellhead between April 22 and July 15, 2010, at which time the flow of oil was suspended. The uncertainty of this estimate is $\pm 10\%$. The pie chart above is based on this group's estimate of 4.9 million barrels of oil.

Direct Measures and Best Estimates: The oil budget calculations are based on direct measurements wherever possible and the best available scientific estimates where measurements were not possible. The numbers for direct recovery and burns were measured directly and reported in daily operational reports. The skimming numbers were also based on daily reported estimates. The rest of the numbers were based on previous scientific analyses, best available information and a broad range of scientific expertise. These numbers will continue to be refined based on additional information and further analysis. Further information on these calculation methods is available in the Deepwater Horizon Gulf Incident Budget Tool Report from Aug 1, 2010 (available online). The tool was created by the US Geological Survey in collaboration with US Coast Guard, NOAA and NIST.

Continued monitoring and research:

Our knowledge of the oil, dispersants, ecosystem impacts and human impacts will continue to evolve. Federal agencies and many academic and independent scientists are actively pursuing better understanding of the fate, transport and impact of the oil. The federal government will continue to report activities, results and data to the public on a regular basis. Updates and information can be found at www.restorethegulf.gov, and data from the response and monitoring can be found at www.geoplatform.gov.

DOI, NASA and NOAA continue to refine understanding of amounts of remaining surface oil. NOAA responders are working with the Unified Command on monitoring strategies for tar balls and near shore submerged oil, and researchers continue subsurface scanning and sampling to monitor the concentration, distribution and impact of oil there. EPA and NOAA have carefully monitored BP's use of dispersant in the Gulf and continues to monitor the air, water and sediments near the shoreline for the presence of dispersant and crude oil components with special attention to human health impacts. Numerous NOAA- and NSF-funded academic researchers and NOAA scientists are investigating rates of biodegradation, ecosystem and wildlife impacts. DOI and DOE responders are working to ensure control of the well and

accurate measurement of oil released and oil remaining in the environment. DOI is leading efforts to mitigate impacts of oil to terrestrial wildlife, natural resources, and public lands.

Even though the threat to shorelines, fish and wildlife, and ecosystems has decreased since the capping of the BP wellhead, federal scientists remain extremely concerned about the impact of the spill to the Gulf ecosystem. Fully understanding the impacts of this spill on wildlife, habitats, and natural resources in the Gulf region will take time and continued monitoring and research.

**Deepwater Horizon/BP Oil Budget:
What happened to the oil?**

Acknowledgements

Authors

Jane Lubchenco, NOAA, DOC
 Marcia McNutt, USGS, DOI
 Bill Lehr, NOAA, DOC
 Mark Sogge, USGS, DOI
 Mark Miller, NOAA, DOC
 Stephen Hammond, USGS, DOI
 William Conner, NOAA, DOC

Credits

The following scientists were involved in developing the Oil Budget Calculator tool:

LT(jg) Charity Drew (USCG) – Original Excel spreadsheet and application inspiration
 David Mack and Jeff Allen (USGS) – Application development and engineering
 Rebecca Uribe (USGS) – Graphic design
 Bill Lehr (NOAA) – Lead mass balance and oil budget scientist
 Antonio Possolo and Pedro Espina (NIST) – Statistical oil budget model encoded as an R program
 LCDR Lance Lindgren, CDR Peter Hoffman, CDR Sean O'Brien, and LT Amy McElroy (USCG) – Application requirements and user stories
 Sky Bristol and Tim Kern (USGS) – Project vision and management
 Kevin Gallagher, Martha Garcia, and Stephen Hammond (USGS) – Executive sponsors

The following experts were consulted on the oil budget calculations, contributed field data, suggested formulas, analysis methods, or reviewed the algorithms used in the calculator. The team continues to refine the analysis and this document will be updated as appropriate.

Federal Scientists

Bill Lehr, NOAA
 Robert Jones, NOAA
 Antonio Possolo, NIST

Independent Scientists

Ron Goodman, U. of Calgary
 Al Allan, SpilTec
 James Payne, Payne Env.
 Tom Coolbaugh, Exxon Mobil
 Ed Overton, LSU
 Juan Lasheras, UCSD
 Merv Fingas, Env. Canada (ret)
 Ali Khelifa, Env. Canada
 Pat Lambert, Env. Canada
 Per Daling, SINTEF
 Michel Boufadel, Temple Univ.

