

(b)(5) Deliberative

(2) (b)(5) Deliberative

(b)(5) Deliberative

(b)(5) Deliberative

RTC_draft_Volume_5_complete_1128 -jh1129.doc

John Hannon
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW (MC 2344A)
Washington, D.C. 20460
Phone (202) 564-5563
Fax (202) 564-5603

Jason Samenow | Sorry for multiple emails on this....but... 11/28/2009 11:38:10AM

From: Jason Samenow/DC/USEPA/US
To: Rona Birnbaum/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill Perkins <perkins.william@epa.gov>, Lesley Jantarasami/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA
Date: 11/28/2009 11:38 AM
Subject: vol 5 (use this version, please)

Sorry for multiple emails on this....but please refer to this version of Volume 5.
Jason

EPA-EF-003769

(Ben and Mike, please check the first comment and response on air quality and make sure both of your edits to that one were appropriately incorporated)

(b)(5) Deliberative

RTC_draft_Volume_5_complete_1128.doc

EPA-2364

Jason
Samenow/DC/USEPA/US
11/29/2009 01:19 PM

To John Hannon
cc Ben DeAngelo, Carol Holmes, David Chalmers, Dina Kruger,
Lesley Jantarasami, Michael Kolian, Bill Perkins, Rona
Birnbaum
bcc
Subject Re: vol 5 (use this version, please)

Thanks, John -- for the very helpful comments and quick turnaround. We're addressing this volume today. Ben and Mike will work the air quality issues (and will respond substantively to your questions), and I'm handling everything else (e.g. heat, disease, etc).

Jason

John Hannon [Here are comments on the rest of volu...](#) 11/29/2009 01:00:01 PM

From: John Hannon/DC/USEPA/US
To: Jason Samenow/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill Perkins <perkins.william@epa.gov>, Rona Birnbaum/DC/USEPA/US@EPA
Date: 11/29/2009 01:00 PM
Subject: Re: vol 5 (use this version, please)

Here are comments on the rest of volume 5. Not much, except in the area of (b)(5) Deliberative

[REDACTED]

I think this means two things:

(1) [REDACTED] (b)(5) Deliberative [REDACTED]

[REDACTED]

[REDACTED]

EPA-EF-003771

(b)(5) Deliberative

(2) (b)(5) Deliberative

[Redacted]

[Redacted]

[Redacted]

[attachment "RTC_draft_Volume_5_complete_1128 -jh1129.doc" deleted by Jason Samenow/DC/USEPA/US]

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Jason Samenow Sorry for multiple emails on this....but... 11/28/2009 11:38:10 AM

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To: Rona Birnbaum/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill Perkins <perkins.william@epa.gov>, Lesley Jantarasami/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA
Date: 11/28/2009 11:38 AM
Subject: vol 5 (use this version, please)

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(Ben and Mike, please check the first comment and response on air quality and make sure both of your edits to that one were appropriately incorporated)

[attachment "RTC_draft_Volume_5_complete_1128.doc" deleted by Jason Samenow/DC/USEPA/US]

EPA-2365

"Mae Thomas"
<Mae.Thomas@erg.com>
11/29/2009 01:22 PM

To William Perkins
cc "Mae Thomas", "Tracy Parham"
bcc

Subject Process Memo

Hi Bill attached is a draft of the process memo. I think Tracy and I would both prefer spending several more hours on it, but, at this point, it is complete with all our steps. We can certainly add more detail or refine the language, but it is all there.

Some really obvious things that will need to be fixed are:

- + Making what we call different sections consistent throughout (we changed names and I don't think we have fixed this throughout)
- + The tables need to be better formatted for a memo and also they need to be edited to make sure they reflect the final codes or categories. We might even want to put some or all of the tables in attachments because some are really long.
- + There are a couple of tables we need to add.
- + General editing
- + Any changes you would like us to make.

Thanks Bill
Mae

(b)(5) Deliberative

GHG Endangerment Project Description_v4.doc

EPA-EF-003774

EPA-2366

**Rona
Birnbaum/DC/USEPA/US**
11/29/2009 01:23 PM

To Lesley Jantarasami
cc Jeremy Martinich, William Perkins
bcc

Subject thought from Dina re: RTC layout

Lesley, in speaking with Dina this morning, she noted that for MRR RTC, ERG placed a line between each comment/response **set** and she thought that would be useful for our RTC volumes as well. I'm assuming she meant that was the way they were actually finalized, not just for review purposes (although she said that it made review easier as well). I did find one error here in Vol 1 where comment/response #1-7 was inadvertently repeated....so, we'll need to make sure that gets fixed as well and all following numbers are changed accordingly. Can you/Bill check with ERG regarding placing those lines in our Volumes?
thanks, Rona

Rona Birnbaum | Jeremy, I just sent this to Dina to revie... | 11/28/2009 06:23:56 PM

From: Rona Birnbaum/DC/USEPA/US
To: Jeremy Martinich/DC/USEPA/US@EPA
Cc: William Perkins/DC/USEPA/US@EPA
Date: 11/28/2009 06:23 PM
Subject: Vol 1 edits

Jeremy, I just sent this to Dina to review again and make any edits on top of mine. I'm cc'ing Bill here as I'm suggesting that section 1.5 be moved to Vol 8.
THANKS!!!

(b)(5) Deliberative
[REDACTED]

RTC draft Volume 1 General TSD Approach 11-24-09.RB Comments on 11-28.doc

EPA-EF-003775

EPA-2367

Jason
Samenow/DC/USEPA/US
11/29/2009 01:26 PM

To William Perkins, David Chalmers
cc Rona Birnbaum
bcc
Subject action required on volume 5

Bill and David--

Could you both please try to address John Hannon's comments today on your respective sections and could you each send me a revision doc with just those sections (allergens and disease) for me to drop in?

I'd like to get a revised health volume to Dina for tomorrow and possibly also (b)(5) Deliberative

Thanks,
Jason

----- Forwarded by Jason Samenow/DC/USEPA/US on 11/29/2009 01:23 PM -----

From: John Hannon/DC/USEPA/US
To: Jason Samenow/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill Perkins <perkins.william@epa.gov>, Rona Birnbaum/DC/USEPA/US@EPA
Date: 11/29/2009 01:00 PM
Subject: Re: vol 5 (use this version, please)

Here are comments on the rest of volume 5. Not much, except in the area of (b)(5) Deliberative

[Redacted]

I think this means two things:

(1) (b)(5) Deliberative
[Redacted]

[Redacted]

[Redacted]

(b)(5) Deliberative

(2) (b)(5) Deliberative

(b)(5) Deliberative

RTC_draft_Volume_5_complete_1128 -jh1129.doc

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Office of General Counsel
U.S. Environmental Protection Agency
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Phone (202) 564-5563
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To: Rona Birnbaum/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill Perkins <perkins.william@epa.gov>, Lesley Jantarasami/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA
Date: 11/28/2009 11:38 AM
Subject: vol 5 (use this version, please)

EPA-EF-003777

Sorry for multiple emails on this....but please refer to this version of Volume 5.
Jason

(Ben and Mike, please check the first comment and response on air quality and make sure both of your edits to that one were appropriately incorporated)

(b)(5) Deliberative

RTC_draft_Volume_5_complete_1128.doc

EPA-2368

Michael Kolian
05/12/2010 10:13 AM

To
cc
bcc

Subject UPGRADE C:\Documents and Settings\Owner\My Documents\Ccd\TSD comment period\RTC Document and Outline\Volume 5\November 23\RTC_draft_Volume_5_complete_1128 -jh1129.doc

(b)(5) Deliberative

- RTC_draft_Volume_5_complete_1128 -jh1129.doc

EPA-EF-003779

EPA-2369

William
Perkins/DC/USEPA/US
11/29/2009 02:09 PM

To Carol Holmes, John Hannon
cc Rona Birnbaum, Lesley Jantarasami, Ben DeAngelo
bcc
Subject For your review: stock language and titles for reference list

Carol and John,

As we have discussed, we are planning [REDACTED] (b)(5) deliberative [REDACTED]

We also have discussed that the [REDACTED] (b)(5) Deliberative [REDACTED]

Enclosed is the draft stock language for referring to list #1 as well as a draft title and organization for the three reference lists; we welcome any feedback you may have. We hope to be able to share this with the full team early tomorrow. Thank you for your time and attention.

Sincerely,

Bill

(b)(5) Deliberative [REDACTED]

Reference lists - stock language and titles.doc

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
Climate Change Division
U.S. Environmental Protection Agency
perkins.william@epa.gov
(O) 202.343.9460
(F) 202.343.2202
(C) [REDACTED] (b)(6)

EPA-2370

Carol Holmes/DC/USEPA/US

11/29/2009 02:34 PM

To Carol Holmes

cc David Chalmers, John Hannon, Lesley Jantarasami, Marcus Sarofim, Rona Birnbaum, Suzanne Kocchi

bcc

Subject Re: USE THIS VOL 3 -- here is the rest

Here are the rest of my comments on volume 3 (Includes what I sent earlier). I had several comment balloons etc, but overall I thought it was quite good. It indicates that y'all put a lot of time into reviewing the comments and attached papers etc and thought carefully about how to respond. The judges really like that (as do we!). So well done.

(b)(5) Deliberative

RTC draft Volume 3 Attribution 112209 csh 11 24.doc

Confidential communication for internal deliberations only; Attorney-client, attorney work product and/or enforcement privilege; Do not distribute outside EPA or DOJ

Carol S. Holmes
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Ave, NW (MC 2344A)
Washington, DC 20460
Phone (202) 564-8709
Fax (202) 564-5603

Carol Holmes First part of Volume 3 (through 3.1) in c... 11/29/2009 10:27:44 AM

From: Carol Holmes/DC/USEPA/US
To: Carol Holmes/DC/USEPA/US@EPA
Cc: David Chalmers/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US, Marcus Sarofim/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA, Suzanne Kocchi/DC/USEPA/US@EPA
Date: 11/29/2009 10:27 AM
Subject: Re: USE THIS VOL 3

First part of Volume 3 (through 3.1) in case you want to start while I do the rest.
[attachment "RTC draft Volume 3 Attribution 112209 csh 11 24.doc" deleted by Carol Holmes/DC/USEPA/US]

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Carol S. Holmes
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Ave, NW (MC 2344A)
Washington, DC 20460
Phone (202) 564-8709
Fax (202) 564-5603

Carol Holmes Hey guys -- I'll be sending V3 back later... 11/29/2009 08:58:43 AM

EPA-EF-003781

From: Carol Holmes/DC/USEPA/US
To: Lesley Jantarasami/DC/USEPA/US
Cc: David Chalmers/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Marcus Sarofim/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA, Suzanne Kocchi/DC/USEPA/US@EPA
Date: 11/29/2009 08:58 AM
Subject: Re: USE THIS VOL 3

Hey guys -- I'll be sending V3 back later today. It is VERY techy, so not sure how much value I'll be adding -- y'all know the TSD and record better than me, (b) 5 deliberative

[REDACTED]

But one thing I am noting is that [REDACTED] (b)(5) Deliberative

[REDACTED]

Isn't that something we can and should do? Or am I missing something. I am putting that in comment balloon also but wanted to note. THANKS

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Carol S. Holmes
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Ave, NW (MC 2344A)
Washington, DC 20460
Phone (202) 564-8709
Fax (202) 564-5603

Lesley Jantarasami Hi Carol and John, Please use this... 11/22/2009 03:39:26 PM

From: Lesley Jantarasami/DC/USEPA/US
To: Carol Holmes/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA
Cc: Rona Birnbaum/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA, Marcus Sarofim/DC/USEPA/US@EPA, Suzanne Kocchi/DC/USEPA/US@EPA
Date: 11/22/2009 03:39 PM
Subject: USE THIS VOL 3

Hi Carol and John,

Please use this version of Vol 3 for your review. We belatedly realized there were a few comment bubbles left in there from older versions, and wanted to take them out so that you weren't left wondering if they had been addressed or not.

Thanks so much,

Lesley

Lesley Jantarasami

EPA-EF-003782

US EPA, Climate Change Division
Climate Science & Impacts Branch
202.343.9929
202.343.2202 (fax)
Jantarasami.Lesley@epa.gov

-----Forwarded by Lesley Jantarasami/DC/USEPA/US on 11/22/2009 03:35PM -----

To: Rona Birnbaum/DC/USEPA/US@EPA
From: David Chalmers/DC/USEPA/US
Date: 11/22/2009 03:19PM
cc: Lesley Jantarasami/DC/USEPA/US@EPA, William Perkins/DC/USEPA/US@EPA, "David Chalmers" <chalmers.david@epa.gov>, "Lesley Jantarasami" <jantarasami.lesley@epa.gov>, Marcus Sarofim/DC/USEPA/US@EPA, Suzanne Kocchi/DC/USEPA/US@EPA
Subject: clean vol. 3 for OGC

Clean version for transmittal to OGC attached. This is the one they should use.

David Chalmers
ORISE Fellow
U.S. EPA, Climate Change Division
202.343.9814

[attachment "RTC draft Volume 3 Attribution 112209.doc" deleted by Carol Holmes/DC/USEPA/US]

EPA-2371

Ben DeAngelo

04/06/2010 04:56 PM

To

cc

bcc

Subject UPGOAD C:\Documents and Settings\owner\My Documents\Endangerment\Response to Public Comments\RTC draft Volume New 11 (old 9 - 12) 11 29 09.doc

(b)(5) Deliberative

- RTC draft Volume New 11 (old 9 - 12) 11 29 09.doc

EPA-EF-003784

EPA-2372

Lesley
Jantarasami/DC/USEPA/US
11/29/2009 03:39 PM

To Michael Kolian
cc Ben DeAngelo
bcc
Subject Re: Fw: Vol 6 ag

Ok guys, here are my comments and edits on Vol 6 (Ag only). I did not spend the time to go through it with a fine-toothed comb, so there may be things I missed, but I've highlighted a number of places where I think our responses should be clarified or fleshed out some more. Mike, what's the plan for forestry?

(b)(5) Deliberative

RTC draft Volume 6 Ag only 112809 LJ edits.doc

Michael Kolian I am working from home. 202-635-2425 11/29/2009 02:23:19 PM

From: Michael Kolian/DC/USEPA/US
To: Lesley Jantarasami/DC/USEPA/US@EPA
Date: 11/29/2009 02:23 PM
Subject: Re: Fw: Vol 6 ag

I am working from home.

(b)(6)

-----Lesley Jantarasami/DC/USEPA/US wrote: -----

To: Michael Kolian/DC/USEPA/US@EPA
From: Lesley Jantarasami/DC/USEPA/US
Date: 11/28/2009 07:50PM
Subject: Re: Fw: Vol 6 ag

Sounds good, I will take a look tomorrow. I'll most likely come into the office - are you planning on being there?

Lesley

Michael Kolian---11/28/2009 05:50:34 PM---actually use this one. ---- Forwarded by Michael Kolian/DC/USEPA/US on 11/28/2009 05:50 PM ----

From: Michael Kolian/DC/USEPA/US
To: Lesley Jantarasami/DC/USEPA/US@EPA
Date: 11/28/2009 05:50 PM
Subject: Fw: Vol 6 ag

actually use this one.

EPA-EF-003785

[attachment "RTC draft Volume 6 Ag only 112809.doc" deleted by Lesley Jantarasami/DC/USEPA/US]
----- Forwarded by Michael Kolian/DC/USEPA/US on 11/28/2009 05:50 PM -----

From: Michael Kolian/DC/USEPA/US
To: Lesley Jantarasami/DC/USEPA/US@EPA
Date: 11/28/2009 05:40 PM
Subject: Vol 6 ag

I finished with John's comments and fleshed out some comments and responses. Can you review?
Note the one on the references and how I treated that one. It may help limit our task of searching for
(b) 5 deliberative

Check for consistency on Stock language too.....

Cheers,
Mike

[attachment "RTC draft Volume 6 Ag only 112809.doc" deleted by Michael Kolian/DC/USEPA/US]

EPA-2373

Mike Kolian

(b)(6)

11/29/2009 03:39 PM

To Jason Samenow

cc Rona Birnbaum, Ben DeAngelo

bcc

Subject FW: vol 5 (use this version, please)

From: (b)(6)
To: kolian.michael@epamail.epa.gov
CC: birnbaum.rona@epa.gov; deangelo.ben@epa.gov
Subject: RE: vol 5 (use this version, please)
Date: Sun, 29 Nov 2009 15:38:16 -0500

HH general comments plus one. Note comments.

Subject: Fw: vol 5 (use this version, please)
From: Kolian.Michael@epamail.epa.gov
To: (b)(6)
Date: Sun, 29 Nov 2009 15:35:51 -0500

-----Forwarded by Michael Kolian/DC/USEPA/US on 11/29/2009 03:35PM -----

To: Michael Kolian/DC/USEPA/US@EPA, Ben DeAngelo/DC/USEPA/US@EPA
From: Jason Samenow/DC/USEPA/US
Date: 11/29/2009 01:15PM
cc: Rona Birnbaum/DC/USEPA/US@EPA
Subject: Fw: vol 5 (use this version, please)

Mike and Ben-- I'm going to need you guys to work together to address John's AQ comments (and Mike, the other two comments I sent you). I will handle the rest.

If you can work through these issues today, much appreciated.

Jason

----- Forwarded by Jason Samenow/DC/USEPA/US on 11/29/2009 01:13 PM -----

From: John Hannon/DC/USEPA/US
To: Jason Samenow/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill Perkins <perkins.william@epa.gov>, Rona Birnbaum/DC/USEPA/US@EPA

EPA-EF-003787

Date: 11/29/2009 01:00 PM

Subject: Re: vol 5 (use this version, please)

Here are comments on the rest of volume 5. Not much, except in the area of (b)(5) Deliberative

[Redacted]

I think this means two things:

(1) (b)(5) Deliberative
[Redacted]

[Redacted]

[Redacted]

(2) (b)(5) Deliberative
[Redacted]

[Redacted]

[Redacted]

(b)(5) Deliberative

John Hannon
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1200 Pennsylvania Ave. NW (MC 2344A)
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Phone (202) 564-5563
Fax (202) 564-5603

Jason Samenow---11/28/2009 11:38:10 AM--- Sorry for multiple emails on this....but please refer to this version of Volume 5.

From: Jason Samenow/DC/USEPA/US
To: Rona Birnbaum/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill Perkins <perkins.william@epa.gov>, Lesley Jantarasami/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA
Date: 11/28/2009 11:38 AM
Subject: vol 5 (use this version, please)

Sorry for multiple emails on this....but please refer to this version of Volume 5.
Jason

(Ben and Mike, please check the first comment and response on air quality and make sure both of your edits to that one were appropriately incorporated)

Hotmail: Trusted email with Microsoft's powerful SPAM protection. [Sign up now.](#)

Hotmail: Trusted email with Microsoft's powerful SPAM protection. [Sign up now.](#)

EPA-EF-003789

(b)(5) Deliberative

HH_general comment.doc

EPA-2374

William
Perkins/DC/USEPA/US
11/29/2009 03:48 PM

To perkins.william
cc
bcc
Subject vol 4 backup

(b)(5) Deliberative
[Redacted]

RTC draft Volume 4 MASTER 112809 BP.doc

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
Climate Change Division
U.S. Environmental Protection Agency
perkins.william@epa.gov
(O) 202.343.9460
(F) 202.343.2202
(C) (b)(6)

EPA-EF-003791

EPA-2375

Jeremy
Martinich/DC/USEPA/US
11/29/2009 04:10 PM

To Lesley Jantarasami
cc
bcc
Subject Re: you working today?

Yeah, this belongs in 7. I'll add it.

Jeremy Martinich
USEPA, Climate Change Division
202-343-9871

-----Lesley Jantarasami/DC/USEPA/US wrote: -----

To: Jeremy Martinich/DC/USEPA/US@EPA
From: Lesley Jantarasami/DC/USEPA/US
Date: 11/29/2009 02:47PM
Subject: Re: you working today?

No worries - I'll take a shot at revising and we can discuss tomorrow. Speaking of acidification, here is a supportive comment that was in vol 6, but I believe belongs in with your discussion of the issue. Do you agree?

(b)(5) Deliberative

Jeremy Martinich---11/29/2009 02:41:44 PM---Hey Leslie, I'm working from home today. I've got a bunch of other edits to work on for V2 that I p

From: Jeremy Martinich/DC/USEPA/US
To: Lesley Jantarasami/DC/USEPA/US@EPA
Date: 11/29/2009 02:41 PM
Subject: Re: you working today?

Hey Leslie,
I'm working from home today. I've got a bunch of other edits to work on for V2 that I plan on tackling tomorrow. Right now I'm trying to finish up the acidification crap in V7. I discovered a bunch of comments that we're originally parsed out.

Give me a call (b)(6) if this needs to happen today and we can do that. Otherwise I can turn to it tomorrow.

Jeremy

EPA-EF-003792

Jeremy Martinich
USEPA, Climate Change Division
202-343-9871

-----Lesley Jantarasami/DC/USEPA/US wrote: -----

To: Jeremy Martinich/DC/USEPA/US@EPA
From: Lesley Jantarasami/DC/USEPA/US
Date: 11/29/2009 12:04PM
Subject: you working today?

Hey there,

You working today? Jason wanted to see if you and/or I could edit that first comment in Section 2.7.

Lesley

Lesley Jantarasami
US EPA, Climate Change Division
Climate Science & Impacts Branch
202.343.9929
202.343.2202 (fax)
Jantarasami.Lesley@epa.gov

EPA-2376

Ben DeAngelo

04/06/2010 04:56 PM

To

cc

bcc

Subject UPGOAD C:\Documents and Settings\owner\My Documents\Endangerment\Response to Public Comments\RTC draft Volume 6 Ag only 112809 LJ edits.doc

(b)(5) Deliberative

- RTC draft Volume 6 Ag only 112809 LJ edits.doc

EPA-EF-003794

EPA-2377

Lesley Jantarasami
04/01/2010 03:51 PM

To
cc
bcc

Subject UPGOAD C:\Documents and Settings\ljantara\My Documents\Endangerment\02_Comments and Responses\Vol 6 stuff\RTC draft Volume 6 Ag only 112809 LJ edits.doc

(b)(5) Deliberative

- RTC draft Volume 6 Ag only 112809 LJ edits.doc

EPA-EF-003795

EPA-2378

Ben DeAngelo

04/06/2010 04:56 PM

To

cc

bcc

Subject UPGOAD C:\Documents and Settings\owner\My Documents\Endangerment\Response to Public Comments\Reference lists - stock language and titles.doc

(b)(5) Deliberative

- Reference lists - stock language and titles.doc

EPA-EF-003796

EPA-2379

William
Perkins/DC/USEPA/US
11/29/2009 05:03 PM

To perkins.william
cc
bcc
Subject vol 4 backup

(b)(5) Deliberative

RTC draft Volume 4 MASTER 112809 BP.doc

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
Climate Change Division
U.S. Environmental Protection Agency
perkins.william@epa.gov
(O) 202.343.9460
(F) 202.343.2202
(C) (b)(6)

EPA-EF-003797

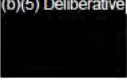
EPA-2380

Lesley Jantarasami
04/01/2010 03:44 PM

To
cc
bcc

Subject UPGRADE C:\Documents and Settings\ljantara\My Documents\Endangerment\01_Full Doc\Quikr drop 11 20 through 30\RTC draft Volume 2 112809.doc

(b)(5) Deliberative

 - RTC draft Volume 2 112809.doc

EPA-EF-003798

EPA-2381

William
Perkins/DC/USEPA/US
11/29/2009 05:36 PM

To perkins.william
cc
bcc
Subject vol 4 backup

(b)(5) Del berative

RTC draft Volume 4 MASTER 112809 BP.doc

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
Climate Change Division
U.S. Environmental Protection Agency
perkins.william@epa.gov
(O) 202.343.9460
(F) 202.343.2202
(C) (b)(6)

EPA-EF-003799

EPA-2382

Ben DeAngelo/DC/USEPA/US

11/29/2009 05:36 PM

To Mike Kolian

cc Michael Kolian, Rona Birnbaum

bcc

Subject RE: vol 5 (use this version, please)

(b)(5) Deliberative

HH_general comment BJD 112909.doc

Mike,

(b)(5) Deliberative

Same goes for other comment.. (b)(5) Deliberative

Would you be able to give me a call (am at work now 202-343-9107) about coordinating on AQ and Ag/Forestry?? Thanks.

-Ben

Mike Kolian

HH general comments plus one. Note...

11/29/2009 03:38:22 PM

From: Mike Kolian (b)(6)
To: Michael Kolian/DC/USEPA/US@EPA
Cc: Rona Birnbaum/DC/USEPA/US@EPA, Ben DeAngelo/DC/USEPA/US@EPA
Date: 11/29/2009 03:38 PM
Subject: RE: vol 5 (use this version, please)

HH general comments plus one. Note comments.

Subject: Fw: vol 5 (use this version, please)
From: Kolian.Michael@epamail.epa.gov
To: (b)(6)
Date: Sun, 29 Nov 2009 15:35:51 -0500

-----Forwarded by Michael Kolian/DC/USEPA/US on 11/29/2009 03:35PM -----

To: Michael Kolian/DC/USEPA/US@EPA, Ben DeAngelo/DC/USEPA/US@EPA
From: Jason Samenow/DC/USEPA/US
Date: 11/29/2009 01:15PM
cc: Rona Birnbaum/DC/USEPA/US@EPA
Subject: Fw: vol 5 (use this version, please)

Mike and Ben-- I'm going to need you guys to work together to address John's AQ comments (and Mike, the other two comments I sent you). I will handle the rest.

EPA-EF-003800

If you can work through these issues today, much appreciated.

Jason

----- Forwarded by Jason Samenow/DC/USEPA/US on 11/29/2009 01:13 PM -----

From John Hannon/DC/USEPA/US

:

To: Jason Samenow/DC/USEPA/US@EPA

Cc: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill Perkins <perkins.william@epa.gov>, Rona Birnbaum/DC/USEPA/US@EPA

Date 11/29/2009 01:00 PM

:

Subj Re: vol 5 (use this version, please)

ect:

Here are comments on the rest of volume 5. Not much, except in the area of (b)(5) Deliberative

[Redacted]

I think this means two things:

(1) (b)(5) Deliberative [Redacted]

[Redacted]

[Redacted]

(b)(5) Deliberative

(2) (b)(5) Deliberative

John Hannon
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW (MC 2344A)
Washington, D.C. 20460
Phone (202) 564-5563
Fax (202) 564-5603

Jason Samenow---11/28/2009 11:38:10 AM--- Sorry for multiple emails on this....but please refer to this version of Volume 5.

From Jason Samenow/DC/USEPA/US

:

To: Rona Birnbaum/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA

Cc: Ben DeAngelo/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill Perkins <perkins.william@epa.gov>, Lesley Jantarasami/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA

Date 11/28/2009 11:38 AM

:

EPA-EF-003802

Subj vol 5 (use this version, please)
ect:

Sorry for multiple emails on this...but please refer to this version of Volume 5.
Jason

(Ben and Mike, please check the first comment and response on air quality and make sure both of your edits to that one were appropriately incorporated)

Hotmail: Trusted email with Microsoft's powerful SPAM protection. [Sign up now.](#) [\[attachment "HH_general comment.doc" deleted by Ben DeAngelo/DC/USEPA/US\]](#)

EPA-2383

Jason
Samenow/DC/USEPA/US
11/29/2009 05:41 PM

To William Perkins
cc
bcc

Subject please provide this to ERG (re: Vol 2 references)

Bill,
Marcus submitted some additional references to me for Vol 2, that will help ERG as it does the QC...

Thanks so much...

Jason

(b)(5) Deliberative

Volume2References.doc

EPA-2384

Dina Kruger/DC/USEPA/US

To Carol Holmes

11/29/2009 05:43 PM

cc

bcc

Subject Re: Vol 2 for review and copy editing

That's a plan. Glad you agree (b)(5) Deliberative It took me a lot of time on the first review to provide constructive comments and input on how to build that part out.

Sent by EPA Wireless E-Mail Services
Carol Holmes

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

From: Carol Holmes

Sent: 11/29/2009 12:40 PM EST

To: Dina Kruger

Cc: "Ben DeAngelo" <deangelo.ben@epa.gov>; Jason Samenow; Jeremy Martinich; John Hannon; Lesley Jantarasami; Marcus Sarofim; Rona Birnbaum; William Perkins

Subject: Re: Vol 2 for review and copy editing

I agree (b)(5) Deliberative My tweaks were more along the lines of how we sum up at the beginning and end of the responses.

I'll continue to point suggestions along these lines out, but if the edit wouldn't fit with a particular response, y'all should definitely stick with what makes the most sense and is accurate.

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Washington, DC 20460
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Fax (202) 564-5603

Dina Kruger

I definitely prefer (b)(5) Deliberative

11/29/2009 11:37:59 AM

From: Dina Kruger/DC/USEPA/US
To: Carol Holmes/DC/USEPA/US@EPA
Cc: "Ben DeAngelo" <deangelo.ben@epa.gov>, Jason Samenow/DC/USEPA/US@EPA, Jeremy Martinich/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Marcus Sarofim/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA, William Perkins/DC/USEPA/US@EPA
Date: 11/29/2009 11:37 AM
Subject: Re: Vol 2 for review and copy editing

I definitely prefer (b)(5) Deliberative

EPA-EF-003805

When I initially read these volumes, I spent a lot of time thinking about (b)(5) Deliberative

Dina Kruger
Director, Climate Change Division
USEPA

202-343-9039 (phone)
202-343-2290 (fax)

Carol Holmes Here is another example (b)(5) Deliberative 11/29/2009 10:01:24 AM

From: Carol Holmes/DC/USEPA/US
To: Dina Kruger/DC/USEPA/US@EPA
Cc: "Ben DeAngelo" <deangelo.ben@epa.gov>, Jason Samenow/DC/USEPA/US@EPA, Jeremy Martinich/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Marcus Sarofim/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA, William Perkins/DC/USEPA/US@EPA
Date: 11/29/2009 10:01 AM
Subject: Re: Vol 2 for review and copy editing

Here is another example (b)(5) Deliberative

(b)(5) Deliberative

would become

(b)(5) Deliberative

Which approach does everyone prefer?

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Carol S. Holmes
Office of General Counsel

EPA-EF-003806

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Washington, DC 20460
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Fax (202) 564-5603

Dina Kruger I am 100% behind (b)(5) Deliberative 11/29/2009 09:38:06 AM

From: Dina Kruger/DC/USEPA/US
To: Rona Birnbaum/DC/USEPA/US@EPA
Cc: Carol Holmes/DC/USEPA/US@EPA, "Ben DeAngelo" <deangelo.ben@epa.gov>, Jason Samenow/DC/USEPA/US@EPA, Jeremy Martinich/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Marcus Sarofim/DC/USEPA/US@EPA, William Perkins/DC/USEPA/US@EPA
Date: 11/29/2009 09:38 AM
Subject: Re: Vol 2 for review and copy editing

I am 100% behind (b)(5) Deliberative

(b)(5) Deliberative
I welcome your fresh eyes to polish it up (but wanted to share my reasoning, in case it is in some way valid).

Dina Kruger
Director, Climate Change Division
USEPA

202-343-9039 (phone)
202-343-2290 (fax)

Rona Birnbaum Hi Carol, yes, I do agree with your com... 11/29/2009 09:09:03 AM

From: Rona Birnbaum/DC/USEPA/US
To: Carol Holmes/DC/USEPA/US@EPA, Jason Samenow/DC/USEPA/US@EPA
Cc: Dina Kruger/DC/USEPA/US@EPA, Jeremy Martinich/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Marcus Sarofim/DC/USEPA/US@EPA, William Perkins/DC/USEPA/US@EPA, "Ben DeAngelo" <deangelo.ben@epa.gov>
Date: 11/29/2009 09:09 AM
Subject: Re: Vol 2 for review and copy editing

Hi Carol, yes, I do agree with your comment particularly because (b)(5) Deliberative
. Your review catching things like that is really good. We're trying to look out for things like that as well.
Thanks! Rona

Sent by EPA Wireless E-Mail Services

Carol Holmes

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

From: Carol Holmes
Sent: 11/29/2009 08:35 AM EST
To: Jason Samenow
Cc: Dina Kruger; Jeremy Martinich; John Hannon; Lesley Jantarasami; Marcus Sarofim; Rona Birnbaum; William Perkins
Subject: Re: Vol 2 for review and copy editing
Query for the group -- I've been making the following kind of edits to the responses b/c I recommended
(b)(5) Deliberative :

(b)(5) Deliberative

I thought I would check with others to make sure we are in agreement and that I wasn't missing something by making this type of edit. Thoughts?

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Jason Samenow | would do three first. But no need to... 11/28/2009 08:32:14 PM

From: Jason Samenow/DC/USEPA/US
To: Carol Holmes/DC/USEPA/US@EPA
Cc: Dina Kruger/DC/USEPA/US@EPA, Jeremy Martinich/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Marcus Sarofim/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA, William Perkins/DC/USEPA/US@EPA
Date: 11/28/2009 08:32 PM
Subject: Re: Vol 2 for review and copy editing

I would do three first. But no need to wait for another version to start on 2. There are only a couple comments that require substantive work at this point. That said, if we get those addressed between now and by the time you finish three, we'll send you a revised version... and I'll keep on top of any version issues.

Thanks....

Jason

Carol Holmes | Thanks Jason. So should I be reviewin... 11/28/2009 08:27:16 PM

EPA-EF-003808

From: Carol Holmes/DC/USEPA/US
To: Jason Samenow/DC/USEPA/US
Cc: Dina Kruger/DC/USEPA/US@EPA, Jeremy Martinich/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Marcus Sarofim/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA, William Perkins/DC/USEPA/US@EPA
Date: 11/28/2009 08:27 PM
Subject: Re: Vol 2 for review and copy editing

Thanks Jason. So should I be reviewing it now, or wait a couple days until others do their thing? I still have to review 3 (plan to do so tomorrow). Thanks

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Fax (202) 564-5603

Vol 2 for review and copy editing

Jason Samenow to: Rona Birnbaum, John Hannon, Carol Holmes,
Dina Kruger

11/28/2009 08:22 PM

Cc: Marcus Sarofim, Jeremy Martinich, Lesley Jantarasami, William Perkins

Team--

Here is the latest and greatest version of Vol 2, ready for review. It's another long one, nearly 70 pages (not including citations).

A few notes...

EPA-EF-003809

OGC-- Please pay particular attention to [REDACTED] (b)(5) Deliberative

Bill-- Recommend that ERG, in addition to copy editing this, [REDACTED] (b)(5) Deliberative

[REDACTED]
Also, please remind them not to include comment numbers yet.

Lesley-- There are a few comments from Dina on your responses that I forgot to send to you (physical and biological systems). Can you please address those?

Thanks to Marcus and Jeremy for their help in responding to the last round of edits.

Jason

EPA-2385

**Jason
Samenow/DC/USEPA/US**
11/29/2009 05:57 PM

To David Chalmers
cc Michael Kolian
bcc

Subject Fw: New submission relevant to Vol. 5

David-- Could you perhaps work in a reference to this study as you're dealing with John's comments tomorrow? Thanks, Jason

----- Forwarded by Jason Samenow/DC/USEPA/US on 11/29/2009 05:57 PM -----

From: David Chalmers/DC/USEPA/US
To: Michael Kolian/DC/USEPA/US@EPA
Cc: Jason Samenow/DC/USEPA/US@EPA, William Perkins/DC/USEPA/US@EPA
Date: 11/25/2009 10:53 AM
Subject: New submission relevant to Vol. 5

Mike: The attached comment and submitted paper are relevant to Vol. 5. I don't have the comment # yet but will send it as soon as I have it.



Lafferty 2009.pdf



Coalition 11-20-2009 Addendum & Supplementation.pdf

available at
regulations.gov

David Chalmers
ORISE Fellow
U.S. EPA, Climate Change Division
202.343.9814

EPA-EF-003811

EPA-2386

Jason
Samenow/DC/USEPA/US
11/29/2009 06:03 PM

To Marcus Sarofim
cc
bcc

Subject Fw: New comment excerpts: Volume 2

Marcus-- Do you think we have these covered? Just am double checking...

----- Forwarded by Jason Samenow/DC/USEPA/US on 11/29/2009 06:03 PM -----

From: William Perkins/DC/USEPA/US
To: Jason Samenow/DC/USEPA/US@EPA
Date: 11/22/2009 11:40 AM
Subject: Fw: New comment excerpts: Volume 1

Another comment excerpt for you....

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
Climate Change Division
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(O) 202.343.9460
(F) 202.343.2202
(C) (b)(6)

----- Forwarded by William Perkins/DC/USEPA/US on 11/22/2009 11:40 AM -----

From: Jeremy Martinich/DC/USEPA/US
To: William Perkins/DC/USEPA/US@EPA
Date: 11/22/2009 10:18 AM
Subject: Re: New comment excerpts: Volume 1

Thanks Bill. This one belongs in V2
(b)(5) Deliberative

Comment Code 9.5 Validity of Observed_Measured Data.doc

Jeremy Martinich
USEPA, Climate Change Division
202-343-9871

William Perkins Bill Perkins Climate Change Adaptation... 11/21/2009 07:45:21 PM

From: William Perkins/DC/USEPA/US
To: Jeremy Martinich/DC/USEPA/US@EPA
Cc: Lesley Jantarasami/DC/USEPA/US@EPA
Date: 11/21/2009 07:45 PM
Subject: New comment excerpts: Volume 1

[attachment "Comment Code 10.1 Environmental Justice Considerations.doc" deleted by Jeremy Martinich/DC/USEPA/US] [attachment "Comment Code 4.1 General Comments on Technical

EPA-EF-003812

"Considerations for the Findings.doc" deleted by Jeremy Martinich/DC/USEPA/US] [attachment "Comment Code 4.5 Consideration of Net Effects (harm vs. benefits).doc" deleted by Jeremy Martinich/DC/USEPA/US] [attachment "Comment Code 9.1 General Comments on the TSD_Supporting Data.doc" deleted by Jeremy Martinich/DC/USEPA/US] [attachment "Comment Code 9.2.1 Use of non-EPA assessments.doc" deleted by Jeremy Martinich/DC/USEPA/US] [attachment "Comment Code 9.3 Adherence to the Data Quality Act.doc" deleted by Jeremy Martinich/DC/USEPA/US] [attachment "Comment Code 9.4 Consideration of Role of Adaptation & Mitigation.doc" deleted by Jeremy Martinich/DC/USEPA/US] [attachment "Comment Code 9.5 Validity of Observed_Measured Data.doc" deleted by Jeremy Martinich/DC/USEPA/US]

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(F) 202.343.2202
(C) (b)(6)

EPA-2387

William
Perkins/DC/USEPA/US
11/29/2009 06:26 PM

To perkins.william
cc
bcc
Subject vol 4 backup

(b)(5) Deliberative

RTC draft Volume 4 MASTER 112809 BP.doc

Bill Perkins
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(F) 202.343.2202
(C) (b)(6)

EPA-EF-003814

EPA-2388

John Hannon/DC/USEPA/US

11/29/2009 06:31 PM

To Jeremy Martinich

cc Ben DeAngelo, Carol Holmes, Dina Kruger, Lesley Jantarasami, Rona Birnbaum, Suzanne Kocchi

bcc

Subject Re: Revised RTC Volume 1

Jeremy, this is much better. I have a few comments through out. Grant MacIntyre from OGC added a few edits re IQA in 1.6 as well.

(b)(5) Deliberative

RTC draft Volume 1 General TSD Approach 11-24-09 gbm 112509 -jh1129.doc

John Hannon
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW (MC 2344A)
Washington, D.C. 20460
Phone (202) 564-5563
Fax (202) 564-5603

Jeremy Martinich

Attached is a revised version of Volu...

11/24/2009 03:11:21 PM

From: Jeremy Martinich/DC/USEPA/US
To: John Hannon/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA, Ben DeAngelo/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Suzanne Kocchi/DC/USEPA/US@EPA
Date: 11/24/2009 03:11 PM
Subject: Revised RTC Volume 1

Attached is a revised version of Volume 1 based on comments from John and Grant.
[attachment "RTC draft Volume 1 General TSD Approach 11-24-09.doc" deleted by John Hannon/DC/USEPA/US]

Volume 1 now has three appendices, which include the report development guidelines for IPCC (Appendix A), USGCRP/CCSP (Appendix B), and NRC (Appendix C).
[attachment "Volume 1 - Appendix A.pdf" deleted by John Hannon/DC/USEPA/US] [attachment "Volume 1 - Appendix B.pdf" deleted by John Hannon/DC/USEPA/US] [attachment "Volume 1 - Appendix C.pdf" deleted by John Hannon/DC/USEPA/US]

Jeremy Martinich
USEPA, Climate Change Division
202-343-9871

EPA-EF-003815

EPA-2389

Ben DeAngelo

04/06/2010 04:56 PM

To

cc

bcc

Subject UPLOADED C:\Documents and Settings\owner\My Documents\Endangerment\Response to Public Comments\HH_general comment BJD 112909.doc

(b)(5) Deliberative

- HH_general comment BJD 112909.doc

EPA-EF-003816

EPA-2390

William
Perkins/DC/USEPA/US
11/29/2009 06:41 PM

To David Chalmers
cc
bcc
Subject 4.4 revisions

David,

Please see enclosed and of course let me know if you have any questions or concerns. I should be in the office for some time yet. Thank you and good luck with your work.

Cheers,

Bill

(b)(5) Deliberative

RTC draft Volume 4 MASTER 112809 BP.doc

Bill Perkins
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(C) (b)(6)

EPA-EF-003817

EPA-2391

Carol Holmes/DC/USEPA/US

To Lesley Jantarasami

11/29/2009 07:12 PM

cc

bcc

Subject Re: vol 11 for your review + a few new comments

I went ahead and gave you my initial thoughts and a couple responses to the "new" comments. Didn't want to do more since it may overlap with what you are doing.

On new comments: (1) [redacted] (b)(5) Deliberative
[redacted] (2) [redacted] (b)(5) Deliberative

Let me know what you want to do next to finish thsi up. THANKS

(b)(5) Deliberative

RTC draft Volume New 11 [old 9 - 12] 11 28 v2 cSH 11 28.doc

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Fax (202) 564-5603

Lesley Jantarasami Hi Carol, Just spoke to Rona about... 11/29/2009 11:35:15 AM

From: Lesley Jantarasami/DC/USEPA/US
To: Carol Holmes/DC/USEPA/US@EPA
Date: 11/29/2009 11:35 AM
Subject: Re: vol 11 for your review + a few new comments

Hi Carol,

Just spoke to Rona about timing and we think V2 is the priority right now. So while you finish reviewing V3 and V2, we'll continue to revise V11 and send you a new version.

Thanks,

Lesley

Carol Holmes Hi Lesley -- I am in the middle of V3 rig... 11/29/2009 08:41:33 AM

From: Carol Holmes/DC/USEPA/US
To: Lesley Jantarasami/DC/USEPA/US
Date: 11/29/2009 08:41 AM
Subject: Re: vol 11 for your review + a few new comments

Hi Lesley -- I am in the middle of V3 right now (52 pages). Do y'all want me to do this before V2?

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Lesley Jantarasami Hi Carol, Hope you had a nice Tha... 11/28/2009 08:40:23 PM

From: Lesley Jantarasami/DC/USEPA/US
To: Carol Holmes/DC/USEPA/US@EPA
Date: 11/28/2009 08:40 PM
Subject: vol 11 for your review + a few new comments

Hi Carol,

Hope you had a nice Thanksgiving! Please find attached OAR's latest edits and additions to vol 11. At the beginning of the volume, I cut and pasted the text of a few new comments that ERG found during a QA/QC of their database. I don't think they bring up any new issues, but see if you agree. There's also one I summarized about the **(b)(5) Deliberative** - I think you/John already dealt with similar comments in vol 1, but let me know if this one belongs somewhere in vol 11.