ATTACHMENT E

007759

From: Mark Miller
To: NOS ORR HAZMAT SSC; William Conner; Glen Watabayashi; John Tampley; Debbie Payton; Amy Merten; Mark Dix; Bill Lehr; Doug Helton; Alan Mearns
Subject: "Pie Chart" Doc
Date: Thursday, July 29, 2010 9:30:29 PM
Attachments: Oil Budget description 7 29 v 7.doc

The Oil Budget document has just started clearance by the White House. It is positioned as a public information document and contains general description of the oil fate. If there are changes I will route the final version. Obviously not for release until after clearance.

Mark

Deepwater Horizon/BP Oil Budget Calculator: Where did the oil go?

The National Incident Command has assembled the best scientific minds in the government and independent scientific community to produce an estimate of just how much oil has been skimmed, burned, contained, evaporated and dispersed. They have developed a tool, called the Oil Budget Calculator to determine where the oil has gone. The numbers are based on best estimates of how much oil was released and how this oil is moving and degrading.

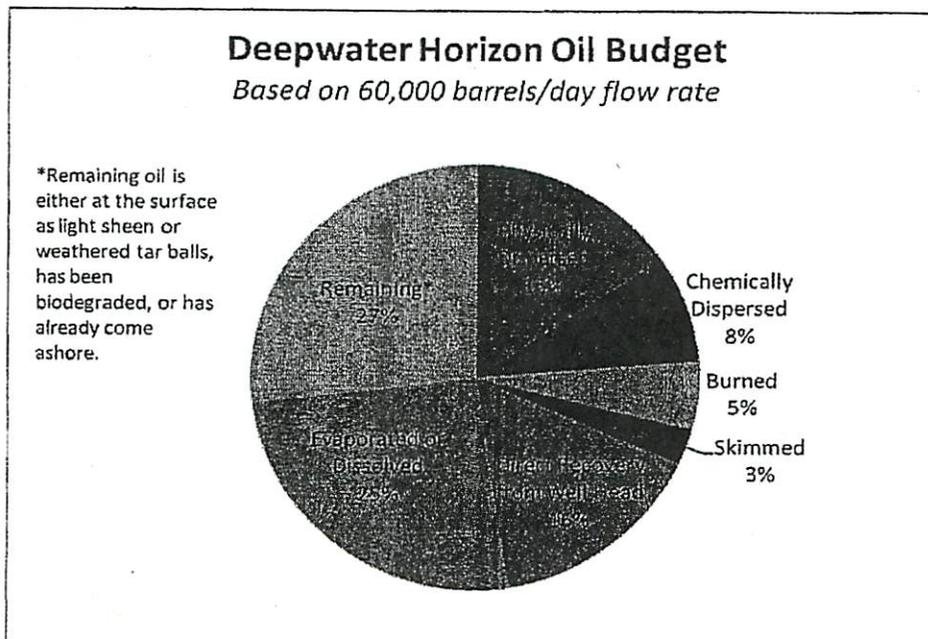


Figure 1: Oil Budget Calculator- Shows what has happened to the oil.

Explanation of Findings

The Flow Rate Technical Group (FRTG), assembled by the National Incident Command, estimates that as of July 15, between **3-5 million barrels** of oil had been released from the Deepwater Horizon/BP wellhead.

As shown in the pie chart (Figure 1), aggressive response efforts have been successful in recovering a significant portion of the spilled oil. 16 percent of the oil was captured directly from the wellhead by the riser pipe insertion tube and top hat systems. In addition, burning and skimming operations collected approximately 11 percent of the oil.

It is estimated that 25 percent of the oil volume quickly evaporated or dissolved into the water column. The volatile components of oil evaporate, while the components that are not volatile dissolve into the water column or form residues such as tar balls. The evaporation rate estimate is based on scientific research and observations conducted during the Deepwater Horizon incident. A different evaporation rate is used for fresh and weathered oil to provide the most accurate number.

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After accounting for operations, dispersion and evaporation, 27 percent remains. This oil is either at the surface as light sheen or weathered tar balls, has been biodegraded, or has already come ashore on beaches.

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NOAA continues to track the movement of the remaining oil. It will issue daily surface oil trajectories for as long as necessary and continue subsurface sampling to monitor the concentration and distribution of oil there. NOAA responders are working with the Unified Command to develop monitoring strategies for tar balls and near shore submerged oil.