Rona has reviewed this version, but Dina has not. It would be great if you're able to do a quick turnaround review so we can send it to her by late afternoon tomorrow, but I understand you have a lot going on right now and that may not be possible. Let me know what your schedule looks like. We also plan to send this to you and John again after we incorporate any edits from Dina.

Best,

Lesley

[attachment "RTC draft Volume New 11 (old 9 - 12) 11 28 v2.doc" deleted by Carol Holmes/DC/USEPA/US]

Lesley Jantarasami
US EPA, Climate Change Division
Climate Science & Impacts Branch
202.343.9929
202.343.2202 (fax)
Jantarasami.Lesley@epa.gov

EPA-2392

Jason
Samenow/DC/USEPA/US
11/29/2009 07:28 PM

To David Chalmers
cc
bcc
Subject Fw: disease

Not sure if you already worked this in or whether it's even helpful... but just in case...

Jason

----- Forwarded by Jason Samenow/DC/USEPA/US on 11/29/2009 07:27 PM -----

From: Michael Kolian/DC/USEPA/US
To: Jason Samenow/DC/USEPA/US@EPA
Cc: David Chalmers/DC/USEPA/US@EPA
Date: 11/23/2009 09:04 PM
Subject: disease

Thought this was important, if not already mentioned.....

(b) 5 deliberative

EPA-EF-003820

EPA-2393

Ben DeAngelo

04/06/2010 04:57 PM

To

cc

bcc

Subject UPGOAD C:\Documents and Settings\owner\My Documents\Endangerment\Response to Public Comments\RTC_draft_Volume_5_complete_1128 -jh1129.doc

(b)(5) Deliberative

- RTC_draft_Volume_5_complete_1128 -jh1129.doc

EPA-EF-003821

EPA-2394

Carol Holmes/DC/USEPA/US

11/29/2009 08:05 PM

To Dina Kruger

cc Ben DeAngelo, Jeremy Martinich, John Hannon, Lesley Jantarasami, Rona Birnbaum, Suzanne Kocchi

bcc

Subject Re: Revised RTC Volume 1

I think Lesley is still fiddling with it.

Confidential communication for internal deliberations only; Attorney-client, attorney work product and/or enforcement privilege; Do not distribute outside EPA or DOJ

Carol S. Holmes
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Ave, NW (MC 2344A)
Washington, DC 20460
Phone (202) 564-8709
Fax (202) 564-5603

Dina Kruger

This is good - Jeremy, I will add my co...

11/29/2009 08:00:13 PM

From: Dina Kruger/DC/USEPA/US
To: John Hannon/DC/USEPA/US@EPA, Jeremy Martinich/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA, Suzanne Kocchi/DC/USEPA/US@EPA
Date: 11/29/2009 08:00 PM
Subject: Re: Revised RTC Volume 1

This is good - Jeremy, I will add my comments onto John/Grant and you can deal with them all at once.

I am going to turn to 11 next. Is anyone else in progress on that one? I want to avoid version control issues, if possible, at this stage.

Sent by EPA Wireless E-Mail Services

John Hannon

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

From: John Hannon

Sent: 11/29/2009 06:31 PM EST

To: Jeremy Martinich

Cc: Ben DeAngelo; Carol Holmes; Dina Kruger; Lesley Jantarasami; Rona Birnbaum; Suzanne Kocchi

Subject: Re: Revised RTC Volume 1

Jeremy, this is much better. I have a few comments through out. Grant MacIntyre from OGC added a few edits re IQA in 1.6 as well.

[attachment "RTC draft Volume 1 General TSD Approach 11-24-09 gbm 112509 -jh1129.doc" deleted by Dina Kruger/DC/USEPA/US]

EPA-EF-003822

John Hannon
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW (MC 2344A)
Washington, D.C. 20460
Phone (202) 564-5563
Fax (202) 564-5603

Jeremy Martinich Attached is a revised version of Volu... 11/24/2009 03:11:21 PM

From: Jeremy Martinich/DC/USEPA/US
To: John Hannon/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA, Ben DeAngelo/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Suzanne Kocchi/DC/USEPA/US@EPA
Date: 11/24/2009 03:11 PM
Subject: Revised RTC Volume 1

Attached is a revised version of Volume 1 based on comments from John and Grant.
[attachment "RTC draft Volume 1 General TSD Approach 11-24-09.doc" deleted by John Hannon/DC/USEPA/US]

Volume 1 now has three appendices, which include the report development guidelines for IPCC (Appendix A), USGCRP/CCSP (Appendix B), and NRC (Appendix C).
[attachment "Volume 1 - Appendix A.pdf" deleted by John Hannon/DC/USEPA/US] [attachment "Volume 1 - Appendix B.pdf" deleted by John Hannon/DC/USEPA/US] [attachment "Volume 1 - Appendix C.pdf" deleted by John Hannon/DC/USEPA/US]

Jeremy Martinich
USEPA, Climate Change Division
202-343-9871

EPA-2395

Lesley Jantarasami
04/01/2010 03:52 PM

To
cc
bcc

Subject UPGOAD C:\Documents and Settings\ljantara\My Documents\Endangerment\02_Comments and Responses\Vol 9 and 12 stuff\RTC draft Volume New 11 (old 9 - 12) 11 28 v2 cSH 11 28.doc

(b)(5) Deliberative

- RTC draft Volume New 11 (old 9 - 12) 11 28 v2 cSH 11 28.doc

EPA-EF-003824

EPA-2396

**William
Perkins/DC/USEPA/US**
11/29/2009 08:35 PM

To Jason Samenow
cc
bcc

Subject Aeroallergens section with JH comments addressed

Jason,

Enclosed is Volume 5 with John's comments on the aeroallergen section addressed. One comment bubble in there for you as an fyi which you can delete. I could not get my computer to transfer the section properly to a separate Word doc so I am just sending you the whole volume but I only touched the aeroallergens piece. Thank you and please let me know if you have any questions or concerns.

Cheers,

Bill

(b)(5) Deliberative

RTC_draft_Volume_5_BP with aeroallergen mods.doc

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
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(F) 202.343.2202
(C) (b)(6)

EPA-EF-003825

EPA-2397

Mike Kolian
(b)(6)
11/29/2009 08:44 PM

To Rona Birnbaum
cc Ben DeAngelo, Jason Samenow
bcc
Subject RE: Mike question

Those comments were not in the ERG database so I could not access the original comment submission. The supportive comments were parsed out volume leads separately. Bill may know how to access them. They maybe on ftp site?

> Subject: Mike question
> To: (b)(6)
> CC: DeAngelo.Ben@epamail.epa.gov; Samenow.Jason@epamail.epa.gov
> From: Birnbaum.Rona@epamail.epa.gov
> Date: Sun, 29 Nov 2009 16:06:13 -0500
>
> just want to be clear here with regard to your not having access per
> your comment bubbles. Does that mean they are not in the ERG reference
> database or does that mean that you cannot get into it from your remote
> location?

> |----->
> | From: |
> |----->

> |Mike Kolian (b)(6) |
>
>-----

> |----->
> | To: |
> |----->

> |Jason Samenow/DC/USEPA/US@EPA |
>
>-----

> |----->
> | Cc: |
> |----->

>-----

> |Rona Birnbaum/DC/USEPA/US@EPA, Ben DeAngelo/DC/USEPA/US@EPA |

>

-----|

> |----->

> | Date: |

> |----->

>

-----|

> |11/29/2009 03:40 PM |

>

-----|

> |----->

> | Subject: |

> |----->

>

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> |FW: vol 5 (use this version, please) |

>

-----|

>

>

>

>

>

>

>

> From: (b)(6)

> To: kolian.michael@epamail.epa.gov

> CC: birnbaum.rona@epa.gov; deangelo.ben@epa.gov

> Subject: RE: vol 5 (use this version, please)

> Date: Sun, 29 Nov 2009 15:38:16 -0500

>

> HH general comments plus one. Note comments.

>

>

>

> Subject: Fw: vol 5 (use this version, please)

> From: Kolian.Michael@epamail.epa.gov

> To: (b)(6)

> Date: Sun, 29 Nov 2009 15:35:51 -0500

>

>

> -----Forwarded by Michael Kolian/DC/USEPA/US on 11/29/2009 03:35PM -----

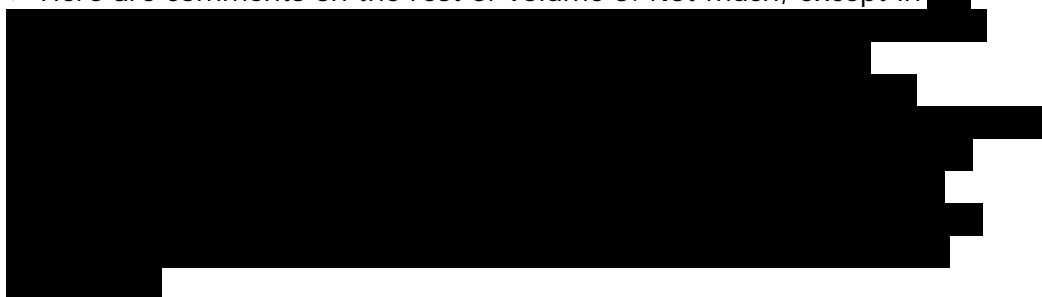


>

> To: Michael Kolian/DC/USEPA/US@EPA, Ben DeAngelo/DC/USEPA/US@EPA

> From: Jason Samenow/DC/USEPA/US

> Date: 11/29/2009 01:15PM

> cc: Rona Birnbaum/DC/USEPA/US@EPA

> Subject: Fw: vol 5 (use this version, please)
>
> Mike and Ben-- I'm going to need you guys to work together to address
> John's AQ comments (and Mike, the other two comments I sent you). I
> will handle the rest.
>
> If you can work through these issues today, much appreciated.
>
> Jason
>
> ----- Forwarded by Jason Samenow/DC/USEPA/US on 11/29/2009 01:13 PM
> -----
>
>
> Fro John Hannon/DC/USEPA/US
> m:
>
>
> To: Jason Samenow/DC/USEPA/US@EPA
>
>
> Cc: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, David
> Chalmers/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, Lesley
> Jantarasami/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill
> Perkins <perkins.william@epa.gov>, Rona Birnbaum/DC/USEPA/US@EPA
>
>
> Dat 11/29/2009 01:00 PM
> e:
>
>
> Sub Re: vol 5 (use this version, please)
> jec
> t:
>
>
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>
> Here are comments on the rest of volume 5. Not much, except in (b)(5) De

>
> I think this means two things:
>
> (1)  (b)(5) Deliberative 

> (b)(5) Deliberative
[Redacted]

[Redacted]

[Redacted]

> (2) (b)(5) Deliberative
[Redacted]

[Redacted]

[Redacted]

[Redacted]

>
>
>
>
>
>
>
> John Hannon

> Office of General Counsel
> U.S. Environmental Protection Agency
> 1200 Pennsylvania Ave. NW (MC 2344A)
> Washington, D.C. 20460
> Phone (202) 564-5563
> Fax (202) 564-5603
>
> Jason Samenow---11/28/2009 11:38:10 AM--- Sorry for multiple emails on
> this....but please refer to this version of Volume 5.
>
>
> Fro Jason Samenow/DC/USEPA/US
> m:
>
>
> To: Rona Birnbaum/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, John
> Hannon/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA
>
>
> Cc: Ben DeAngelo/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill
> Perkins <perkins.william@epa.gov>, Lesley
> Jantarasami/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA
>
>
> Dat 11/28/2009 11:38 AM
> e:
>
>
> Sub vol 5 (use this version, please)
> jec
> t:
>
>
>
>
>
>
>
>
> Sorry for multiple emails on this....but please refer to this version
> of Volume 5.
> Jason
>
> (Ben and Mike, please check the first comment and response on air
> quality and make sure both of your edits to that one were appropriately
> incorporated)
>
>
>
>
>
>
> Hotmail: Trusted email with Microsoft's powerful SPAM protection. Sign
> up now.
> Hotmail: Trusted email with Microsoft's powerful SPAM protection. Sign

> up now.[attachment "HH_general comment.doc" deleted by Rona
> Birnbaum/DC/USEPA/US]

Hotmail: Trusted email with Microsoft's powerful SPAM protection. [Sign up now.](#)

EPA-2398

"Mae Thomas"
<Mae.Thomas@erg.com>
11/29/2009 09:34 PM

To David Chalmers
cc William Perkins, "Mae Thomas"
bcc

Subject Re: Fw: another study for ERG to find

Not a problem. There are only 2300+ references for you to look through. I also have this lovely searchable Access database with everything in it.

>>> <Chalmers.David@epamail.epa.gov> 11/29/2009 9:18 PM >>>

Many thanks, Mae, and apologies for somehow missing the study in the FTP site (thought I was looking in the right place but apparently wasn't....)

David Chalmers
ORISE Fellow
U.S. EPA, Climate Change Division
202.343.9814

-----"Mae Thomas" <Mae.Thomas@erg.com> wrote: -----

To: David Chalmers/DC/USEPA/US@EPA, William Perkins/DC/USEPA/US@EPA
From: "Mae Thomas" <Mae.Thomas@erg.com>
Date: 11/29/2009 08:23PM
cc: David Chalmers/DC/USEPA/US@EPA, "Mae Thomas" <Mae.Thomas@erg.com>
Subject: Re: Fw: another study for ERG to find

Hold the presses, we have it on the FTP site, here you go...

>>> <Perkins.William@epamail.epa.gov> 11/29/2009 8:16 PM >>>
Mae,

Thank you very much.

Cheers,

Bill

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
Climate Change Division
U.S. Environmental Protection Agency
perkins.william@epa.gov
(O) 202.343.9460
(F) 202.343.2202
(C) (b)(6)

EPA-EF-003832

From: "Mae Thomas" <Mae.Thomas@erg.com>
To: William Perkins/DC/USEPA/US@EPA
Cc: "Mae Thomas" <Mae.Thomas@erg.com>
Date: 11/29/2009 08:15 PM
Subject: Re: Fw: another study for ERG to find

Bummer I don't have Bamber! ;-)

I will do some looking around.

>>> <Perkins.William@epamail.epa.gov> 11/29/2009 8:03 PM >>>

Mae, are you still in the office? If so, could you pull this down from your internal folder for us? Thank you.

Cheers,

Bill

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
Climate Change Division
U.S. Environmental Protection Agency
perkins.william@epa.gov
(O) 202.343.9460
(F) 202.343.2202
(C) (b)(6)

----- Forwarded by William Perkins/DC/USEPA/US on 11/29/2009 08:02 PM -----

From: David Chalmers/DC/USEPA/US
To: perkins.william@epa.gov
Date: 11/29/2009 08:01 PM
Subject: another study for ERG to find

Can you ask ERG to acquire the following study:

EPA-EF-003833

Bamber, et al. (2009) Reassessment of the Potential Sea-Level Rise from a Collapse of the West Antarctic Ice Sheet. Science 324: 01-03

It's not currently in the FTP site or the set of RTC reference lists ERG has, but it is included in the still-growing reference list for the current vol. 4.

Thanks!

David Chalmers
ORISE Fellow
U.S. EPA, Climate Change Division
202.343.9814

[attachment "Bamber_7676.pdf" removed by David Chalmers/DC/USEPA/US]

EPA-2399

Lesley
Jantarasami/DC/USEPA/US
11/29/2009 09:35 PM

To Dina Kruger
cc Carol Holmes
bcc
Subject Re: Revised RTC Volume 1

Hi Dina,

I did not make any changes from the version I sent earlier, so please go ahead with that one if you haven't already.

Thanks,

Lesley

-----Dina Kruger/DC/USEPA/US wrote: -----

To: John Hannon/DC/USEPA/US@EPA, Jeremy Martinich/DC/USEPA/US@EPA
From: Dina Kruger/DC/USEPA/US
Date: 11/29/2009 08:00PM
cc: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA, Suzanne Kocchi/DC/USEPA/US@EPA
Subject: Re: Revised RTC Volume 1

This is good - Jeremy, I will add my comments onto John/Grant and you can deal with them all at once.

I am going to turn to 11 next. Is anyone else in progress on that one? I want to avoid version control issues, if possible, at this stage.

Sent by EPA Wireless E-Mail Services
John Hannon

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

From: John Hannon
Sent: 11/29/2009 06:31 PM EST
To: Jeremy Martinich
Cc: Ben DeAngelo; Carol Holmes; Dina Kruger; Lesley Jantarasami; Rona Birnbaum; Suzanne Kocchi
Subject: Re: Revised RTC Volume 1

Jeremy, this is much better. I have a few comments through out. Grant MacIntyre from OGC added a few edits re IQA in 1.6 as well.

[attachment "RTC draft Volume 1 General TSD Approach 11-24-09 gbm 112509 -jh1129.doc" deleted by Dina Kruger/DC/USEPA/US]

John Hannon
Office of General Counsel
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EPA-EF-003835

Washington, D.C. 20460
Phone (202) 564-5563
Fax (202) 564-5603

Jeremy Martinich---11/24/2009 03:11:21 PM---Attached is a revised version of Volume 1 based on comments from John and Grant. Volume 1 now has

From: Jeremy Martinich/DC/USEPA/US

To: John Hannon/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA, Ben DeAngelo/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Suzanne Kocchi/DC/USEPA/US@EPA

Date: 11/24/2009 03:11 PM

Subject: Revised RTC Volume 1

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[attachment "Volume 1 - Appendix A.pdf" deleted by John Hannon/DC/USEPA/US] [attachment "Volume 1 - Appendix B.pdf" deleted by John Hannon/DC/USEPA/US] [attachment "Volume 1 - Appendix C.pdf" deleted by John Hannon/DC/USEPA/US]

Jeremy Martinich
USEPA, Climate Change Division
202-343-9871

EPA-2400

**Rona
Birnbau/DC/USEPA/US**
11/29/2009 09:36 PM

To Dina Kruger
cc
bcc

Subject Re: Revised RTC Volume 1

Go for it! Vol 11 that is if you haven't already.

Sent by EPA Wireless E-Mail Services
Dina Kruger

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

From: Dina Kruger
Sent: 11/29/2009 08:00 PM EST
To: John Hannon; Jeremy Martinich
Cc: Ben DeAngelo; Carol Holmes; Lesley Jantarasami; Rona Birnbau; Suzanne Kocchi
Subject: Re: Revised RTC Volume 1

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John Hannon

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

From: John Hannon
Sent: 11/29/2009 06:31 PM EST
To: Jeremy Martinich
Cc: Ben DeAngelo; Carol Holmes; Dina Kruger; Lesley Jantarasami; Rona Birnbau; Suzanne Kocchi
Subject: Re: Revised RTC Volume 1

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[attachment "RTC draft Volume 1 General TSD Approach 11-24-09 gbm 112509 -jh1129.doc" deleted by Dina Kruger/DC/USEPA/US]

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Phone (202) 564-5563
Fax (202) 564-5603

Jeremy Martinich Attached is a revised version of Volu... 11/24/2009 03:11:21 PM

From: Jeremy Martinich/DC/USEPA/US
To: John Hannon/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, Rona Birnbau/DC/USEPA/US@EPA, Ben

EPA-EF-003837

DeAngelo/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Suzanne
Kocchi/DC/USEPA/US@EPA

Date: 11/24/2009 03:11 PM
Subject: Revised RTC Volume 1

Attached is a revised version of Volume 1 based on comments from John and Grant.
[attachment "RTC draft Volume 1 General TSD Approach 11-24-09.doc" deleted by John
Hannon/DC/USEPA/US]

Volume 1 now has three appendices, which include the report development guidelines for IPCC
(Appendix A), USGCRP/CCSP (Appendix B), and NRC (Appendix C).
[attachment "Volume 1 - Appendix A.pdf" deleted by John Hannon/DC/USEPA/US] [attachment "Volume
1 - Appendix B.pdf" deleted by John Hannon/DC/USEPA/US] [attachment "Volume 1 - Appendix C.pdf"
deleted by John Hannon/DC/USEPA/US]

Jeremy Martinich
USEPA, Climate Change Division
202-343-9871

EPA-2401

**William
Perkins/DC/USEPA/US**
11/29/2009 09:44 PM

To **Matthew Mitchell, Sue Eisenfeld**
cc **Lesley Jantarasami, Mae Thomas**
bcc

Subject **Volume 11 for copyediting/formatting**

Matt and Sue,

Here is Volume 11. As I noted before, please also include the lines between each comment/response set. Also, as I stated earlier the deadline is not until 0900 on Tuesday for this because we got this to you so late. However, it looks right now like we may have multiple volumes, big ones, coming your way tomorrow; so my advice would be to try to get this to us tomorrow to clear your plate. Thank you and please let me know if you have any questions or concerns.

Cheers,

Bill

(b)(5) Deliberative

RTC Volume 11 to ERG 112909.doc

Bill Perkins
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(F) 202.343.2202
(C) (b)(6)

EPA-EF-003839

EPA-2402

Lesley Jantarasami
04/01/2010 03:51 PM

To
cc
bcc

Subject UPGOAD C:\Documents and Settings\ljantara\My Documents\Endangerment\02_Comments and Responses\Vol 6 stuff\RTC_draft_Volume_6_Forestry_only_112909[1].doc

(b)(5) Deliberative

- RTC_draft_Volume_6_Forestry_only_112909[1].doc

EPA-EF-003840

EPA-2403

Michael Kolian

05/12/2010 10:11 AM

To

cc

bcc

Subject UPLoad C:\Documents and Settings\Owner\My
Documents\Ccd\TSD comment period\RTC Document and
Outline\Volume
6\December\RTC_draft_Volume_6_Forestry_only_112909[1]
.doc

(b)(5) Deliberative

- RTC_draft_Volume_6_Forestry_only_112909[1].doc

EPA-EF-003841

EPA-2404

David
Chalmers/DC/USEPA/US
11/30/2009 12:08 AM

To Rona Birnbaum
cc John Hannon, Ben DeAngelo, Carol Holmes, Dina Kruger,
Lesley Jantarasami, Michael Kolian, Bill Perkins, Jason
Samenow, Suzanne Kocchi
bcc
Subject List of things to docket

Hi all,

Please find a preliminary list of things we still need to docket attached. Note that ERG is handling all the references for the TSD and RTC volumes as well as the IBR materials. Let me know if I'm missing anything and please try to get any pending emails and meeting documentations to me at least 24 hours in advance of signature as FDMS is clunky.

Thanks,
David

-----Jason Samenow/DC/USEPA/US wrote: -----

To: John Hannon/DC/USEPA/US@EPA
From: Jason Samenow/DC/USEPA/US
Date: 11/29/2009 01:19PM
cc: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill Perkins <perkins.william@epa.gov>, Rona Birnbaum/DC/USEPA/US@EPA
Subject: Re: vol 5 (use this version, please)

Thanks, John -- for the very helpful comments and quick turnaround. We're addressing this volume today. Ben and Mike will work the air quality issues (and will respond substantively to your questions), and I'm handling everything else (e.g. heat, disease, etc).

Jason

John Hannon---11/29/2009 01:00:01 PM---Here are comments on the rest of volume 5. Not much, except in (b)(5) Deliberative

From: John Hannon/DC/USEPA/US

To: Jason Samenow/DC/USEPA/US@EPA

Cc: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill Perkins <perkins.william@epa.gov>, Rona Birnbaum/DC/USEPA/US@EPA

Date: 11/29/2009 01:00 PM

Subject: Re: vol 5 (use this version, please)

EPA-EF-003842

Here are comments on the rest of volume 5. Not much, except in (b)(5) Deliberative

[Redacted]

I think this means two things:

(1) (b)(5) Deliberative
[Redacted]

[Redacted]

[Redacted]

(2) (b)(5) Deliberative
[Redacted]

[Redacted]

[Redacted]

[Redacted]

[attachment "RTC_draft_Volume_5_complete_1128 -jh1129.doc" deleted by Jason Samenow/DC/USEPA/US]

John Hannon
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW (MC 2344A)
Washington, D.C. 20460
Phone (202) 564-5563
Fax (202) 564-5603

Jason Samenow---11/28/2009 11:38:10 AM--- Sorry for multiple emails on this....but please refer to this version of Volume 5.

From: Jason Samenow/DC/USEPA/US
To: Rona Birnbaum/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill Perkins <perkins.william@epa.gov>, Lesley Jantarasami/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA
Date: 11/28/2009 11:38 AM
Subject: vol 5 (use this version, please)

Sorry for multiple emails on this....but please refer to this version of Volume 5.
Jason

(Ben and Mike, please check the first comment and response on air quality and make sure both of your edits to that one were appropriately incorporated)

[attachment "RTC_draft_Volume_5_complete_1128.doc" deleted by Jason Samenow/DC/USEPA/US]

(b)(5) Deliberative

Items to docket.doc

EPA-2405

Marcus
Sarofim/DC/USEPA/US
11/30/2009 12:29 AM

To Jason Samenow
cc
bcc
Subject Re: Fw: New comment excerpts: Volume 2

Mostly covered. I mean, we have [REDACTED] (b)(5) Deliberative [REDACTED]

Marcus C. Sarofim, PhD
phone: 202-343-9993
fax: 202-343-2202
1310 L Street 256C
AAAS Science & Technology Policy Fellow
with the EPA Climate Division

-----Jason Samenow/DC/USEPA/US wrote: -----

To: Marcus Sarofim/DC/USEPA/US@EPA
From: Jason Samenow/DC/USEPA/US
Date: 11/29/2009 06:03PM
Subject: Fw: New comment excerpts: Volume 2

Marcus-- Do you think we have these covered? Just am double checking...

----- Forwarded by Jason Samenow/DC/USEPA/US on 11/29/2009 06:03 PM -----

From: William Perkins/DC/USEPA/US
To: Jason Samenow/DC/USEPA/US@EPA
Date: 11/22/2009 11:40 AM
Subject: Fw: New comment excerpts: Volume 1

Another comment excerpt for you....

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
Climate Change Division
U.S. Environmental Protection Agency
perkins.william@epa.gov
(O) 202.343.9460
(F) 202.343.2202
(C) [REDACTED] (b)(6)

----- Forwarded by William Perkins/DC/USEPA/US on 11/22/2009 11:40 AM -----

From: Jeremy Martinich/DC/USEPA/US

EPA-EF-003845

To: William Perkins/DC/USEPA/US@EPA
Date: 11/22/2009 10:18 AM
Subject: Re: New comment excerpts: Volume 1

Thanks Bill. This one belongs in V2

Jeremy Martinich
USEPA, Climate Change Division
202-343-9871

William Perkins---11/21/2009 07:45:21 PM---Bill Perkins Climate Change Adaptation Analyst

From: William Perkins/DC/USEPA/US
To: Jeremy Martinich/DC/USEPA/US@EPA
Cc: Lesley Jantarasami/DC/USEPA/US@EPA
Date: 11/21/2009 07:45 PM
Subject: New comment excerpts: Volume 1

[attachment "Comment Code 10.1 Environmental Justice Considerations.doc" deleted by Jeremy Martinich/DC/USEPA/US] [attachment "Comment Code 4.1 General Comments on Technical Considerations for the Findings.doc" deleted by Jeremy Martinich/DC/USEPA/US] [attachment "Comment Code 4.5 Consideration of Net Effects (harm vs. benefits).doc" deleted by Jeremy Martinich/DC/USEPA/US] [attachment "Comment Code 9.1 General Comments on the TSD_Supporting Data.doc" deleted by Jeremy Martinich/DC/USEPA/US] [attachment "Comment Code 9.2.1 Use of non-EPA assessments.doc" deleted by Jeremy Martinich/DC/USEPA/US] [attachment "Comment Code 9.3 Adherence to the Data Quality Act.doc" deleted by Jeremy Martinich/DC/USEPA/US] [attachment "Comment Code 9.4 Consideration of Role of Adaptation & Mitigation.doc" deleted by Jeremy Martinich/DC/USEPA/US] [attachment "Comment Code 9.5 Validity of Observed_Measured Data.doc" deleted by Jeremy Martinich/DC/USEPA/US]

Bill Perkins
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(C) (b)(6)

[attachment "Comment Code 9.5 Validity of Observed_Measured Data.doc" removed by Marcus Sarofim/DC/USEPA/US]

EPA-2406

**Rona
Birnbaum/DC/USEPA/US**
11/30/2009 09:26 AM

To Carol Holmes
cc
bcc
Subject Re: Vol. 4 update

yea, I saw that later.
thanks.

Rona

Carol Holmes	you know John already re-reviewed Vol...	11/30/2009 09:18:19 AM
From:	Carol Holmes/DC/USEPA/US	
To:	Rona Birnbaum/DC/USEPA/US@EPA	
Date:	11/30/2009 09:18 AM	
Subject:	Re: Vol. 4 update	

you know John already re-reviewed Volume 1? Just checking. Talk with you later!

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Washington, DC 20460
Phone (202) 564-8709
Fax (202) 564-5603

Rona Birnbaum	Carol, your plan/priority makes sense....	11/29/2009 09:31:10 PM
From:	Rona Birnbaum/DC/USEPA/US	
To:	David Chalmers/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA	
Cc:	John Hannon/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA	
Date:	11/29/2009 09:31 PM	
Subject:	Re: Vol. 4 update	

Carol, your plan/priority makes sense. Dina is also taking another look at Vol 1 and we definitely want another OGC review on that as Jeremy added a bunch of stuff per John's earlier review. I think Dina will be done by tomorrow.

Sent by EPA Wireless E-Mail Services

From: David Chalmers
Sent: 11/29/2009 08:17 PM EST
To: Carol Holmes
Cc: John Hannon; Marcus Sarofim; Rona Birnbaum; William Perkins; Lesley Jantarasami
Subject: Re: Vol. 4 update

EPA-EF-003848

Thanks for the quick response, Carol. The volume is currently [REDACTED] (b)(5) Deliberative

[REDACTED] The entire volume is fairly techie but should be in good shape by the time you get it, so I do think a day or two should be sufficient. Touching base sometime tomorrow in the early afternoon sounds good. I'll be working from Michigan for most of tomorrow so the best number to use to reach me by phone is my cell: [REDACTED] (b)(6).

Thanks,
David

-----Carol Holmes/DC/USEPA/US wrote: -----

To: David Chalmers/DC/USEPA/US@EPA
From: Carol Holmes/DC/USEPA/US
Date: 11/29/2009 07:30PM
cc: John Hannon/DC/USEPA/US@EPA, Marcus Sarofim/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA, William Perkins/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US
Subject: Re: Vol. 4 update

Thanks David. How many pages do you anticipate for the whole thing? I am a bit burned out after reading all of Vs 2 and 3 today, so am inclined to do this tomorrow assuming it can be done in a day or two. Also, I need to work with Lesley on V11 and work up [REDACTED] (b) 5 deliberative [REDACTED]. I also wouldn't mind skimming V1 just to know what is there. So I have stuff to hold me in the short term. So assuming V4 isn't longer than the rest, why don't you keep working on it and I'll do the other items above in meantime. Then we can check in with each other late tomorrow morning or early afternoon. Work for you? THANKS

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David Chalmers---11/29/2009 07:17:16 PM---Hi Carol, Bill let me know that you inquired as to when you could expect Vol 4, so I thought I'd

From David Chalmers/DC/USEPA/US

:

To: Carol Holmes/DC/USEPA/US@EPA

Cc: Rona Birnbaum/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Marcus Sarofim/DC/USEPA/US@EPA, William Perkins/DC/USEPA/US@EPA

Date: 11/29/2009 07:17 PM

Subje Vol. 4 update
ct:

Hi Carol,

Bill let me know that you inquired as to when you could expect Vol 4, so I thought I'd send an update. All of the Vol. 4 save sections 1 and 2 should be ready by the end of tonight, but it's looking like we won't be able to have the whole volume ready until late in the day tomorrow. Would it make sense for us to send you sections 3-7 later tonight or first thing tomorrow so that you can get started on those (and then send sections 1 and 2 sometime later in the day), or would you rather we send the entire review-ready volume sometime tomorrow afternoon?

Thanks,
David

-----William Perkins/DC/USEPA/US wrote: -----

To: David Chalmers/DC/USEPA/US@EPA
From: William Perkins/DC/USEPA/US
Date: 11/29/2009 06:43PM
Subject: Fw: Vol 2 for review and copy editing

Fyi, Carol is asking about volume 4 sir.

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
Climate Change Division
U.S. Environmental Protection Agency
perkins.william@epa.gov
(O) 202.343.9460
(F) 202.343.2202
(C) (b)(6)

----- Forwarded by William Perkins/DC/USEPA/US on 11/29/2009 06:42 PM -----

Fro Carol Holmes/DC/USEPA/US
m:

To: Jason Samenow/DC/USEPA/US@EPA

Cc: Dina Kruger/DC/USEPA/US@EPA, Jeremy Martinich/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Marcus Sarofim/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA, William Perkins/DC/USEPA/US@EPA

Dat 11/29/2009 06:40 PM
e:

Sub Re: Vol 2 for review and copy editing
ject:

Here are my comments on v2. Again, overall quite good, (b)(5) Deliberative

(b)(5) Deliberative

Also, as I mentioned before, (b)(5) Deliberative

(b)(5) Deliberative

I do suggest combining the two comment/responses into one.

THANKS

PS -- when can I expect volume 4?

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Jason Samenow---11/28/2009 08:22:03 PM---Team-- Here is the latest and greatest version of Vol 2, ready for review. It's another long one, n

From Jason Samenow/DC/USEPA/US

:

To: Rona Birnbaum/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA

Cc: Marcus Sarofim/DC/USEPA/US@EPA, Jeremy Martinich/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, William Perkins/DC/USEPA/US@EPA

Date: 11/28/2009 08:22 PM

Subject: Vol 2 for review and copy editing

ct:

EPA-EF-003851

Team--

Here is the latest and greatest version of Vol 2, ready for review. It's another long one, nearly 70 pages (not including citations).

A few notes...

OGC-- Please pay particular attention to [REDACTED] (b)(5) Deliberative

Bill-- Recommend that ERG, in addition to copy editing this, [REDACTED] (b)(5) Deliberative

[REDACTED] Also, please remind them not to include comment numbers yet.

Lesley-- There are a few comments from Dina on your responses that I forgot to send to you (physical and biological systems). Can you please address those?

Thanks to Marcus and Jeremy for their help in responding to the last round of edits.

Jason

[attachment "RTC volume 2 112809.doc" deleted by Carol Holmes/DC/USEPA/US]

[attachment "Volume 2 References v2.doc" deleted by Carol Holmes/DC/USEPA/US]

[attachment "RTC volume 2 112809 csh 11 29.doc" removed by David Chalmers/DC/USEPA/US]

EPA-2407

**Jeremy
Martinich/DC/USEPA/US**
11/30/2009 09:39 AM

To Lesley Jantarasami
cc
bcc

Subject Please give me a call when you get this...

Comment (7-1):

(b)(5) Deliberative

Response (7-1):

(b)(5) Deliberative

[Redacted]

Jeremy Martinich
USEPA, Climate Change Division
202-343-9871

EPA-2408

**William
Perkins/DC/USEPA/US**
11/30/2009 09:40 AM

To Sue Eisenfeld, Matthew Mitchell
cc Lesley Jantarasami, Mae Thomas
bcc
Subject Updated copyedit schedule

Sue and Matt,

We now anticipate for 1st-round review:

<u>Volume</u>	<u>Date to ERG</u>
4	12/1
5	11/30
6	12/1 or 12/2
9	12/1 or 12/2

Cheers,

Bill

Bill Perkins
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(C) (b)(6)

EPA-EF-003854

EPA-2409

Ben DeAngelo/DC/USEPA/US

11/30/2009 09:40 AM

To Darrell Winner

cc Mike Kolian

bcc

Subject Fw: vol 5 (use this version, please)

Darrell,

Please see the comments below from John Hannon from OGC regarding our responses to comments

(b)(5) Deliberative

Would you have time today to get on a call to go over this??

Thanks for any help.

-Ben

----- Forwarded by Ben DeAngelo/DC/USEPA/US on 11/30/2009 09:36 AM -----

From: John Hannon/DC/USEPA/US
To: Jason Samenow/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill Perkins <perkins.william@epa.gov>, Rona Birnbaum/DC/USEPA/US@EPA
Date: 11/29/2009 01:00 PM
Subject: Re: vol 5 (use this version, please)

Here are comments on the rest of volume 5. Not much, except in the area of (b)(5) Deliberative

I think this means two things:

(1) (b)(5) Deliberative

EPA-EF-003855

(b)(5) Deliberative

(2) (b)(5) Deliberative

[Redacted]

[Redacted]

[Redacted]

(b)(5) Deliberative

RTC_draft_Volume_5_complete_1128 -jh1129.doc

John Hannon
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW (MC 2344A)
Washington, D.C. 20460
Phone (202) 564-5563
Fax (202) 564-5603

Jason Samenow | Sorry for multiple emails on this....but... | 11/28/2009 11:38:10 AM

From: Jason Samenow/DC/USEPA/US
To: Rona Birnbaum/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill Perkins <perkins.william@epa.gov>, Lesley Jantarasami/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA
Date: 11/28/2009 11:38 AM

Subject: vol 5 (use this version, please)

Sorry for multiple emails on this....but please refer to this version of Volume 5.
Jason

(Ben and Mike, please check the first comment and response on air quality and make sure both of your edits to that one were appropriately incorporated)

(b)(5) Deliberative

RTC_draft_Volume_5_complete_1128.doc

EPA-2410

Lesley
Jantarasami/DC/USEPA/US
11/30/2009 09:42 AM

To Carol Holmes
cc
bcc

Subject Re: vol 11 for your review + a few new comments

Carol, here is the clean version I sent to Dina.

(b)(5) Deliberative

RTC draft Volume New 11 (old 9 - 12) 11 29 09.doc

Carol Holmes Sure. I was going to offer to help with fi... 11/30/2009 07:46:12 AM

From: Carol Holmes/DC/USEPA/US
To: Lesley Jantarasami/DC/USEPA/US
Date: 11/30/2009 07:46 AM
Subject: Re: vol 11 for your review + a few new comments

Sure. I was going to offer to help with finding place for the "new" comments today. I don't think it will be hard.

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Phone (202) 564-8709
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Lesley Jantarasami Thanks, Carol. I thought Dina was... 11/29/2009 09:59:24 PM

From: Lesley Jantarasami/DC/USEPA/US
To: Carol Holmes/DC/USEPA/US@EPA
Date: 11/29/2009 09:59 PM
Subject: Re: vol 11 for your review + a few new comments

Thanks, Carol. I thought Dina was going to be able to review v11 this afternoon, but it looks like we will get her comments back tomorrow. My plan was to incorporate her edits, add those summaries from the new comments, and then send a new version to you for another review. Does that work for you?

Lesley

-----Carol Holmes/DC/USEPA/US wrote: -----

To: Lesley Jantarasami/DC/USEPA/US
From: Carol Holmes/DC/USEPA/US
Date: 11/29/2009 07:12PM
Subject: Re: vol 11 for your review + a few new comments

EPA-EF-003858

I went ahead and gave you my initial thoughts and a couple responses to the "new" comments. Didn't want to do more since it may overlap with what you are doing.

On new comments: [REDACTED] (b)(5) Deliberative [REDACTED]
[REDACTED]

Let me know what you want to do next to finish thsi up. THANKS

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Lesley Jantarasami---11/29/2009 11:35:15 AM---Hi Carol, Just spoke to Rona about timing and we think V2 is the priority right now. So while you f

From: Lesley Jantarasami/DC/USEPA/US
To: Carol Holmes/DC/USEPA/US@EPA
Date: 11/29/2009 11:35 AM
Subject: Re: vol 11 for your review + a few new comments

Hi Carol,

Just spoke to Rona about timing and we think V2 is the priority right now. So while you finish reviewing V3 and V2, we'll continue to revise V11 and send you a new version.

Thanks,

Lesley

Carol Holmes---11/29/2009 08:41:33 AM---Hi Lesley -- I am in the middle of V3 right now (52 pages). Do y'all want me to do this before V2?

From: Carol Holmes/DC/USEPA/US
To: Lesley Jantarasami/DC/USEPA/US

Date: 11/29/2009 08:41 AM
Subject: Re: vol 11 for your review + a few new comments

Hi Lesley -- I am in the middle of V3 right now (52 pages). Do y'all want me to do this before V2?

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Fax (202) 564-5603

Lesley Jantarasami---11/28/2009 08:40:23 PM---Hi Carol, Hope you had a nice Thanksgiving! Please find attached OAR's latest edits and additions t

From: Lesley Jantarasami/DC/USEPA/US
To: Carol Holmes/DC/USEPA/US@EPA
Date: 11/28/2009 08:40 PM
Subject: vol 11 for your review + a few new comments

Hi Carol,

Hope you had a nice Thanksgiving! Please find attached OAR's latest edits and additions to vol 11. At the beginning of the volume, I cut and pasted the text of a few new comments that ERG found during a QA/QC of their database. I don't think they bring up any new issues, but see if you agree. There's also one I summarized about the (b)(5) Deliberative - I think you/John already dealt with similar comments in vol 1, but let me know if this one belongs somewhere in vol 11.

Rona has reviewed this version, but Dina has not. It would be great if you're able to do a quick turnaround review so we can send it to her by late afternoon tomorrow, but I understand you have a lot going on right now and that may not be possible. Let me know what your schedule looks like. We also plan to send this to you and John again after we incorporate any edits from Dina.

Best,

Lesley

[attachment "RTC draft Volume New 11 (old 9 - 12) 11 28 v2.doc" deleted by Carol Holmes/DC/USEPA/US]

Lesley Jantarasami
US EPA, Climate Change Division
Climate Science & Impacts Branch

202.343.9929
202.343.2202 (fax)
Jantarasami.Lesley@epa.gov

[attachment "RTC draft Volume New 11 (old 9 - 12) 11 28 v2 cSH 11 28.doc" removed by Lesley Jantarasami/DC/USEPA/US]

EPA-2411

Lesley
Jantarasami/DC/USEPA/US
11/30/2009 09:51 AM

To **Jeremy Martinich**
cc
bcc

Subject **section 2.7 comment for your review**

here is my attempt to edit that one comment...

(b)(5) Deliberative

Dina comment on 2.7.doc

Thanks!

Lesley

EPA-2412

Lesley Jantarasami/DC/USEPA/US
11/30/2009 09:53 AM

To Jeremy Martinich
cc
bcc

Subject Re: section 2.7 comment for your review

here is the original comment in case you'd like to see the context.



EPA-HQ-OAR-2009-0171-3283.1.pdf

available at
[regulations.gov](http://www.regulations.gov)

Lesley Jantarasami [here is my attempt to edit that one...](#) 11/30/2009 09:51:34 AM

From: Lesley Jantarasami/DC/USEPA/US
To: Jeremy Martinich/DC/USEPA/US@EPA
Date: 11/30/2009 09:51 AM
Subject: section 2.7 comment for your review

here is my attempt to edit that one comment...

[attachment "Dina comment on 2.7.doc" deleted by Lesley Jantarasami/DC/USEPA/US]

Thanks!

Lesley

EPA-2413

Darrell Winner/DC/USEPA/US

11/30/2009 09:54 AM

To Chris Weaver, Anne Grambsch

cc

bcc

Subject Fw: vol 5 (use this version, please)

Heads-up. I've asked for you both to be included in the meeting with OGC later today, time TBD.