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Appendix B: Acknowledgements

**Deepwater Horizon/BP Oil Budget Calculator:
Where did the oil go?**

Appendix B: Acknowledgements

Authors

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Marcia McNutt, USGS, DOI
William Conner, NOAA, DOC
Mark Sogge, USGS, DOI
Steven Hammond, USGS, DOI

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Jeff Allen (USGS) – Interface designer
Bill Lehr (NOAA) – Lead mass balance and oil budget scientist
LCDR Lance Lindgren and CDR Peter Hoffman (USCG) – Application requirements
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Ed Overton, LSU
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Ali Khelifa, Env. Canada
Pat Lambert, Env. Canada
Per Daling, SINTEF
David Usher, ISCO
Peter Carragher, BP
Michel Boufadel, Temple Univ.

ATTACHMENT F

Subject: Re: Need feed back from USCG and NOAA on potential changes to oil budget tool
From: Sky Bristol <sbristol@usgs.gov>
Date: Sun, 01 Aug 2010 14:56:58 -0600
To: Mark Miller <Mark.W.Miller@noaa.gov>
CC: Stephen E Hammond <sehammon@usgs.gov>

We can probably round however we need to, so we'll look at this. Better give us till COB tomorrow on this.

I have to run now. My dad and brother just showed up at the lake with the boat. I'll check email periodically.

<(((-----(((-----(((-----

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

(((-----(((-----(((-----

On Aug 1, 2010, at 2:51 PM, Mark Miller wrote:

All three is the best possible. This will make it much easier for us. I apologize but do you have any estimate on when that might be available - we have a call with the WH at 10:30 EDT tomorrow. I don't need it by then but knowing when will be a great help.

I firmly support rounding the numbers - can we consider a maximum number of left hand digits like three?

Mark

Sky Bristol wrote:

I recommend keeping all three reports, once we add in the "mean." In the application, users can print any one report or all of them together, so it should enable any or all of the reports to be used as appropriate. You all should decide on guidance for when to use what report, and/or we can reorganize the application a bit as well.

On a somewhat related note, Bill Lehr had recommended a while back that we round everything to the nearest 10 barrels to help a little in communicating uncertainty. Is that something you'd like to discuss with staff at the NIC? The FRTG team from yesterday did not do this, but it might be worth considering. As we are honing in on "real numbers," I think we want to get it as close to right as we can and then not mess around with them.

We also created a task to add a similar pie chart with the categories all broken out like what you included in the document from yesterday. That seemed to be a pretty useful chart, and it should be relatively for the developers to add into the application.

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

On Aug 1, 2010, at 2:21 PM, Mark Miller wrote:

Tomorrow morning is great. We have received strong pushback from WH on the cumulative total used in our graphic being more than the official 4.93 M bbls. With the flow rate press release looking like it will go out on Tuesday that means our document won't go out until Wednesday so tomorrow morning if possible is great. How will you handle the report? Would it have only one set of graphics?

Mark

Sky Bristol wrote:

We have it on the list to produce a third report from the direct "government estimates." However, we'll need to address that first thing tomorrow if that is okay. We don't have the staffing today.

An alternative if available would be to have Antonio or one of the NIST guys run the R program directly with the latest spreadsheet. That won't get you the same report you see on the Web, but you'd have the numbers.

Sent from my iPhone

On Aug 1, 2010, at 13:27, Mark Miller <Mark.W.Miller@noaa.gov> wrote:

Sky,

I was wondering how difficult would it be for you to do a one off Report that had just the flowrates and not the +/- 10 % in it?

Mark

Sky Bristol wrote:

Mark,

Please add Steve Hammond to the list of executive sponsors in the credits for the Oil Budget Tool if it's not too late to get any changes into that document. I'll be updating the Web site version of these in the About page to match what I sent.

ATTACHMENT G

006625

From: Mark.W.Miller
To: Bill Conner; Bill Lehr; Mark K Sooge; Hammond, Stephen E; Sky Bristol; Parsons, Roger; Nathalie Valette-Silver; Anatas.Paul@epa.gov; Perclasepe.Bob@epa.gov; Venosa.Albert@epamail.epa.gov; Allen.Harry@epamail.epa.gov; Wilson.Gregory@epamail.epa.gov; Sarri, Kristen; Scott Smullen; Zichal, Heather R.; Gilson, Shannon; Margaret Spring; KGriffis@dcc.gov
Subject: Final Submission, Oil Budget
Date: Tuesday, August 03, 2010 3:21:26 PM
Attachments: Oil Budget description 8.3 FINAL.docx

This is the copy just transmitted to the White House. Actual schedule for release is not known but should be shortly.

Mark

BP Deepwater Horizon Oil Budget: What Happened To the Oil?

The National Incident Command (NIC) assembled a number of interagency expert scientific teams to estimate the quantity of BP Deepwater Horizon oil that has been released from the well and the fate of that oil. The expertise of government scientists serving on these teams is complemented by nongovernmental and governmental specialists reviewing the calculations and conclusions. One team calculated the flow rate and total oil released. Led by Energy Secretary Steven Chu and United States Geological Survey (USGS) Director Marcia McNutt, this team announced on August 2, 2010, that it estimates that a total of 4.9 million barrels of oil has been released from the BP Deepwater Horizon well. A second interagency team, led by the Department of the Interior (DOI) and the National Oceanic and Atmospheric Administration (NOAA) developed a tool called the Oil Budget Calculator to determine what happened to the oil. The calculator uses the 4.9 million barrel estimate as its input and uses both direct measurements and the best scientific estimates available to date, to determine what has happened to the oil. The interagency scientific report below builds upon the calculator and summarizes the disposition of the oil to date.

In summary, it is estimated that burning, skimming and direct recovery from the wellhead removed one quarter (25%) of the oil released from the wellhead. One quarter (25%) of the total oil naturally evaporated or dissolved, and just less than one quarter (24%) was dispersed (either naturally or as a result of operations) as microscopic droplets into Gulf waters. The residual amount — just over one quarter (26%) — is either on or just below the surface as light sheen and weathered tar balls, has washed ashore or been collected from the shore, or is buried in sand and sediments. Oil in the residual and dispersed categories is in the process of being degraded. The report below describes each of these categories and calculations. These estimates will continue to be refined as additional information becomes available.

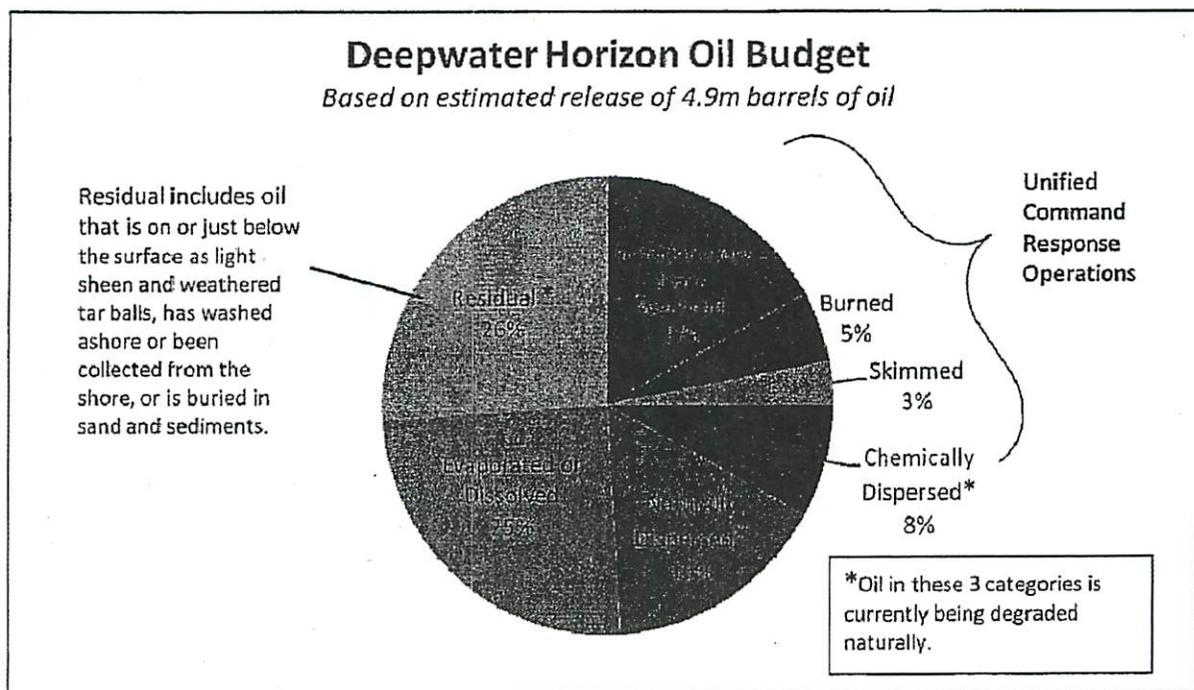


Figure 1: Oil Budget - Shows current best estimates of what happened to the oil.