-darrell

Darrell Winner, Ph.D.
Director, Applied Science Division
National Center for Environmental Research
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phone 202-343-9748
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1025 F St NW
Washington, DC 20004

(Woodies Building / metro stop: Metro Center)


----- Forwarded by Darrell Winner/DC/USEPA/US on 11/30/2009 09:54 AM -----

From: Ben DeAngelo/DC/USEPA/US
To: Darrell Winner/DC/USEPA/US@EPA
Cc: Mike Kolian <kolian.michael@epa.gov>
Date: 11/30/2009 09:40 AM
Subject: Fw: vol 5 (use this version, please)

Darrell,

Please see the comments below from John Hannon from OGC regarding our responses to comments

(b)(5) Deliberative



Would you have time today to get on a call to go over this??

Thanks for any help.

-Ben

----- Forwarded by Ben DeAngelo/DC/USEPA/US on 11/30/2009 09:36 AM -----

EPA-EF-003864

From: John Hannon/DC/USEPA/US
To: Jason Samenow/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill Perkins <perkins.william@epa.gov>, Rona Birnbaum/DC/USEPA/US@EPA
Date: 11/29/2009 01:00 PM
Subject: Re: vol 5 (use this version, please)

Here are comments on the rest of volume 5. Not much, except in the area of (b)(5) Deliberative

[Redacted]

I think this means two things:

(1) (b)(5) Deliberative
[Redacted]

[Redacted]

[Redacted]

(2) (b)(5) Deliberative
[Redacted]

[Redacted]

[Redacted]

(b)(5) Deliberative

[attachment "RTC_draft_Volume_5_complete_1128 -jh1129.doc" deleted by Darrell Winner/DC/USEPA/US]

John Hannon
Office of General Counsel
U.S. Environmental Protection Agency
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Washington, D.C. 20460
Phone (202) 564-5563
Fax (202) 564-5603

Jason Samenow [Sorry for multiple emails on this....but...](#) 11/28/2009 11:38:10 AM

From: Jason Samenow/DC/USEPA/US
To: Rona Birnbaum/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill Perkins <perkins.william@epa.gov>, Lesley Jantarasami/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA
Date: 11/28/2009 11:38 AM
Subject: vol 5 (use this version, please)

Sorry for multiple emails on this....but please refer to this version of Volume 5.
Jason

(Ben and Mike, please check the first comment and response on air quality and make sure both of your edits to that one were appropriately incorporated)

[attachment "RTC_draft_Volume_5_complete_1128.doc" deleted by Darrell Winner/DC/USEPA/US]

EPA-2414

William Perkins/DC/USEPA/US
11/30/2009 10:42 AM

To John Hannon
cc Ben DeAngelo, Carol Holmes, Lesley Jantarasami, Rona Birnbaum
bcc
Subject Re: For your review: stock language and titles for reference list

John,

Good point. That is what is meant -- (b)(5) Deliberative
[Redacted]

Thank you for the edits on the titles.

Cheers,

Bill

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
Climate Change Division
U.S. Environmental Protection Agency
perkins.william@epa.gov
(O) 202.343.9460
(F) 202.343.2202
(C) (b)(6)

John Hannon Bill, a few edits. (b)(5) Deliberative 11/30/2009 10:33:41 AM

From: John Hannon/DC/USEPA/US
To: William Perkins/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA
Date: 11/30/2009 10:33 AM
Subject: Re: For your review: stock language and titles for reference list

Bill, a few edits. (b)(5) Deliberative
[Redacted]

John Hannon
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW (MC 2344A)
Washington, D.C. 20460
Phone (202) 564-5563

EPA-EF-003867

Fax (202 564-5603

William Perkins Carol and John, As we have discussed,... 11/29/2009 02:09:52 PM

From: William Perkins/DC/USEPA/US
To: Carol Holmes/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA
Cc: Rona Birnbaum/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Ben DeAngelo/DC/USEPA/US@EPA
Date: 11/29/2009 02:09 PM
Subject: For your review: stock language and titles for reference list

Carol and John,

As we have discussed, we are planning to [REDACTED] (b) 5 deliberative

[REDACTED]

Enclosed is the draft stock language for referring to list #1 as well as a draft title and organization for the three reference lists; we welcome any feedback you may have. We hope to be able to share this with the full team early tomorrow. Thank you for your time and attention.

Sincerely,

Bill

[attachment "Reference lists - stock language and titles.doc" deleted by John Hannon/DC/USEPA/US]

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
Climate Change Division
U.S. Environmental Protection Agency
perkins.william@epa.gov
(O) 202.343.9460
(F) 202.343.2202
(C) [REDACTED] (b)(6)

EPA-2415

William Perkins/DC/USEPA/US
11/30/2009 10:43 AM

To Lesley Jantarasami
cc
bcc
Subject Re: EJ section move + new outline?

Lesley,

I think that's a great idea. I'll change the title to (b) 5 deliberative

Cheers,

Bill

Bill Perkins
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Climate Science and Impacts Branch
Climate Change Division
U.S. Environmental Protection Agency
perkins.william@epa.gov
(O) 202.343.9460
(F) 202.343.2202
(C) (b)(6)

Lesley Jantarasami Are you keeping the same title? Se... 11/30/2009 10:39:29 AM

From: Lesley Jantarasami/DC/USEPA/US
To: William Perkins/DC/USEPA/US@EPA
Date: 11/30/2009 10:39 AM
Subject: Re: EJ section move + new outline?

Are you keeping the same title? Seems a little odd that it says "Analysis of Effects on" when the other sub-sections in V8 don't say that. What do you think about just (b) 5 deliberative

Lesley

William Perkins Lesley, As I mentioned, 1.5 has been m... 11/30/2009 10:11:07 AM

From: William Perkins/DC/USEPA/US
To: Lesley Jantarasami/DC/USEPA/US@EPA
Date: 11/30/2009 10:11 AM
Subject: EJ section move + new outline?

Lesley,

As I mentioned, 1.5 has been moved to be the new 8.4. Jeremy and I thought also that it might be useful to send out a revised outline to the team? Thank you.

Cheers,

Bill

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch

EPA-EF-003869

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(C) (b)(6)

EPA-2416

Lesley
Jantarasami/DC/USEPA/US
11/30/2009 11:06 AM

To Ben DeAngelo, Carol Holmes, John Hannon, Rona
Birnbaum, William Perkins, Jeremy Martinich, Jason
Samenow, Michael Kolian, David Chalmers, Marcus Sarofim

cc

bcc

Subject Revised RTC Outline 11/30

We've been making a number of changes to the overall outline of the RTC, so I wanted to ensure everyone has the latest version. Volume Leads - please cross-walk how you're referring to the various other volumes and section numbers/titles with this document.

And please continue to let me know about any changes to section titles or the order of sections.

Thanks!

Lesley

(b)(5) Deliberative

RTC Outline 113009.doc

EPA-2417

William
Perkins/DC/USEPA/US
11/30/2009 11:34 AM

To Jeremy Martinich, Lesley Jantarasami, Marcus Sarofim,
Jason Samenow, David Chalmers, Ben DeAngelo, Michael
Kolian
cc Rona Birnbaum
bcc
Subject Stock language for referring to the master reference list of
public commenter materials

All,

Enclosed is the language that we crafted to use in the RTCs when we need to refer the reader to the list of all the materials that commenters either gave us or referenced in their comments. As we have discussed, this will probably mainly be applicable when we discuss one or two journal submissions in a specific vein, (using e.g.) and then we can insert this language to refer folks to the big list of all the IBRed and submitted material:

Stock language:

(b) 5 deliberative

Cheers,

Bill

Bill Perkins
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Climate Science and Impacts Branch
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(F) 202.343.2202
(C) (b)(6)

EPA-EF-003872

EPA-2418

William
Perkins/DC/USEPA/US
11/30/2009 11:39 AM

To David Chalmers
cc
bcc
Subject Fw: For your review: stock language and titles for reference list

David,

Fyi, as discussed. [REDACTED] (b)(5) Deliberative
[REDACTED] Thanks.

Bill

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
Climate Change Division
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perkins.william@epa.gov
(O) 202.343.9460
(F) 202.343.2202
(C) [REDACTED] (b)(6)

----- Forwarded by William Perkins/DC/USEPA/US on 11/30/2009 11:38 AM -----

From: John Hannon/DC/USEPA/US
To: John Hannon/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA, William Perkins/DC/USEPA/US@EPA
Date: 11/30/2009 10:36 AM
Subject: Re: For your review: stock language and titles for reference list

Sorry, here's the edited version.

[REDACTED] (b)(5) Deliberative

Reference lists - stock language and titles - jh1130.doc

John Hannon
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW (MC 2344A)
Washington, D.C. 20460
Phone (202) 564-5563
Fax (202) 564-5603

John Hannon Bill, a few edits. I'm still not clear what i... 11/30/2009 10:33:41 AM

From: John Hannon/DC/USEPA/US
To: William Perkins/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA

EPA-EF-003873

Date: 11/30/2009 10:33 AM
Subject: Re: For your review: stock language and titles for reference list

Bill, a few edits. I'm still not clear what is meant by the mean unique comments. that was mentioned as well in Vol 1 of the RTC. If we mean comments that are not duplicates of others (e.g. mass mailings are not unique), we should say that. Wouldn't the Master List of comments include a category for the mass mailings, etc.?

John Hannon
Office of General Counsel
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Washington, D.C. 20460
Phone (202) 564-5563
Fax (202) 564-5603

William Perkins Carol and John, As we have discussed,... 11/29/2009 02:09:52 PM

From: William Perkins/DC/USEPA/US
To: Carol Holmes/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA
Cc: Rona Birnbaum/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Ben DeAngelo/DC/USEPA/US@EPA
Date: 11/29/2009 02:09 PM
Subject: For your review: stock language and titles for reference list

Carol and John,

As we have discussed, we are planning (b) 5 deliberative

[REDACTED]

[REDACTED]

Enclosed is the draft stock language for referring to list #1 as well as a draft title and organization for the three reference lists; we welcome any feedback you may have. We hope to be able to share this with the full team early tomorrow. Thank you for your time and attention.

Sincerely,

Bill

[attachment "Reference lists - stock language and titles.doc" deleted by John Hannon/DC/USEPA/US]

Bill Perkins
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(F) 202.343.2202
(C) (b)(6)

EPA-2419

**Rona
Birnbaum/DC/USEPA/US**
11/30/2009 11:39 AM

To Lesley Jantarasami
cc
bcc
Subject Re: Revised RTC Outline 11/30

Jason should be listed as staff lead for 5
thanks

Rona Birnbaum
Chief, Climate Science and Impacts Branch
USEPA, Climate Change Division
birnbaum.rona@epa.gov
202-343-9076

Lesley Jantarasami [We've been making a number of ch...](#) 11/30/2009 11:06:01 AM

From: Lesley Jantarasami/DC/USEPA/US
To: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA, William Perkins/DC/USEPA/US@EPA, Jeremy Martinich/DC/USEPA/US@EPA, Jason Samenow/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA, Marcus Sarofim/DC/USEPA/US@EPA
Date: 11/30/2009 11:06 AM
Subject: Revised RTC Outline 11/30

We've been making a number of changes to the overall outline of the RTC, so I wanted to ensure everyone has the latest version. Volume Leads - please cross-walk how you're referring to the various other volumes and section numbers/titles with this document.

And please continue to let me know about any changes to section titles or the order of sections.

Thanks!

Lesley

[attachment "RTC Outline 113009.doc" deleted by Rona Birnbaum/DC/USEPA/US]

EPA-EF-003876

EPA-2420

David
Chalmers/DC/USEPA/US
11/30/2009 11:44 AM

To samenow.jason
cc
bcc

Subject climate-sensitiive disease section for drop-in

(b)(5) Deliberative

Also, there's one or two holes left over from the previous incarnation (e.g. missing comment numbers) that the original author (Mike?) will be best able to address; I've flagged these. Please call or write if there's anything I can clarify. webmail seems to be working well recently but please confirm receipt.

David Chalmers
ORISE Fellow
U.S. EPA, Climate Change Division (b)(5) Deliberative

202.343.9814climate sensitive diseases_FOR DROP IN TO VOL 5.doc

EPA-EF-003877

EPA-2421

William Perkins/DC/USEPA/US
11/30/2009 11:52 AM

To David Chalmers
cc
bcc
Subject Fw: For your review: stock language and titles for reference list

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
Climate Change Division
U.S. Environmental Protection Agency
perkins.william@epa.gov
(O) 202.343.9460
(F) 202.343.2202
(C) (b)(6)

----- Forwarded by William Perkins/DC/USEPA/US on 11/30/2009 11:52 AM -----

From: William Perkins/DC/USEPA/US
To: John Hannon/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA
Date: 11/30/2009 10:42 AM
Subject: Re: For your review: stock language and titles for reference list

John,

Good point. That is what is meant -- (b)(5) Deliberative

Thank you for the edits on the titles.

Cheers,

Bill

Bill Perkins
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(O) 202.343.9460
(F) 202.343.2202
(C) (b)(6)

John Hannon Bill, a few edits. (b)(5) Deliberative 11/30/2009 10:33:41 AM

From: John Hannon/DC/USEPA/US
To: William Perkins/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA
Date: 11/30/2009 10:33 AM

EPA-EF-003878

Subject: Re: For your review: stock language and titles for reference list

Bill, a few edits. (b)(5) Deliberative

[REDACTED]

John Hannon
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW (MC 2344A)
Washington, D.C. 20460
Phone (202) 564-5563
Fax (202) 564-5603

William Perkins Carol and John, As we have discussed,... 11/29/2009 02:09:52 PM

From: William Perkins/DC/USEPA/US
To: Carol Holmes/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA
Cc: Rona Birnbaum/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Ben DeAngelo/DC/USEPA/US@EPA
Date: 11/29/2009 02:09 PM
Subject: For your review: stock language and titles for reference list

Carol and John,

As we have discussed, we are planning to (b) 5 deliberative

[REDACTED]

[REDACTED]

Enclosed is the draft stock language for referring to list #1 as well as a draft title and organization for the three reference lists; we welcome any feedback you may have. We hope to be able to share this with the full team early tomorrow. Thank you for your time and attention.

Sincerely,

Bill

[attachment "Reference lists - stock language and titles.doc" deleted by John Hannon/DC/USEPA/US]

Bill Perkins
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Climate Science and Impacts Branch
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perkins.william@epa.gov
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EPA-EF-003879

(F) 202.343.2202
(C) (b)(6)

EPA-2422

Rona
Birnbaum/DC/USEPA/US
11/30/2009 11:59 AM

To Lesley Jantarasami
cc
bcc

Subject Fw: another late submission to docket

fyi

----- Forwarded by Rona Birnbaum/DC/USEPA/US on 11/30/2009 11:59 AM -----

From: Carol Holmes/DC/USEPA/US
To: Rona Birnbaum/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Suzanne Kocchi/DC/USEPA/US@EPA
Date: 11/30/2009 11:53 AM
Subject: Re: another late submission to docket

v11 probably makes sense. We'd have to add a category re late comments.

Confidential communication for internal deliberations only; Attorney-client, attorney work product and/or enforcement privilege; Do not distribute outside EPA or DOJ

Carol S. Holmes
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Ave, NW (MC 2344A)
Washington, DC 20460
Phone (202) 564-8709
Fax (202) 564-5603

Rona Birnbaum (b)(5) Deliberative 11/30/2009 11:32:46 AM

From: Rona Birnbaum/DC/USEPA/US
To: Carol Holmes/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Suzanne Kocchi/DC/USEPA/US@EPA
Date: 11/30/2009 11:32 AM
Subject: Re: another late submission to docket

(b)(5) Deliberative

Would the explanation of why we didn't consider it go into Vol 11?

Carol Holmes John and I just talked briefly, and we thi... 11/30/2009 11:06:40 AM

From: Carol Holmes/DC/USEPA/US
To: Rona Birnbaum/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Suzanne Kocchi/DC/USEPA/US@EPA
Date: 11/30/2009 11:06 AM
Subject: Re: another late submission to docket

John and I just talked briefly, and we think (b)(5) Deliberative

EPA-EF-003881

(b)(5) Deliberative

. OAR thoughts?

Confidential communication for internal deliberations only; Attorney-client, attorney work product and/or enforcement privilege; Do not distribute outside EPA or DOJ

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1200 Pennsylvania Ave, NW (MC 2344A)
Washington, DC 20460
Phone (202) 564-8709
Fax (202) 564-5603

Rona Birnbaum	submitted to the docket on 11/20 by Ho...	11/25/2009 10:12:21 AM
---------------	---	------------------------

From: Rona Birnbaum/DC/USEPA/US
To: John Hannon/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Suzanne Kocchi/DC/USEPA/US@EPA
Date: 11/25/2009 10:12 AM
Subject: another late submission to docket

submitted to the docket on 11/20 by Holland and Hart..

[attachment "Coalition 11-20-2009 Addendum & Supplementation.pdf" deleted by Carol Holmes/DC/USEPA/US]

EPA-2423

David
Chalmers/DC/USEPA/US
11/30/2009 12:02 PM

To William Perkins
cc
bcc

Subject Re: Fw: For your review: stock language and titles for
reference list

we definitely discuss the mass mails but i don't think we specifically use the word 'unique' but rather 'other'. probably not a big deal, but i suppose we could define unique in the findings or vol. 1. here's how the findings currently reads:

(b)(5) Deliberative



David Chalmers
ORISE Fellow
U.S. EPA, Climate Change Division
202.343.9814

-----William Perkins/DC/USEPA/US wrote: -----

To: David Chalmers/DC/USEPA/US@EPA
From: William Perkins/DC/USEPA/US
Date: 11/30/2009 11:52AM
Subject: Re: Fw: For your review: stock language and titles for reference list

David, do we discuss the mass mailers, etc. in those places? I thought we had a discussion of that but we might not. I'll send you my response to John. Cheers, Bill

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
Climate Change Division

EPA-EF-003883

U.S. Environmental Protection Agency
perkins.william@epa.gov
(O) 202.343.9460
(F) 202.343.2202
(C) (b)(6)

David Chalmers---11/30/2009 11:50:40 AM---Thanks Bill. This looks great. With regard to the last item, do we have a definition of 'unique' i

From: David Chalmers/DC/USEPA/US
To: William Perkins/DC/USEPA/US@EPA
Date: 11/30/2009 11:50 AM
Subject: Re: Fw: For your review: stock language and titles for reference list

Thanks Bill. This looks great. With regard to the last item, do we have a definition of 'unique' in Vol. 1 or the Findings? If not, should we?

Thanks,

David Chalmers
ORISE Fellow
U.S. EPA, Climate Change Division
202.343.9814

-----William Perkins/DC/USEPA/US wrote: -----

To: David Chalmers/DC/USEPA/US@EPA
From: William Perkins/DC/USEPA/US
Date: 11/30/2009 11:39AM
Subject: Fw: For your review: stock language and titles for reference list

David,

Fyi, as discussed. (b)(5) Deliberative

Thanks.

Bill

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
Climate Change Division
U.S. Environmental Protection Agency
perkins.william@epa.gov
(O) 202.343.9460
(F) 202.343.2202
(C) (b)(6)

----- Forwarded by William Perkins/DC/USEPA/US on 11/30/2009 11:38 AM -----

From: John Hannon/DC/USEPA/US
To: John Hannon/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA, William Perkins/DC/USEPA/US@EPA
Date: 11/30/2009 10:36 AM
Subject: Re: For your review: stock language and titles for reference list

Sorry, here's the edited version.

John Hannon
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW (MC 2344A)
Washington, D.C. 20460
Phone (202) 564-5563
Fax (202) 564-5603

John Hannon---11/30/2009 10:33:41 AM---Bill, a few edits. I'm still not clear what is meant by the mean unique comments. that was mention

From: John Hannon/DC/USEPA/US
To: William Perkins/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Rona Birnbaum/DC/USEPA/US@EPA
Date: 11/30/2009 10:33 AM
Subject: Re: For your review: stock language and titles for reference list

Bill, a few edits. I'm still not clear what is meant by the mean unique comments. that was mentioned as well in Vol 1 of the RTC. If we mean comments that are not duplicates of others (e.g. mass mailings are not unique), we should say that. Wouldn't the Master List of comments include a category for the mass mailings, etc.?

John Hannon
Office of General Counsel

U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW (MC 2344A)
Washington, D.C. 20460
Phone (202) 564-5563
Fax (202) 564-5603

William Perkins---11/29/2009 02:09:52 PM---Carol and John, As we have discussed, we are planning to
[REDACTED] (b) 5 deliberative

From: William Perkins/DC/USEPA/US

To: Carol Holmes/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA

Cc: Rona Birnbaum/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Ben DeAngelo/DC/USEPA/US@EPA

Date: 11/29/2009 02:09 PM

Subject: For your review: stock language and titles for reference list

Carol and John,

As we have discussed, we are planning to [REDACTED] (b) 5 deliberative

[REDACTED]

Enclosed is the draft stock language for referring to list #1 as well as a draft title and organization for the three reference lists; we welcome any feedback you may have. We hope to be able to share this with the full team early tomorrow. Thank you for your time and attention.

Sincerely,

Bill

[attachment "Reference lists - stock language and titles.doc" deleted by John Hannon/DC/USEPA/US]

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
Climate Change Division
U.S. Environmental Protection Agency
perkins.william@epa.gov
(O) 202.343.9460
(F) 202.343.2202
(C) [REDACTED] (b)(6)

[attachment "Reference lists - stock language and titles -jh1130.doc" removed by David Chalmers/DC/USEPA/US]

EPA-2424

Lesley Jantarasami
04/01/2010 03:50 PM

To
cc
bcc
Subject UPGOAD C:\Documents and Settings\ljantara\My Documents\Endangerment\02_Comments and Responses\Vol 2 Section 2.7\Dina comment on 2.7.doc

(b)(5) Deliberative

- Dina comment on 2.7.doc

EPA-EF-003888

EPA-2425

Jason
Samenow/DC/USEPA/US
11/30/2009 12:11 PM

To David Chalmers
cc
bcc
Subject Re: climate-sensitiive disease section for drop-in

Dave--

Thanks for this.

I'm not sure it's any more practical for Mike (the original author) to fill in missing comment numbers than you or me. It just requires doing a quick word search in the ERG database to identify them. I'll just take care of it.

Jason

David Chalmers Note that I made a number of changes... 11/30/2009 11:44:43 AM

From: David Chalmers/DC/USEPA/US
To: samenow.jason@epa.gov
Date: 11/30/2009 11:44 AM
Subject: climate-sensitiive disease section for drop-in

(b)(5) Deliberative

Also, there's one or two holes left over from the previous incarnation (e.g. missing comment numbers) that the original author (Mike?) will be best able to address; I've flagged these. Please call or write if there's anything I can clarify. webmail seems to be working well recently but please confirm receipt.

David Chalmers
ORISE Fellow
U.S. EPA, Climate Change Division
202.343.9814[attachment "climate sensitive diseases_FOR DROP IN TO VOL 5.doc" deleted by Jason Samenow/DC/USEPA/US]

EPA-EF-003889

EPA-2426

"Dave Mills"
<DMills@stratusconsulting.com>
11/30/2009 12:28 PM

To Jason Samenow
cc
bcc
Subject RE: comments

Jason,

Some additional comments and thoughts on Moore from the Amenity paper (first listed)

1. (b)(5) Deliberative
[Redacted]

2. (b)(5) Deliberative
[Redacted]

(b)(5) Deliberative
[Redacted]

(b)(5) Deliberative
[Redacted]

[Redacted]

Thanks,

Dave

-----Original Message-----
From: Samenow.Jason@epamail.epa.gov
[mailto:Samenow.Jason@epamail.epa.gov]
Sent: Saturday, November 28, 2009 9:47 AM
To: Dave Mills
Subject: RE: comments

Both Moore papers are freely, readily accessible via a Google search:

Health and Amenity Effects of Global Warming
<http://www.stanford.edu/~moore/health.html>

Why Global Warming Would be Good for You
http://www.stanford.edu/~moore/Boon_To_Man.html

The first one may not be precisely the same as the one ultimately published in Economic Inquiry...but should be close.

The second one I don't think ever went into a peer reviewed journal

Your comments, particularly on "health and amenity effects" would be useful...

Thanks...