Explanation of Findings

Unified Command Response Efforts: Response efforts to deal with the oil have been aggressive. As shown in the pie chart (Figure 1), response efforts were successful in addressing 33% of the spilled oil. This includes oil that was captured directly from the wellhead by the riser pipe insertion tube and top hat systems (17%), burning (5%), skimming (3%) and chemical dispersion (8%). Direct capture, burning and skimming remove the oil from the water entirely, while chemically dispersed oil remains in the water until it is biodegraded, as discussed below.

Dispersion: Based on estimates, 16% of the oil dispersed naturally into the water column and 8% was dispersed by the application of chemical dispersants on and below the surface. Natural dispersion occurs as a result of the oil coming out of the riser pipe at high speed into the water column, which caused some of the oil to spray off in small droplets. For the purpose of this analysis, 'dispersed oil' is defined as droplets that are less than 100 microns — about the diameter of a human hair. Oil droplets that are this small are neutrally buoyant and thus remain in the water column where they then begin to biodegrade. Chemical dispersion also breaks the oil up into small droplets to keep it from coming ashore in large surface slicks and makes it more readily available for biodegradation. Chemical dispersants were applied at the surface and below the surface; therefore, the chemically dispersed oil ended up both deep in the water column and just below the surface. Dispersion increases the likelihood that the oil will be biodegraded, both in the water column and at the surface. Until it is biodegraded, naturally or chemically dispersed oil, even in dilute amounts, can be toxic to vulnerable species.

All of the naturally dispersed oil and some of the oil that was chemically dispersed remained well-below the surface in diffuse clouds where it began to dissipate further and biodegrade. Previous analyses have shown evidence of diffuse clouds of dispersed oil between 3,300 and 4,300 feet in very low concentrations (parts per million or less), moving in the direction of known ocean currents and decreasing with distance from the wellhead. (citation: Federal Joint Analysis Group Report 1 and 2, <http://ecowatch.ncddc.noaa.gov/JAG/reports.html>). Oil that was chemically dispersed at the surface moved into the top 20 feet of the water column where it mixed with surrounding waters and began to biodegrade.

Evaporation and Dissolution: It is estimated that 25% of the oil volume quickly and naturally evaporated or dissolved into the water column. The evaporation and dissolution rate estimate is based on scientific research and observations conducted during the Deepwater Horizon incident.

Dissolution is different from dispersion. Dissolution is the process by which individual hydrocarbon molecules from the oil separate and dissolve into the water just as sugar can be dissolved in water. Dispersion is the process by which larger volumes of oil are broken down into smaller droplets of oil.

Residual: After accounting for the categories that can be measured directly or estimated (i.e., recovery operations, dispersion, and evaporation and dissolution), an estimated 26% remains. This figure is a combination of categories all of which are difficult to measure or estimate. It includes oil still on or just below the surface in the form of light sheen or tar balls, oil that has washed ashore or been collected from the shore, and some that is buried in sand and sediments and may resurface through time. This oil has also begun to degrade through natural processes.

Biodegradation: Dispersed oil in the water column and oil on the surface of the water biodegrade naturally. While there is more analysis to be done to quantify the rate of biodegradation in the Gulf, early observations and preliminary research results from a number of scientists show that the oil from the BP Deepwater Horizon spill is biodegrading quickly. Scientists from NOAA, EPA, DOE and academia are working to calculate more precise estimates of this rate. It is well known that bacteria that break down the dispersed and weathered surface oil are abundant in the Gulf of Mexico in large part because of the warm water, the favorable nutrient and oxygen levels, and the fact that oil regularly enters the Gulf of Mexico through natural seeps.

Explanation of Methods and Assumptions

Flow Rate: The Oil Budget Calculator starts with an estimate of the cumulative amount of oil released over the course of the spill. The newest estimates reflect the collaborative work and discussions of the National Incident Command's Flow Rate Technical Group (FRTG) led by United States Geological Survey (USGS) Director Marcia McNutt, and a team of Department of Energy (DOE) scientists and engineers, led by Energy Secretary Steven Chu. This group estimates that approximately 4.9 million barrels of oil flowed from the BP Deepwater Horizon wellhead between April 22 and July 15, 2010, at which time the flow of oil was suspended. The uncertainty of this estimate is $\pm 10\%$. The pie chart above is based on this group's estimate of 4.9 million barrels of oil.

Direct Measures and Best Estimates: The oil budget calculations are based on direct measurements wherever possible and the best available scientific estimates where measurements were not possible. The numbers for direct recovery and burns were measured directly and reported in daily operational reports. The skimming numbers were also based on daily reported estimates. The rest of the numbers were based on previous scientific analyses, best available information and a broad range of scientific expertise. These numbers will continue to be refined based on additional information and further analysis. Further information on these calculation methods is available in the Deepwater Horizon Gulf Incident Budget Tool Report from Aug 1, 2010 (available online). The tool was created by the US Geological Survey in collaboration with US Coast Guard, NOAA and NIST.

Continued monitoring and research:

Our knowledge of the oil, dispersants, ecosystem impacts and human impacts will continue to evolve. Federal agencies and many academic and independent scientists are actively pursuing better understanding of the fate, transport and impact of the oil. The federal government will continue to report activities, results and data to the public on a regular basis. Updates and information can be found at www.restorethegulf.gov, and data from the response and monitoring can be found at www.geoplatform.gov.

DOI, NASA and NOAA continue to refine understanding of amounts of remaining surface oil. NOAA responders are working with the Unified Command on monitoring strategies for tar balls and near shore submerged oil, and researchers continue subsurface scanning and sampling to monitor the concentration, distribution and impact of oil there. EPA and NOAA have carefully monitored BP's use of dispersant in the Gulf and continues to monitor the air, water and sediments near the shoreline for the presence of dispersant and crude oil components with special attention to human health impacts. Numerous NOAA- and NSF-funded academic researchers and NOAA scientists are investigating rates of biodegradation, ecosystem and wildlife impacts. DOI and DOE responders are working to ensure control of the well and

accurate measurement of oil released and oil remaining in the environment. DOI is leading efforts to mitigate impacts of oil to terrestrial wildlife, natural resources, and public lands. Even though the threat to shorelines, fish and wildlife, and ecosystems has decreased since the capping of the BP wellhead, federal scientists remain extremely concerned about the impact of the spill to the Gulf ecosystem. Fully understanding the impacts of this spill on wildlife, habitats, and natural resources in the Gulf region will take time and continued monitoring and research.

ATTACHMENT H

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

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
[REDACTED]

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 tell 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

USGSUSGSUSGSUSGSUSGSUSGSUSGSUSGSUSGSUSGS

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

Subject: Re: Need feed back from USCG and NOAA on potential changes to oil budget tool
From: Mark Miller <mark.w.miller@noaa.gov>
Date: Sun, 01 Aug 2010 16:21:20 -0400
To: Sky Bristol <sbristol@usgs.gov>
CC: Stephen E Hammond <sehammon@usgs.gov>

Tomorrow morning is great. We have received strong pushback from WH on the cumulative total used in our graphic being more that the official 4.93 M bbls. With the flow rate press release looking like it will go out on Tuesday that means our document won't go out until Wednesday so tomorrow morning if possible is great. How will you handle the report? Would it have only one set of graphics?

Mark

Sky Bristol wrote:

We have it on the list to produce a third report from the direct "government estimates." However, we'll need to address that first thing tomorrow if that is okay. We don't have the staffing today.

An alternative if available would be to have Antonio or one of the NIST guys run the R program directly with the latest spreadsheet. That won't get you the same report you see on the Web, but you'd have the numbers.

Sent from my iPhone

On Aug 1, 2010, at 13:27, Mark Miller <Mark.W.Miller@noaa.gov> wrote:

Sky,

I was wondering how difficult would it be for you to do a one off Report that had just the flowrates and not the +/- 10 % in it?