Jason

```
|----->
| From: |
|----->

>-----|
| "Dave Mills" <DMills@stratusconsulting.com>
|

>-----|
|----->
| To: |
|----->

>-----|
| Jason Samenow/DC/USEPA/US@EPA
|

>-----|
|----->
| Date: |
|----->

>-----|
| 11/27/2009 09:34 PM
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| Subject: |
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| RE: comments
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Jason,

Just sending this to make sure you received the attachment with my comments. If it did not come through call me using the numbers below and I can resend or we can figure out some other way to get you the file.

thanks,

Dave

From: Dave Mills
Sent: Friday, November 27, 2009 7:33 PM
To: 'Samenow.Jason@epamail.epa.gov'
Cc: 'Martinich.Jeremy@epamail.epa.gov'; Joel Smith
Subject: comments

Jason,

Attached is a file with my comments and suggestions in redline strikeout (note text in all caps are more thoughts and additional considerations that could be addressed or should be noted).

I think the easiest thing to do will be to go over the comments directly with you to see if you have questions or want/need additional information.

The best way to reach me tomorrow will be phone. My cell phone number is (b)(6) and if there are any issues with that number you can try the home phone (b)(6).

Thanks for the opportunity and I look forward to talking with you about the comments.

All the best from Boulder.

David M. Mills
Senior Analyst

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1881 Ninth Street, Suite 201
Boulder, Colorado 80302

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EPA-2427

Rona
Birnbaum/DC/USEPA/US
11/30/2009 12:41 PM

To Ben DeAngelo, Jason Samenow
cc William Perkins, Lesley Jantarasami, Erin Birgfeld
bcc

Subject fact sheet for OPA - quick look if you can

I made a few changes.

(b)(5) Deliberative

(b)(5) Deliberative

Fact Sheet for Final Findings 113009.doc

EPA-EF-003894

EPA-2428

Michael Kolian/DC/USEPA/US

11/30/2009 12:56 PM

To Ben DeAngelo

cc Lesley Jantarasami

bcc

Subject agriculture

Troyer et al., 2004

Note: this is referenced by 3347.3 Chamber in the volume. It is exclusively on breeding methods (adaptation). Our response should acknowledge this.

Abstract:

Understanding the history of a crop helps plant breeders select. This paper supplements and corrects *Background of U.S. Hybrid Corn (Zea mays L., Crop Sci. 39:601–626)*. I explain which open-pollinated cultivars and landmark inbreds persisted into today's hybrids and attempt to explain how and why. I briefly discuss human (artificial) selection, natural selection, and food production. Pedigree background frequencies from 33 elite, 1990s era inbreds directly estimate about 40% of U.S. hybrid corn hectarage and indirectly estimate the rest. I've searched historical records to trace the succession of cultivars and inbreds. Reid Yellow Dent is 51% of the documented U.S. hybrid corn background (Iodent Reid, 13%; Troyer Reid, 12%; Osterland Reid, 11%; Stiff Stalk Synthetic, 8%; Reid per se, 4%; and Funk Reid, 3%). Minnesota 13 is 13%, Lancaster Sure Crop is 13%, Northwestern Dent is 5%, and Leaming Corn is 5%. Five widely adapted, century-old, open-pollinated cultivars surpassed in use tens of thousands of genetically divergent cultivars to account for 87% of the known background of today's U.S. hybrid corn. Adaptedness mattered; U.S. corn breeders are adapting a tropical crop to a temperate climate. New, diverse background sources will probably be better adapted to longer daylengths, cooler minimum temperatures, drought, shorter seasons, and improved crop production practices. Selecting for adaptation to these conditions and to improved agronomic production practices will continue to increase yield. Traditional corn breeding methods will continue to accommodate climate change. Plant breeding and crop production research provides plentiful food in the USA.



370_troyer_2004.pdf

EPA-EF-003895

REVIEW & INTERPRETATION

Background of U.S. Hybrid Corn II: Breeding, Climate, and Food

A. Forrest Troyer*

ABSTRACT

Understanding the history of a crop helps plant breeders select. This paper supplements and corrects *Background of U.S. Hybrid Corn* (*Zea mays* L., *Crop Sci.* 39:601–626). I explain which open-pollinated cultivars and landmark inbreds persisted into today's hybrids and attempt to explain how and why. I briefly discuss human (artificial) selection, natural selection, and food production. Pedigree background frequencies from 33 elite, 1990s era inbreds directly estimate about 40% of U.S. hybrid corn hectareage and indirectly estimate the rest. I've searched historical records to trace the succession of cultivars and inbreds. Reid Yellow Dent is 51% of the documented U.S. hybrid corn background (Iodent Reid, 13%; Troyer Reid, 12%; Osterland Reid, 11%; Stiff Stalk Synthetic, 8%; Reid per se, 4%; and Funk Reid, 3%). Minnesota 13 is 13%, Lancaster Sure Crop is 13%, Northwestern Dent is 5%, and Leaming Corn is 5%. Five widely adapted, century-old, open-pollinated cultivars surpassed in use tens of thousands of genetically divergent cultivars to account for 87% of the known background of today's U.S. hybrid corn. Adaptedness mattered; U.S. corn breeders are adapting a tropical crop to a temperate climate. New, diverse background sources will probably be better adapted to longer daylengths, cooler minimum temperatures, drought, shorter seasons, and improved crop production practices. Selecting for adaptation to these conditions and to improved agronomic production practices will continue to increase yield. Traditional corn breeding methods will continue to accommodate climate change. Plant breeding and crop production research provides plentiful food in the USA.

When the new breed has spread widely, it gives rise to new strains and sub breeds, And the best of these succeed and spread, supplanting other and older breeds; And so always onwards in the march of improvement.

—Charles Darwin 1868

DARWIN (1859), in *The Origin of Species*, notes the association of wide adaptedness with much taxonomic subdivision. He states that this association occurs because the large area occupied by the widely adapted taxonomic division necessarily contains many environmental or man-made niches where either natural selection or human (artificial) selection causes the formation of subdivisions. Darwin was well aware of the importance of time (how long) and of space (where) to evolution; transformation in time deals with changes in adaptability, as when a species acquires new characteristics. Mayr (1997) states evolutionary effects usually answer “why” questions determined by inference from historical narrative.

Development and sale of open-pollinated cultivars emphasized local adaptation due to natural selection,

but some open-pollinated cultivars were popular and widely grown due to human selection. Hybrids eliminated much of the justification for local adaptation; where the seed was developed and produced no longer greatly mattered. Successful, research-oriented, hybrid seed corn companies grew larger by selling more widely adapted hybrids (Troyer, 1996). Selection for widely adapted hybrids ultimately favored germplasm from the more popular, widely grown open-pollinated cultivars containing more genes for adaptedness (Allard, 1988; Vladutu et al., 1999; Tuberosa and Phillips, 2002) to the U.S. Corn Belt.

METHODS

Pedigree background frequencies indicate how often particular ancestor inbreds are represented in the lineage of descendant inbreds. Frequencies refer to parental background only; they are not weighted by hybrid popularity. I developed the first U.S. hybrid corn background frequency bar graph with the gracious help of Dr. O.S. Smith (Smith et al., 1990, Troyer, 1994). Cultivar percentage is the sum for that cultivar across inbreds divided by the total number of background frequencies in the study. The calculations assume equal contribution from each parent at each generation. To avoid duplication and confusion, I have grouped related cultivars to the oldest common precursor with open-pollinated cultivars above and with appropriate, first-cycle, public inbred(s) below the line in Fig. 1. For example, first-cycle Iowa inbred I205 is from Iodent Reid cultivar from which present-day Iodent germplasm evolved. Another example, second-cycle Ohio inbred OH43 traces back to Richey Lancaster through Ohio inbred OH40B and to Northwestern dent through Minnesota inbred A48. See Troyer (1999, 2004) for more information on the background of popular and persistent inbreds.

Past popularity helps, but does not guarantee persistence of background. Formerly popular Missouri inbred MO17 was replaced by closely related Holden inbred LH51. But neither left a popular, related inbred to take its place. Undoubtedly, their poor cold test germination, both per se and in hybrids, was a factor leading to their demise. With the additional, previous demise of Wisconsin inbred W64A, Krug cultivar no longer persists. Krug's presence depended on inbred 187-2 in MO17 and in W64A backgrounds. Inbred MO17 was replaced by Holden LH51 in about 1985, which was replaced by Holden LH123 in about 1995. Holden LH123 was developed from Pioneer brand hybrid 3535.

All companies started with the same public inbreds, and surviving companies self-pollinated superior competitor hybrids to develop newer inbreds. The MBS 2002 Genetic Handbook of current inbreds lists Pioneer brand hybrids (including inbred LH123 from Pioneer brand hybrid 3535) in the background of 157 inbreds, and lists only seven inbreds from other company's hybrids (Brayton, 2002). Why so many Pioneer brand hybrids? Pioneer Hi-Bred market share increased from 22% in 1973 to 44% in 1996 (Pioneer Hi-Bred International, 1997). If the goal is to increase market share, it is logical to

611 Joanne Lane, DeKalb, IL 60115. Received 25 May 2003. *Corresponding author (atroyer@uiuc.edu).

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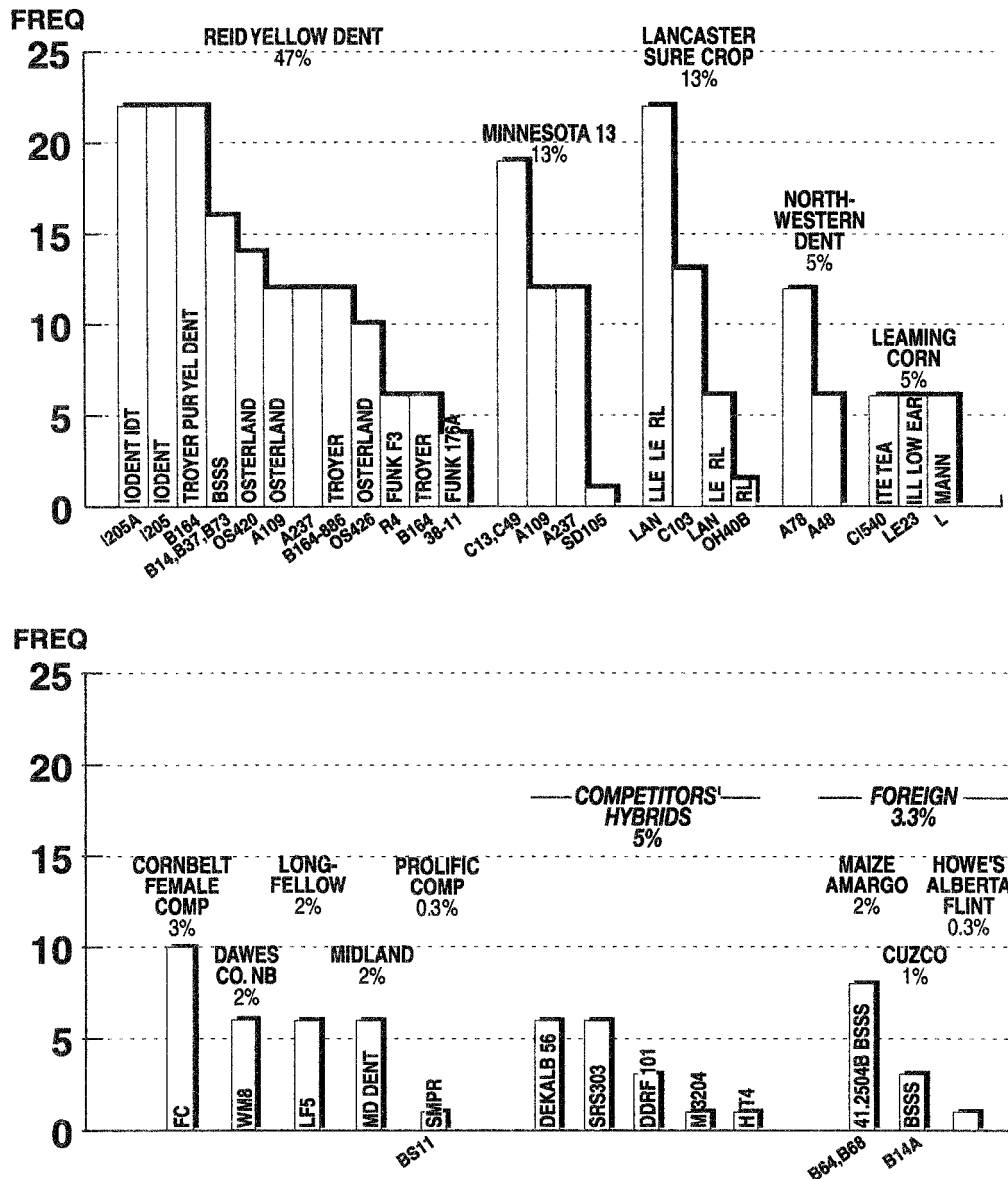


Fig. 1. Background of U.S. hybrid corn. Pedigree background frequencies for 33 Pioneer Hi-Bred International elite proprietary inbreds with parental background above and with publicly available representatives below; adapted from Smith et al. (1990).

use breeding material (commercial hybrids) that increased market share. Product performance is heritable. Since 1970, Pioneer hybrids do not contain cytoplasmic male sterility that would complicate their use as breeding material. Former Chairman and President of Pioneer Hi-Bred International twice opined that developing inbreds from competitors' commercial hybrids was all right in a speech about germplasm ownership to the American Seed Trade Association (Brown, 1984).

Selection for widely adapted hybrids causes the background to resemble Fig. 1. A myriad of corn germplasm entities exist (Labate et al., 2003), and many are used in small amounts (<1%). In 1940, thousands of U.S. seed corn companies existed, but only about 300 have survived. Iowa went from 500 hybrid seed corn companies in 1940 to 100 in 1957 (Johnson, 1957) to 28 in 1997 (Troyer, 2000). Much noncompetitive germplasm left with noncompetitive companies. In the 1970s, breeding strategy changed from finding new hybrids among many inbreds to developing fewer, but more widely adapted

inbreds, thus fewer backgrounds (Troyer, 1996). I believe Fig. 1 closely represents the present-day background of U.S. hybrid corn as a group. I have searched in vain for other background sources that exceed 1% (324 000 ha, 800 000 acres, or 250 000 bags of hybrid seed) of annual, present-day U.S. corn production.

I've searched historical records to trace the succession of cultivars and inbreds. I've attempted to explain not only what open-pollinated cultivars and first-cycle landmark inbreds make up the background but also when, where, how, why, and by whom they were developed. This paper provides additional historical narratives of backgrounds, provides corrections to *Background of U.S. Hybrid Corn* (Troyer, 1999), and briefly discusses human (artificial) selection, natural selection, and food production. I present additional background results generally from greater to lesser amounts under germplasm headings like those in Fig. 1. Germplasm designation in all-capital letters imitates Smith et al. (1990), Troyer (1999), and Fig. 1 of this paper, indicating the same identical germplasm.

RESULTS

REID YELLOW DENT

The phrase PUR YEL DENT, Purdue Yellow Dent, Troyer 9-1, and Duddleston's 461 (Crabb, 1948) are synonyms for S₂ or S₃ material from Troyer Reid. Purdue Yellow Dent was Henry A. Wallace's name for Duddleston's 461, which he acquired from Dr. Hoffer at Purdue in 1924 (Wallace, 1925, Crabb, 1948). He traded it and Pioneer inbred B164 to Dr. H.K. Hayes for Minnesota inbreds C11 and C14. Ben Duddleston at Purdue and Raymond Baker at Pioneer Hi-Bred developed inbred B164 from Duddleston's 461. Minnesota inbred A25 was also developed from Purdue Yellow Dent (Troyer Reid). The exchange of seed was made at a political rally Wallace participated in at St. Paul, MN, in 1930 (R.F. Baker, 1990, personal communication; Jenkins, 1936). I have moved the phrase PUR YEL DENT to the TROYER bar for Pioneer/Minnesota inbred B164 under Reid Yellow Dent in Fig. 1.

The original and improved strains of Reid Yellow Dent and their known background percentages are as follows: IODENT REID, 13%; TROYER REID, 12%; OSTERLAND REID, 11%; BSSS (Stiff Stalk Synthetic also including Iowa inbreds B14A, B64, and B68 shown under FOREIGN in Fig. 1), 8%; REID YELLOW DENT per se, 4%; FUNK REID F3 (Illinois inbred R4), nearly 2%; and FUNK STRAIN 176A (Indiana inbred 38-11) is slightly >1% of the documented U.S. hybrid corn background. Reid Yellow Dent totals 51% of the documented U.S. hybrid corn background (Fig. 1).

IODENT REID

Troyer (1999) describes Iodent Reid and its derivatives in some detail. A newer finding indicates Lindstrom LE (Long Ear) in Modern Iodent Inbreds and in Early Iodent Inbreds is Richey Lancaster inbred LAN (see LANCASTER SURECROP in this paper). The amount of known Iodent Reid in U.S. hybrid corn background stays the same, but the backgrounds of Iodent Reid and Lancaster Surecrop and the amount of Lancaster Surecrop in the background of known U.S. hybrid corn change (Fig. 1). A brief review of Iodent Reid follows:

Iodent is an abbreviation of Iowa Experiment Station Reid Yellow Dent. Perry Holden brought Reid Yellow Dent to Iowa from Bloomington and from Taylorville, IL (Troyer, 2004). It was a full-season corn for southern Iowa. He and Iowa State College spread Reid Yellow Dent throughout Iowa beginning in 1902. Prof. Lyman C. Burnett of Iowa State College used the ear-to-row method to select for earliness and yield in Reid Yellow Dent from 1909 to 1922 to develop Iodent Reid. Dr. Jenkins started inbreeding Iodent Reid at Iowa State College in 1922. He separated inbreds IDT and I205 during inbreeding (probably at S₃). Dr. Ernest W. Lindstrom finished IDT (also known as I205A). See Fig. 1 (Troyer, 1999).

Modern Iodent Inbreds were developed by Raymond Baker at Johnston, IA. He used hybrid B164 by LE as the nonrecurrent source of longer ears in part of a 16 ha (40 acres) detasseled field to make seed that was 87.5% Iodent Reid in 1942. I believe Lindstrom LE was

in fact inbred LAN from Lancaster Surecrop (Lindstrom, 1931). This eliminates Lindstrom LE and increases Lancaster Surecrop as known backgrounds in Fig. 1. Mr. Baker selected for ear length at harvest, using ears of the male as comparative checks. He kept fewer than 200 ears from the B164 × LE nonrecurrent portion of the field. These cycle two selections resulted in three very important commercial inbreds (R.F. Baker, 1992, personal communication; Troyer, 1999).

Early Iodent Inbreds resulted from materials that Mr. Baker and I started at Mankato, MN, in 1958. My objective was to develop earlier versions of Baker's Modern Iodent Inbreds (adapted in south-central Iowa) using the Rinke method (Rinke and Sentz, 1961). Mr. Baker chose one early Pioneer inbred with Iodent Reid in its background, and I chose an early hybrid A509/A556 (adapted in south-central Minnesota) as a nonrecurrent donor parent. Minnesota inbred A509 has inbreds A78 (Northwestern Dent) and A109 (Osterland Reid) in its background. Inbred A556 has inbreds B164 (Troyer Reid) and A237 (Reid Yellow Dent) in its background. These three early inbreds each contributed excellent yield and very good stalk strength to their hybrids. I did the selection at Mankato using twice-normal plant densities and nitrogen fertilizer. I typically grew 1000 to 1200 plants of each segregating population and chose the earlier-flowering 10 or 12 plants (1%) to self, to backcross, or to sib mate. At harvest, the best ears from the best plants were selected. These cycle three selections were the sole background of several very important commercial inbreds during the 1970s and 1980s (Troyer, 1999).

Iodent Reid accounts for 13% of the documented U.S. hybrid corn background tracing back to Iowa inbred lines I205 and IDT (also known as I205A) (Coors et al., 1993; Fig. 1).

BSSS STIFF STALK SYNTHETIC

Dr. Sprague synthesized Stiff Stalk Synthetic from 1932 to 1934 at Arlington Farms, VA, where the Pentagon now stands. He crossed 16 inbreds, including two that were second-cycle inbreds, so a total of 20 parent inbreds were involved (Table 1; Hallauer et al., 1983). The inbreds had yellow endosperm and above-average stalk quality. Fifteen of the 20 inbred-parent slots (75%) trace back to improved strains of Reid Yellow Dent (six from Troyer Reid, three from Iodent Reid, two from Funk Strain 176A, and one each from Black Reid, Krug Reid, Osterland Reid, and Walden Reid). The other five inbreds include one each from Illinois Two Ear (from Chester Leaming), Illinois High Yield (from an indistinguishable cultivar), Illinois Low Ear (from Chester Leaming), Eichenberger Clarage, and Kansas Sunflower (ILL12 from Kansas Sunflower; D.R. Sywasink, 2003, personal communication). Dr. M.T. Jenkins developed seven of the inbreds at Iowa State, and Ben Duddleston developed four of the inbreds from Troyer Reid that fill six of the 20 inbred-parent slots at Purdue.

LANCASTER SURE CROP

Dr. Lindstrom at Iowa State developed LE or LLE (Lindstrom Long Ear), which is the source of ear length

Table 1. Inbred lines included in the synthesis of Iowa Stiff Stalk Synthetic (Sprague, 1946; Stucker and Hallauer, 1992).

Line	Station	Source	Originator
A3G-3-1-3	Iowa	BL345B × I159	Dr. M.T. Jenkins
BL345B	Iowa	Black Reid	Dr. M.T. Jenkins
I159	Iowa	Iodent Reid	Dr. M.T. Jenkins
CI187-2†	Pfister	Krug Reid × Gold Mine	Lester Pfister
CI540†	BPI‡	Chester Leaming > Ill. Two Ear > TEA	Henry A. Wallace
CI617†	BPI‡	Funk Reid > Strain 176A	Dr. F.D. Richey
F1B1-7-1	Purdue	B2 × FE	Ralph St. John
B2	Purdue	Troyer Reid > Late Butler	Ben Duddlestone
FE	Purdue	Troyer Reid > Early	Ben Duddlestone
I159	Iowa	Iodent Reid	Dr. M.T. Jenkins
I224	Iowa	Iodent Reid	Dr. M.T. Jenkins
OS420	Iowa	Osterland Reid	Dr. M.T. Jenkins
WD456	Iowa	Walden Reid	Dr. M.T. Jenkins
ILL.12E	Illinois	Kansas Sunflower > ILL.12	Dr. J.R. Holbert
HY	Kansas	Illinois High Yield	Dr. A.M. Brunson
461-3	Purdue	Troyer Reid	Ben Duddlestone
AH83	Purdue	Funk Reid > Strain 176A	Ben Duddlestone
TR	Purdue	Troyer Reid	Ben Duddlestone
LE23	Illinois	Chester Leaming > Illinois Low Ear	Dr. L.H. Smith
OH3167B	Ohio	Eichenberger Clarage	Glen Stringfield

† Cereal investigations.

‡ Bureau of Plant Industry, Arlington Farms, Virginia.

in Modern Iodent Inbreds developed by Raymond Baker at Johnston, IA, in the 1940s (Hallauer and Miranda, 1981; Troyer, 1999). Lindstrom (1931) published a paper on *Prepotency of inbred sires on commercial corn cultivars*. Lindstrom states, “LAN inbred sire produced significant yield increases over the cultivar Krug in the Iowa Corn Yield Test. The LAN inbred sired a progeny with characteristically long, medium-slender ears with 12 to 14 rows and kernels uniformly shallow-dented. Barren stalks were noticeably reduced.” This description fits one of the Modern Iodent Inbreds and multiple Early Iodent Inbreds. This is the only information related to ear length in the extensive Lindstrom materials in the Iowa State University Archives. Inbred LA (Jenkins, 1936) is probably a synonym for inbred LAN, which would be a sister to the Richey Lancaster Iowa inbreds L289, L304A, and L317 developed by Dr. Jenkins at Iowa State.

The supreme lesson in *Background of U.S. hybrid corn* is that adaptedness was critical to popularity and to persistence of germplasm (Troyer, 1999). The Richey Lancaster cultivar would more likely persist as 8% of U.S. hybrid corn background than would a long-eared, corn-show oddity. I have added LAN below the line and RL to the LLE and LE bars now placed under Lancaster Sure Crop in Fig. 1. Richey Lancaster is nearly 9% of known U.S. hybrid corn background through Iowa inbred LAN and Ohio inbred OH40B. Lancaster Sure Crop per se is a little >4% of known U.S. hybrid corn background through Connecticut inbred C103. Lancaster Sure Crop in total is 13% of the documented U.S. hybrid corn background (Fig. 1).

Earnest W. Lindstrom

Earnest W. Lindstrom, academician and codeveloper with Dr. Jenkins of persistent Iowa inbreds IDT and LAN (LLE), was born of Swedish immigrant parents in Chicago in 1891. He received an A.B. degree from the University of Wisconsin in 1914, and earned the Ph.D. degree at Nebraska and Cornell University under

Dr. R.A. Emerson in 1917. In World War I, he was a U.S. army officer (bomber ferry pilot) in France. Dr. Lindstrom returned to Wisconsin, joined the faculty of the Genetics Department, and did the first corn inbreeding there in 1920. In 1922, he joined the Iowa State faculty, where he became professor and head of the Genetics Department and vice-dean of the Graduate College. His genetics seminar was one of the most popular seminars on campus. He was a bulwark of sound counsel to many commercial hybrid corn breeders.

Dr. Lindstrom was graduate program advisor to Merle Jenkins, Bruce Griffing, Paul Harvey, Boyd Shank, and others. He routinely received precursors (probably at S₃) of Dr. Jenkins' Iowa State inbreds. He finished inbreds IDT from Iodent Reid and LAN from Richey Lancaster. Both were important to Modern Iodent Inbreds (Lindstrom, 1931). Dr. Lindstrom published some 50 papers. He was a Fellow of the AAAS and a member of the Botanical Society of America, American Society of Naturalists, and the Genetics Society of America, where he served terms as Secretary, Vice President, and President (Lush, 1949).

LEAMING CORN

Henry A. Wallace developed inbred TEA from Illinois Two Ear (ITE) cultivar at Des Moines, IA, in about 1925. He later gave seed to Dr. F.D. Richey, who named it CI540 and to Dr. M.T. Jenkins, who named it Iowa ITE701 (Baker, 1984). In Jenkins' 1927 Iowa State Nursery Book row ITE 701, H.A. Wallace is listed as the source (A.R. Hallauer, 2002, personal communication). Illinois Two Ear cultivar had the highest 9-yr average yield at Urbana, IL, in 1927 (Mumford, 1928). Illinois Two Ear, a selection from Chester Leaming, was begun by Dr. Louie Smith, followed by Dr. C.M. Woodworth and Dr. F.L. Winter at the University of Illinois. The percentage of two-ear stalks started at 6.7% and was increased to as high as 85%, although the results were variable. It was recommended for silage because of difficult hand harvest (Mumford, 1925). Inbreds TEA,

CI540, and Iowa ITE701 are synonyms. I have kept CI540 below the line and added TEA to the bar now placed under LEAMING. Inbred TEA (CI540) is also a component of Stiff Stalk Synthetic (Table 1).

Chester Leaming is nearly 4% of known U.S. hybrid corn background [half through inbred TEA (CI540) developed by Henry A. Wallace and half through inbred LE23 developed by Dr. Louie Smith at Illinois]. Mann Leaming is nearly 2% of known U.S. hybrid corn background through Illinois inbred L developed by Dr. Jim Holbert at Bloomington, IL. Ohio inbred OH07 developed by Glen Stringfield at Wooster, OH, is nearly 4% of known U.S. hybrid corn background through Pioneer inbred TEA (CI540) and Illinois inbred L (Fig. 1). Improved Leaming Corns, in total, are >5% of the documented U.S. hybrid corn background (Fig. 1).

Glen H. Stringfield

Mr. Glen H. Stringfield, developer of popular and persistent inbreds OH07 and OH43, was born (1893) and raised in extreme southeastern Nebraska near the small town of Stella. He graduated at the top of his baccalaureate class in 1924. He studied with Dr. T.A. Kiesselbach at Nebraska, joined the USDA staff at Ohio, and did graduate work for an M.S. degree at Ohio State in 1927, then a year of graduate work at Wisconsin before returning to Ohio. He developed popular Ohio inbreds OH07, OH26, OH43, and OH51A, among others. He developed Ohio inbred OH3167B in popular Stiff Stalk Synthetic. He retired in 1959 and joined DEKALB AgResearch, where he codeveloped popular hybrid DEKALB XL45, among others. He retired again in 1966, but continued consulting. He was a member of Alpha Zeta Agricultural Honorary and Sigma Xi Research Fraternity and a Fellow of the American Society of Agronomy and of the American Genetics Society. He died in 1975.

CORN BELT FEMALE COMPOSITE

Walter Vandeventer of Pioneer Hi-Bred at Princeton, IN, began work on Corn Belt Female Composite (FC) in 1951. He grew 22 proprietary inbreds used in female single-cross parents of Pioneer Hi-Bred commercial double crosses, and 46 mostly S_3 inbreds self-pollinated from crosses of the 22 proprietary inbreds in an isolated plot. Some entries were repeated up to eight times in the plot depending on degree of favor at the time. The background of the materials was predominantly Reid Yellow Dent, but Jarvis Golden Prolific, John Havel Long Ear, Krug Reid, Lancaster Sure Crop, and Midland Yellow Dent were also represented.

In 1952, seed from each 1951 entry was bulked in equal amounts and planted in a 0.2-ha (0.5-acre) isolated plot. Vandeventer selected plants for favorable agronomic traits. Selected ears were shelled, selected for kernel appearance, and tested for cold germination to further select for improved germination. In 1953, the selected ears from 1952 were yield tested per se, and remnant seed from the best performing ear-entries was used for breeding material by Vandeventer. The particular inbred from these materials that influences back-

ground was unusually low eared (Pioneer Hi-Bred International, 1952, 1953; B. Ambrose, 2001, personal communication). Female Composite is 3% of the documented U.S. hybrid corn background (Fig. 1).

DAWES CO., NB

Karl Kahl, Pioneer Hi-Bred district sales manager, collected seed of Dawes Co., NB open-pollinated cultivar from a farm near Mount Horeb, which is near Madison, WI. The farmer had brought the seed from Dawes County in extreme northwestern Nebraska. Karl delivered the seed to Murray Brawner at Princeton, IL, in the early 1960s. The cultivar was about 100 to 105 RM (days relative maturity) and had unusually soft grain texture. The endosperm type and kernel shape were intermediate between typical dent and gourd seed. It was another source of fertility restorer (Rf1) for Texas male sterile cytoplasm. Nebraska inbred N4 was developed from Dawes Co. Dent. Earl Collins of Pioneer Hi-Bred at Princeton, IL, developed the soft-textured, high-yielding Pioneer inbred, WM8, from Dawes Co. Dent, which is nearly 2% of the documented U.S. hybrid corn background (M. Brawner, 2001, personal communication; Fig. 1).

LONGFELLOW

Longfellow Flint originated near Byfield, MA, which is the location of the Longfellow family's original homestead. Mr. Henry Wadsworth Longfellow, poet and academician, left records of Longfellow Flint using the possessive case to signify the cultivar originated with him (Galinat, 1991). Longfellow was America's favorite writer in the 19th century. Among other styles, he wrote popular narrative poems. In *The Song of Hiawatha, Part 13 Blessing of the cornfields*, Longfellow uses the words corn and maize 18 times. He knew something about corn. Galinat (1991) states Longfellow Flint seems to be a yellow endosperm form of Rhode Island White Flint. Ears are 28 cm (11 in) long, 3.7 cm (1.5 in) in diameter, and have eight kernel rows on a white cob. Kernels are medium size, medium depth, and yellow to dark yellow in color. Stalks are about 2.1 m (7 ft) in height, medium diameter, and have few tillers. It flowers 70 d after emergence. Longfellow flint was recommended by the Maine, Massachusetts, Michigan, and New Hampshire Agricultural Experiment Stations in 1936 (Jenkins, 1936).