Mark

Sky Bristol wrote:

Mark,

Please add Steve Hammond to the list of executive sponsors in the credits for the Oil Budget Tool if it's not too late to get any changes into that document. I'll be updating the Web site version of these in the About page to match what I sent.

Inland recovery somehow did not make it into the printed report. I added that as a task for the next "cleanup" version.

Thanks.

<(((<<<<-----<(((<<<<-----<(((<<<<

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

<((((<<<<<<<<((((<<<<<<<<((((<<<<

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.

<((((<<<<~N~N~N~N<((((<<<<~N~N~N~N<((((<<<<
Sky Bristol
sbristol@usgs.gov
Office: 303-202-4181

ATTACHMENT I

(c) 202 368 8193

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

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Steve

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

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

Attachment J

Sarvana, Adam

From: Boyd, April [ABoyd@doc.gov]
Sent: Tuesday, December 21, 2010 11:40 AM
To: Sarvana, Adam; Wright, Jonathan
Cc: Lubchenco, Jane; Murawski, Steve; Flemma, Jean
Subject: RE: requested documents
Attachments: image001.jpg; image002.jpg; image003.jpg; image004.jpg

Adam,

I have been and will continue to communicate with Committee staff on this matter. Please work through Jean Flemma.

April

From: Sarvana, Adam [mailto:Adam.Sarvana@mail.house.gov]
Sent: Tuesday, December 21, 2010 11:35 AM
To: Boyd, April; Wright, Jonathan
Cc: Lubchenco, Jane; Murawski, Steve
Subject: RE: requested documents

April,

Thanks for the call and message yesterday. Please keep all communication on this issue written from now on. There isn't anything to discuss on the phone.

When you redact files requested by the Chairman of the Natural Resources Committee and don't explain why, it is the very definition of unresponsive. Send us the full unredacted versions of every document you originally transmitted or provide a reason for the redactions in writing by 4:00 today. The Monday cutoff has already come and gone with nothing but a phone call offering to discuss this further. My boss is concerned that NOAA isn't taking this seriously.

Adam Sarvana
Communications Director
Rep. Raúl M. Grijalva (AZ-07)
(520) 622-6788 Office (During Christmas week)
(202) 573-2562 Cell

From: Boyd, April [mailto:ABoyd@doc.gov]
Sent: Monday, December 20, 2010 1:14 PM
To: Sarvana, Adam
Cc: Wright, Jonathan
Subject: RE: requested documents

Adam,

I have left messages for you on your work and cell numbers. Please give me a call at your convenience. I'm at 202-482-3663.

April

Jonathan and April,

The redactions run to hundreds of pages and are clearly unjustified. We're not going to get into a process of picking and choosing and dragging things out. You have a record of which files you sent us. Please resend those same files without redactions. Again, these are in response to a chairman's letter and are part of our oversight responsibilities. We've spent a good amount of time reviewing these, and I'm on the verge of telling my boss NOAA's response was uncooperative. There are blacked-out messages in the middle of pertinent conversations. There is no basis for this. It is completely unacceptable.

Adam Sarvana
Communications Director
U. S. Rep. Raúl M. Grijalva (AZ-07)
(202) 225-2435 office
(202) 573-2562 cell



From: Wright, Jonathan [mailto:JWright@doc.gov]
Sent: Friday, December 17, 2010 12:42 PM
To: Sarvana, Adam
Cc: Boyd, April
Subject: RE: requested documents

Adam,

If you can provide a list of document numbers that contain the redactions you mentioned below, we can put you in touch with the applicable agencies to discuss possible ways to accommodate your request.

Jon Wright

Office of the Secretary
Legislative and Intergovernmental Affairs
U.S. Department of Commerce
202-482-6080 (desk)
202-320-1531 (cell)

From: Sarvana, Adam [mailto:Adam.Sarvana@mail.house.gov]
Sent: Friday, December 17, 2010 12:04 PM
To: Wright, Jonathan
Cc: 'woc@noaa.gov'
Subject: RE: requested documents

Jonathan,

These documents include some heavy redactions. These are not in response to a FOIA request – they're in response to a chairman's letter. If NOAA has a justification for these redactions, many of which are clearly not based on private personal information, please advise as soon as possible. There are blacked-out portions of e-mail conversations pertinent to our inquiry that have nothing to do with people's cell phone numbers or home addresses.