Perry Collins developed Pioneer inbred LF5 from Longfellow Flint at Algona, IA. He used the pedigree method, and selected for strong silk emergence at flowering and for other agronomic traits. The inbred was popular in the late 1950s. It contributed earliness, loose husks, yield, and harder kernel texture to 95 and 100 RM double-cross hybrids. Longfellow Flint cultivar is nearly 2% of the documented U.S. hybrid corn background (Fig. 1).

MIDLAND

Raymond Baker of Pioneer Hi-Bred observed the fast acceptance of hybrid corn in 1937 and asked Murray

Brawner to obtain and increase seed lots of the more popular open-pollinated cultivars for inbreeding. Murray increased about 20 Agricultural Experiment Station recommended cultivars at Princeton, IL, in 1938. One of the cultivars was Midland, or MD DENT, Midland Yellow Dent, which was recommended by the Kansas, Missouri, and Oklahoma Agricultural Experiment Stations (Jenkins, 1936). Because of its late maturity, seed from the Midland increase was sent to Bill Landgren at Poseyville in extreme southern Indiana for inbreeding (M. Brawner, 2001, personal communication).

Midland Yellow Dent was developed from a locally grown unnamed yellow corn cultivar by Mr. O.A. Rhodes of Columbus, KS, who selected for a certain plant and ear type. It was grown on his farm since 1894 and first attracted the attention of the Kansas Experiment Station in 1912. Midland Yellow Dent is described as a medium-late cultivar, requiring 120 to 125 d to mature. Ears are 24 to 25 cm (9.5 to 10 in) long and 17.8 cm (7 in) in circumference, tapering somewhat, with butts fairly well rounded, and tips usually well filled. Kernels are rather narrow and thick in proportion to their width, medium depth, and somewhat rounded at the crown. Indentation varies from a dimple to a wrinkle. Stalks are 2.4 to 2.7 m (8 to 9 ft) in height. It was superior to all other yellow cultivars in southeastern Kansas. Midland Yellow Dent usually produces corn if any is produced in Cherokee county (Anonymous, 1929).

The critical 2 yr in inbred development were S_1 and S_2 dry-land observation tests near Beatrice, NE, where the Midland entries stayed green and made corn. They were virtually the only survivors. The resulting inbred also had excellent root strength and poor cold test germination. It was in nearly all Pioneer 120 RM double crosses (B. Ambrose, S. Jensen, and B. Seifert, 2001, personal communication). Bill Landgren developed the Midland inbred that is nearly 2% of the documented U.S. hybrid corn background (Fig. 1).

PROLIFIC COMPOSITE SMPR

Cultivar SMPR, under Prolific Composite, is a newer source of genetic diversity (Smith et al., 1999). In SMPR, the *S* stands for stress selection; the *M* for Mankato, MN; and the *PR* for Prolific Composite. Dr. W.L. Brown developed Prolific Composite from nine prolific cultivars and two semiprofitic hybrids. Argentine Pop and Mexican June cultivars are tropical; Carroway Prolific, Clark Yellow Dent, Jarvis Golden Prolific, Mosby Prolific, Neal Paymaster, Turkish Prolific Pop, and Whatley Prolific are southern, temperate cultivars. The two hybrids were adapted to central Iowa; the earliest inbred in the hybrids was a Pioneer/Minnesota inbred B164 derivative (Troyer and Brown, 1976, Troyer and Larkins, 1985).

Selection to develop SMPR was at twice normal plant density with 136 kg ha⁻¹ (300 lb acre⁻¹) of actual nitrogen at 44° N lat. I selected 11 cycles for earliness (5%) with the last six cycles also selected for stalk quality (36%)(Troyer and Larkins, 1985). The suffix S5 in SMPRS5 stands for the fifth cycle of stalk quality selec-

tion with 10 cycles of selection for earliness (Smith et al., 1999). Compared with Prolific Composite (also known as Iowa synthetic BS11), SMPR has 150 g kg⁻¹ (15 points) lower grain moisture at harvest, 13 d earlier flowering, 30.7 cm (1 ft) shorter plant height, 3 d less silk delay, and 1380 kg ha⁻¹ (22 bushels acre⁻¹) more yield at normal plant densities. SMPR grows fast, flowers early, dries fast, and tolerates stress. SMPR germplasm was in two popular, early (100 to 105RM) Pioneer brand hybrids. Pioneer brand hybrid 3737 was their second most popular corn hybrid for 2 yr (Pioneer Hi-Bred International, 1987, 1988).

The two Iowa hybrids in Prolific Composite provided genes for adaptedness. Natural selection occurred under cooler temperatures, longer days, and shorter seasons. Materials were prolific, which helped reduce barrenness at higher plant densities. Human selection was for crowding and drought tolerance, for earlier flowering, and for better stalk quality. The materials had rare, needed traits for which the method selected. SMPR is about 0.3% of the documented U.S. hybrid corn background (Fig. 1).

COMPETITORS' HYBRIDS DEKALB 56

Charlie Gunn of Dekalb AgResearch developed hybrid Dekalb 56, first grown commercially in 1945. Its two-digit number indicated adaptation to Maturity Zone 0, the early corn company's earliest growing area. It dried fast, yielded well, and stood well. This most popular hybrid for Zone 0 sold more than 50 000 bags yr⁻¹ for 8 yr in its 23-yr period and totaled about 850 000 bags. Dekalb 56 contained one inbred each from Golden King, Osterland Reid, and Western Plowman cultivars (W. Holdridge, 1993, personal communication). The fourth inbred (no. 7), with unknown background to DEKALB, was obtained from Dr. Jim Holbert of Funk Brothers Seed Company. Its background was Krug Reid (D.R. Sywassink, 2001, personal communication). Perry Collins of Pioneer Hi-Bred at Algona, IA, self-pollinated DEKALB 56 to develop a popular inbred that is nearly 2% of the documented U.S. hybrid corn background (Fig. 1).

COMPETITORS' HYBRIDS SRS303

Cultivar SRS 303 was a newer source of genetic diversity in the 1980s (Smith et al., 1999). Very little is known about the background of SRS 303. I am told it was a hybrid that stood well in central Indiana and Ohio in a year when severe stalk rot epidemics and widespread down corn occurred in the early 1960s (J.H. Weatherspoon, 1970, personal communication). SRS 303 descendants account for nearly 2% of the documented U.S. hybrid corn background (Fig. 1).

COMPETITORS' HYBRIDS DDRF101

Steve Noble of Pioneer Hi-Bred at Johnston, IA, self pollinated competitors' hybrid Dockendorf 101 (DDRF101) that led to an inbred in 1960. Dockendorf 101 was tested from 1955 through 1961 in the Iowa Corn Yield Test, where it showed average performance. The

new inbred had unusual ability in hybrids to adjust its ear size to a wide range of plant densities. Competitor hybrid DDRF 101 is about 1% of U.S. hybrid corn background (Fig. 1; W.B. Ambrose, 2001, personal communication).

COMPETITORS' HYBRIDS M3204

Bob Seifert of Pioneer Hi-Bred at Union City, TN, crossed Mississippi double-cross hybrid 204 (M3204) to Connecticut inbred C103 for breeding material in 1953. Mississippi hybrid 204, (MP448/T204) (MP424/GT112), was a large, midseason, yellow endosperm hybrid adapted to central Mississippi. It was developed by Dr. Robert Eckhardt, USDA breeder at Mississippi State. The hybrid's background by inbred is 1/4 Yellow Jelliscorse; 1/8 Florida Laguna, 1/16 Reid Yellow Dent, 1/16 Clarage; 1/4 Kyle Long Season; and 1/8 Whatley Prolific/Creole Yellow Flint, 1/16 Cuban Yellow Flint, and 1/16 Garrick Prolific, respectively (P. Williams and N. Widstrom, 2002, personal communication).

Seifert's objective was to improve the adaptation of C103 to the South. He developed a 'C103 type' inbred that yielded well in hybrids even when stressed by lack of moisture or sunlight. Competitor hybrid M3204 is about 0.3% of the documented U.S. hybrid corn background (Fig. 1).

COMPETITORS' HYBRIDS HT4

After World War II, Holland (the Netherlands) looked at corn as a possible new crop. Imported corn was expensive. News of the success of hybrid corn from the USA was exciting. The D.J. Van der Have Company joined the Holland food industry in starting a foundation for the promotion of corn. As a first step, Ton Hendriksen of D.J. Van Der Have visited the USA on a fact-finding tour in 1949. He visited universities to obtain breeding sources, and also received top-cross seed for testing in Holland. Ton also visited Pioneer Hi-Bred at Johnston, IA, where an alliance for seed research and sales in Europe was eventually organized.

A 5-ha (12-acre) corn nursery was established near Rilland, Holland, where inbred HT4 was developed. Inbred HT4's expanded name is HaTo 4. *Ha* stands for Van der Have, and *To* stands for top cross. One of the top cross entries obtained on Ton's tour of universities was the source of inbred HT4. We do not yet know its pedigree. Inbred HT4 test crosses were made at Pioneer Hi-Bred near Johnston, IA, then yield tested in Holland (F. de Wolff and D. Glas, 2001, personal communication). Curtis Norskog of Pioneer Hi-Bred at Willmar, MN, crossed Pioneer inbred HT4 to Minnesota inbred A509 and developed a popular inbred in the early 1970s. Inbred HT4 descendants are about 0.3% of the documented background of U.S. hybrid corn (Fig. 1).

FOREIGN HOWE'S ALBERTA FLINT

Howe's Alberta Flint (PI 214194) was a common corn grown in Alberta, Canada. Bill Landgren of Pioneer Hi-Bred at Willmar, MN, used it as a source of earliness

to adapt later inbreds to the northern U.S. Corn Belt. Howe's Alberta Flint ears are 15 to 18 cm (6 to 7 in) long with 8 to 10 kernel rows on white cobs. Kernel color is yellow. Plant height is 99 cm (40 in), and ear height is 20 cm (8 in). It flowers 39 d after emergence. Growth under cool conditions (spring vigor) is excellent. It is very susceptible to common smut, and is extremely early flowering, very short and tillers profusely. It often has two and sometimes three ears on the main stem and one ear on some tillers when grown at moderate densities (Troyer and Hallauer, 1968). Howe's Alberta Flint is about 0.3% of the documented U.S. hybrid corn background (Fig. 1).

DISCUSSION

Five popular, widely adapted, century-old cultivars account for 87% of the known background of today's U.S. hybrid corn (Fig. 1). Tens of thousands of corn cultivars are maintained by germplasm banks (Labate et al., 2003), and virtually all have been pollinated in an attempt to develop a useful inbred. Why did these five cultivars dominate? It was not due to early momentum because in 1936 many more locally grown than widely grown cultivars were parents of outstanding inbreds (Jenkins, 1936). Ninety-six open-pollinated cultivars were the parents of 367 different outstanding inbreds. Reid Yellow Dent, Minnesota 13, Lancaster Sure Crop, Northwestern Dent, and Leaming Corn were the parents of only 36 (11%), 27 (7%), 6 (2%), 9 (2%), and 5 (1%) outstanding inbreds, respectively, for 23% of total in 1936 (Jenkins, 1936; Troyer, 1999). They persisted.

Many breeders of corn inbreds wanted local adaptation, which had been important for open-pollinated cultivars. Some breeders chose rare (unpopular) cultivars, hoping in vain for more heterosis. Wellhausen (1956) touted Mexican corns to improve U.S. Corn Belt corn, and significant effort with Mexican corns followed. Among this miscellany, germplasm from the five popular, more widely adapted cultivars persisted and eventually prevailed at 87% of known background because of their adaptedness (Fig. 1). Quality of germplasm (better acclimated to the present environment) prevailed over genetic diversity of germplasm. We are improving the adaptedness of a tropical crop to the temperate U.S. Corn Belt climate.

What do these five open-pollinated cultivars have in common? They were popular and widely grown as cultivars. Jenkins (1936) lists about 375 recommendations for 181 open-pollinated cultivars from 48 states to average two states recommended per cultivar. One hundred twenty-two cultivars were recommended in only one state, 21 in two states, 12 in three states, nine in four states, and seven cultivars were recommended in five states. What about improved strains or extended families? Reid Yellow Dent goes from 21 to 26 recommendations (add Black, Funk, Osterland, Strain 176A, and Troyer). Leaming goes from seven to 11 (add Canada, Early, Improved, and Somerset). Northwestern Dent goes from nine to 12 (add parent Bloody Butcher in three states). Lancaster Sure Crop goes from five

to six (add Sure Crop) recommendations. These five popular cultivars were better adapted to the U.S. Corn Belt climate and more widely grown than lesser-recommended open-pollinated cultivars.

How popular were they? Reid Yellow Dent and its derivatives were once grown on 75% of U.S. Corn Belt acreage (Anonymous, 1930; Wing, 1923). In the late 1920s and early 1930s, white-endosperm corn hectareage was diminishing rapidly (lack of vitamin A for feed), and hybrid corn was still experimental. Jugenheimer (1955) states Reid Yellow Dent, developed in the last third of the nineteenth century, was highly productive, widely adapted, and extensively grown. It won Grand Champion 10 Ears at the World's Fair in Chicago in 1893. Leaming Corn was grown more than all other yellow-endosperm cultivars combined before Reid Yellow Dent was developed (Troyer, 1931). This would be >25% of the total in the last quarter of the 19th century when half the corn grown was white. Leaming Corn won a bronze medal at the World's Fair in Paris in 1878. Minnesota 13 was recommended in 15 states, and moved growing ear corn northward 80 km (50 miles) in the USA in a decade (Hays, 1904; Jenkins, 1936). North-western Dent was popular in northwestern USA (Idaho and Montana), northern USA (North Dakota, Minnesota, and Michigan), and at higher elevations (Arizona and Utah).

Natural selection and human (artificial) selection are effectively adapting the corn crop to the U.S. Corn Belt climate. Darwin (1859, 1868) devoted two chapters to natural selection in *Origin of Species*, and two chapters to human (artificial) selection in *Variation of plants and animals under domestication*. Darwin's principles of selection and adaptation (survival of the fittest) during open-pollinated corn's selection in the U.S. Corn Belt followed by the hybrid seed corn companies' goal to provide more widely adapted hybrids (more weather-proof, more dependable); readily explain the preeminence (87%) of the five popular, open-pollinated cultivars in the known background of U.S. hybrid corn (Troyer, 1996).

Human (Artificial) Selection

Corn is widely adapted, totally dependent on humans for survival, and easily mated during the day. These factors make corn the ideal crop for successful selection by humans. Transformation of the corn ear is governed by five major mapped genes (Doebley et al., 1990). As wild corn became domesticated, humans selected nonshattering, larger ears for easier harvest and storage. As the ears became larger, lack of seed dispersal caused the need for further domestication. Larger ears and domestication were mutually supportive. Movement from tropic to temperate areas required selection for earlier maturity. After European colonization and westward expansion, land ownership made land a limited resource, causing increased yield per unit area of land to become important. Seed corn people typically selected for more good ears in moderate plant densities as a way to obtain more good ears. Choice seed was sold on the ear; better ears commanded higher prices.

Single-eared plants were preferred for hand harvest. Human selection was for higher yield, lower kernel moisture for safer storage, and better standing ability (Troyer, 1999, 2004).

Scientific plant breeding began a century ago with recognition of the individual plant as the unit of selection and use of the progeny test (Hays, 1903; Troyer, 2003). The pedigree method (Hayes and Johnson, 1939) selects individual plants of known pedigree for desirable traits from two or more entities into one inbred. It is the workhorse of corn breeding. Outstanding, popular Iowa inbreds B14, B37, and B73 were developed by recurrent selection with early testing (Hallauer et al., 1983), which involves intercrossing superior segregates based on test-cross yields of unfinished inbreds. Richey (1945) accurately predicted the majority of yield improvements would be made by cumulative selection, which is the repeated use of the pedigree method using superior inbreds as source materials. It's a form of recurrent selection with late testing. It requires less time and less yield testing (less money) between successive improved inbreds than early testing methods (Troyer, 1990, 1996, 2000).

Because so much progress came from so few, so old, and so popular cultivars, adaptedness to the present conditions of life is evidently more important than genetic diversity to increase yields. As long as higher yield means more progeny (seeds) and means progeny more likely to survive to leave progeny, evolutionary biologists would surely agree. Natural selection and human (artificial) selection have increased adaptedness that increased yield. Again, U.S. corn breeders are adapting a tropical crop to a temperate environment.

What traits are critical for yield selection? The U.S. Corn Belt has longer daylengths, cooler minimum temperatures, more drought, and shorter seasons than southern Mexico (18°N lat), where corn originated. Successful new diverse background sources will exhibit adaptation to these needs. Selection for adaptation to these conditions and to improved agronomic production practices will continue to increase yield (Darwin, 1859, 1868; Troyer and Rosenbrook, 1983; Troyer, 1999, 2000).

Natural Selection

Charles Darwin and A.R. Wallace (Darwin and Wallace, 1858; Wallace, 1858) independently concluded that natural selection (sometimes described as survival of the fittest) was the chief cause of evolution of species after reading the Malthusian theory. Natural selection of wild corn was largely a matter of adaptation to environmental factors (daylength, temperature, and rainfall) for survival (Galinat 1977, 1988). Development and sale of open-pollinated cultivars emphasized local adaptation (natural selection). Buy local seed! An open-pollinated cultivar was necessarily widely adapted before it was widely grown. Its genes for adaptedness were garnered by natural selection based on climate and soils and by human (artificial) selection based on personal preference (Troyer, 1999, 2004).

Corn has adapted to many climates. Corn was first domesticated in 8000 to 5000 BC in tropical (18°N lat) south-central or southwestern Mexico (Goodman, 1988). During a 4000- to 7000-yr period, corn became adapted farther north to harsher temperate climates to reach what is now Arizona and New Mexico. Then, corn slowly worked its way north and east from river valley to river valley until reaching higher-rainfall areas. It reached St. Louis in about AD 200, southeastern USA in about AD 600, the Great Plains in about AD 700, and southern Ontario in about AD 1000. It became a food staple in the southeast USA in about AD 900 (Troyer, 2004). During American westward expansion, corn and the U.S. Corn Belt moved northwest. The top corn-producing states in 1838 were Tennessee, Kentucky, and Virginia, respectively. Forty years later, after selection of 750 newer, earlier flowering, more drought-tolerant cultivars, the top producing states were Iowa, Illinois, and Missouri (Montgomery, 1916). Corn adapted.

Is the U.S. Corn Belt climate changing? Great concern exists about the increase in global temperatures since 1900. Many atmospheric scientists believe the increase is linked to human-produced carbon dioxide (via fossil fuels) in the atmosphere. Carbon dioxide, methane, water vapor, and nitrous oxide trap heat within the earth's atmosphere and thereby produce warmer air temperatures. Ultraviolet rays from the sun penetrate the atmosphere, but infrared rays from the earth's surface cannot escape the atmosphere—the greenhouse effect (McGraw-Hill, 2002).

Since 1900, the amount of carbon dioxide and methane in the earth's atmosphere has increased 25%. During the same period, mean global temperatures have increased about 0.5°C (0.9°F). A rise in temperature is expected to alter global air and ocean circulation patterns, which will alter climates differently in different regions. Many species of mountain plants have shifted to higher elevations in the Swiss Alps at rates of up to 4 m (13 ft) per decade. In the USA, total precipitation has increased, but is delivered in fewer, more extreme events making floods (and possibly droughts) more likely (McGraw-Hill, 2002). Natural selection and human (artificial) selection will continue to be effective in adapting corn to changing climates.

Food Production

Science devoted a special issue to obesity (7 Feb. 2003, Vol. 299, no. 5608). The lead editorial states U.S. food is so overproduced and so overmarketed that most adults—of all ages, incomes, educational levels, and census categories—are overweight (Nestle, 2003). It appears our food intake is limited only by each individual's willpower. This is proof of the effectiveness of U.S. plant breeding and agronomic production research. Hallelujah! We have delayed the Malthusian prophesy another century.

Thomas Robert Malthus graduated with honors in mathematics from Cambridge in 1788. He took holy orders the same year, but avoided work as a clergyman because of a speech impediment. He became a history

of economics professor. He determined that human population increases in a geometrical ratio while food supply increases in an arithmetical ratio; therefore, wars or disease will need to reduce population unless number of children is limited. He became embroiled in utopian vs. pessimistic views of population increase. Malthus' first essay on population (Malthus, 1798) was 19 chapters and exceeded 50 000 words. It literally caused reduced spending on social welfare in England. Between visits to several countries to collect more data, he wrote a total of seven editions. With time, he softened some of his harshest conclusions, but still recommended checks on population (Encyclopædia Britannica, 1983; Himmelfarb, 1960). The Malthusian prophecy will be pertinent as long as people have children and eat food.

United States corn production has increased from zero about 3000 yr ago, to 25.4 million Mg [1 billion (1×10^9) bushels] annually in the 1870s, to 76 million Mg [3 billion (3×10^9) bushels] annually in the 1950s, to 150 million Mg [6 billion (6×10^9) bushels] annually in the 1970s, and to more than 229 million Mg [9 billion (9×10^9) bushels] annually for the past 7 yr. Since hybrid corn, average U.S. corn production has increased 176 million Mg [7 billion (7×10^9) bushels] while reducing total hectareage 20% because corn yields increased more than 6271 kg ha⁻¹ (100 bushels acre⁻¹; Fig. 2).

About 60% of U.S. corn is fed directly to livestock, about 20% is used for industrial purposes (e.g., wet milling, dry milling, ethanol production), and about 20% is exported. Another 10% of our corn is fed indirectly to livestock from by-products of industrial use. Corn has become the least expensive available source of starch because of higher corn yields per unit area. Corn is in increasing demand for industrial use (Troyer and Mascia, 1999). Other agronomic crops have also experienced higher yields through plant breeding and agronomic crop production research.

Nature (6 Feb. 2003) included a news feature entitled "A Dying Breed" with the headline "Public-Sector Research into Classical Crop Breeding is Withering, Supplanted by Sexier High-Tech Methods." But without breeders' expertise, molecular-genetic approaches might never bear fruit (Knight, 2003). The same fewer breeders trend is happening in commercial crop breeding. This has apparently already reduced food production. Our highest average U.S. corn yield, 8691 kg ha⁻¹ (138.6 bushels acre⁻¹), occurred in 1994 before transgenic corn hybrids. Herbicide-tolerant corn (not transgenic) was first grown in 1992. Transgenic, Bt, insect-resistant corn was grown on 202 429 ha (500 000 acres) in 1996. Adding herbicide tolerance and insect resistance traits delays or replaces adding genetic gain for yield by corn breeders.

Since 1950, the USA has never gone so long (8 yr) without an increase in record yield of corn (Fig. 2). The average interval between record U.S. average corn yields for this period (1950–1994) is 2.1 yr. This recent delay in record yield increase is probably because of more emphasis on insect and herbicide resistance and less emphasis on yield per unit area. The regression of U.S. average corn yield on years for the decade (1994–

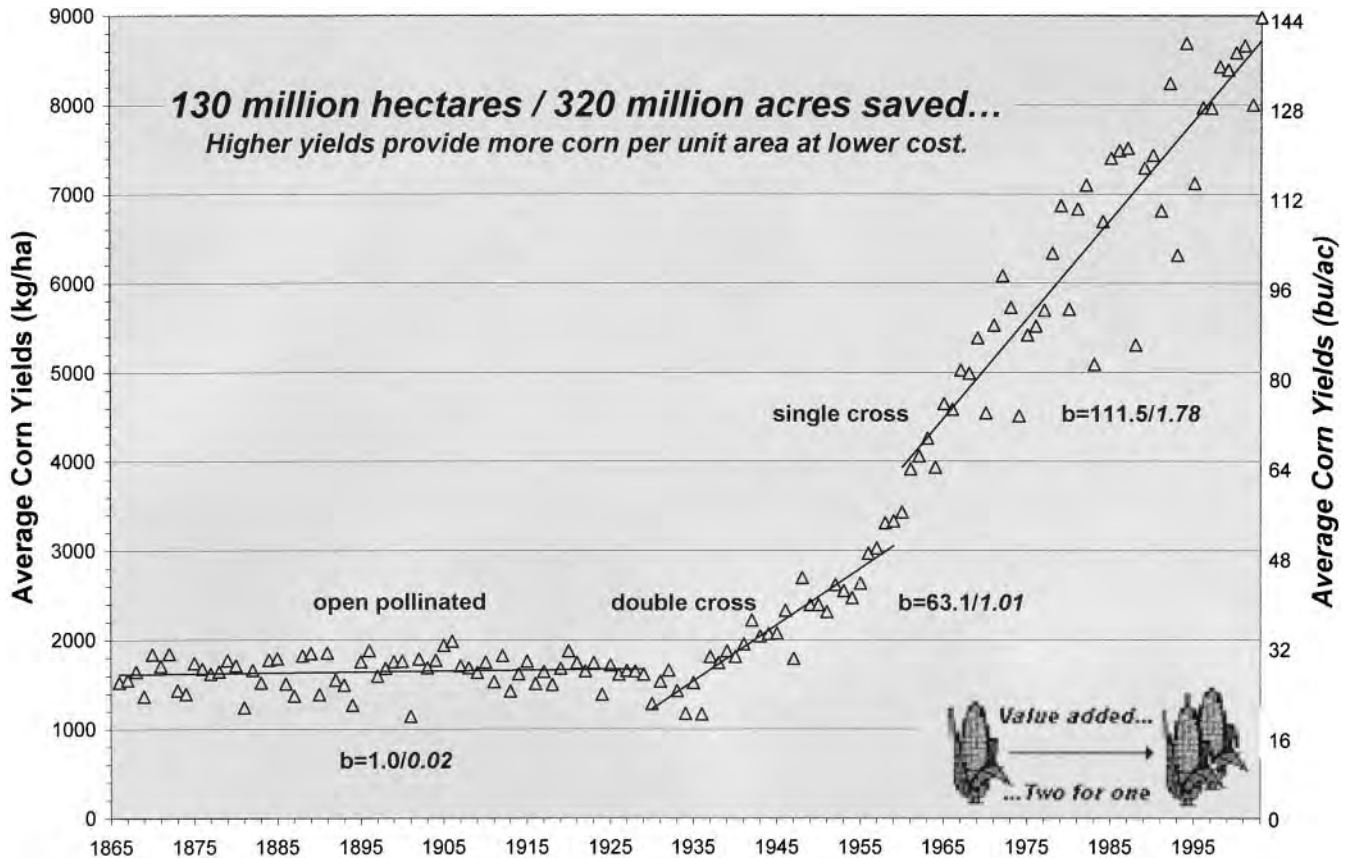


Fig. 2. Average U.S. corn yields and kinds of corn, Civil War to 2003. The b values (regressions) indicate production gain per unit area per year; 2003 production with prehybrid yields requires an additional 130 million ha (320 million acres). Value doubles in 26 yr because higher yields allow low (0.5%) annual price increase. Data compiled by the USDA.

2003) since transgenic corn is about two-thirds ($b = 85.4$ vs. 125.4 kg ha^{-1} or 1.4 vs. 2.0 bushels acre $^{-1}$) of that for the period (1950–1994) when conventional breeders bred all hybrid corn. Direct selection for yield is more effective than indirect selection for yield (countering weeds and insects). Reducing weeds and insects at the expense of additional yield is poor economics for the farmer and reduces food production.

Originally, seed corn companies were developed by farmers for farmers. Successful, profitable, seed corn companies respond to farmers' needs. Higher yields help farmers by increasing efficiency that reduces the cost of production, which helps farmers offset inflation. Farmers buy nearly all the seed. Through a lifetime of experience, they expect newer hybrids to yield more. Warning labels should be required on newer hybrids that don't yield more. Higher yields lower the cost of corn for users (e.g., feeders, industrial processors). Higher yields delay the Malthusian prophecy. We expect to feed more people in this, the 21st century, than the total number of people that have previously existed on our planet. How are we going to do that? Higher yields will help. Meanwhile, farmers' cost of production will continue to be the fundamental factor affecting the demand for corn and for corn growing (Troyer and Mascia, 1999).

There is no love sincerer than the love of food. —George Bernard Shaw

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EPA-2429

Lesley Jantarasami
04/01/2010 03:44 PM

To
cc
bcc

Subject UPGLOAD C:\Documents and Settings\ljantara\My Documents\Endangerment\01_Full Doc\Quikr drop 11 20 through 30\RTC volume 2 113009 mm jt.doc

(b)(5) Deliberative

- RTC volume 2 113009 mm jt.doc

EPA-EF-003907

EPA-2430

Ben DeAngelo

04/06/2010 04:56 PM

To

cc

bcc

Subject UPGOAD C:\Documents and Settings\owner\My Documents\Endangerment\Response to Public Comments\RTC Outline 113009.doc

(b)(5) Deliberative

- RTC Outline 113009.doc

EPA-EF-003908

EPA-2431

Ben DeAngelo/DC/USEPA/US

11/30/2009 01:19 PM

To Rona Birnbaum

cc Erin Birgfeld, Jason Samenow, Lesley Jantarasami, William Perkins

bcc

Subject Re: fact sheet for OPA - quick look if you can

Some edits/suggestions:

(b)(5) Deliberative

Fact Sheet for Final Findings 113009 BJD.doc

Rona Birnbaum

I made a few changes. (b)(5) Deliberative

11/30/2009 12:41:01 PM

From: Rona Birnbaum/DC/USEPA/US
To: Ben DeAngelo/DC/USEPA/US@EPA, Jason Samenow/DC/USEPA/US@EPA
Cc: William Perkins/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Erin Birgfeld/DC/USEPA/US@EPA
Date: 11/30/2009 12:41 PM
Subject: fact sheet for OPA - quick look if you can

I made a few changes.

(b)(5) Deliberative

[attachment "Fact Sheet for Final Findings 113009.doc" deleted by Ben DeAngelo/DC/USEPA/US]

EPA-EF-003909

EPA-2432

Lesley Jantarasami
04/01/2010 03:50 PM

To
cc
bcc
Subject UPLOAD C:\Documents and Settings\ljantara\My Documents\Endangerment\02_Comments and Responses\Vol 2 Section 2.7\Section 2.7.doc

(b)(5) Deliberative

- Section 2.7.doc

EPA-2433

Michael Kolian/DC/USEPA/US
11/30/2009 01:29 PM

To Lesley Jantarasami
cc
bcc
Subject Re: forestry

(b)(5) Deliberative

RTC_draft_Volume_6_Forestry_only_112909[1].doc

Lesley Jantarasami Can you send me the version you s... 11/30/2009 01:20:31 PM

From: Lesley Jantarasami/DC/USEPA/US
To: Michael Kolian/DC/USEPA/US@EPA
Date: 11/30/2009 01:20 PM
Subject: forestry

Can you send me the version you sent to Ben?

Thanks!

EPA-EF-003911

EPA-2434

Michael Kolian/DC/USEPA/US To Lesley Jantarasami
11/30/2009 01:53 PM cc
bcc
Subject Re: forestry

Yes, if there is any sort of context to the reference that would be great too.

Lesley Jantarasami Both API and Holland and Hart sub... 11/30/2009 01:50:15 PM

From: Lesley Jantarasami/DC/USEPA/US
To: Michael Kolian/DC/USEPA/US@EPA
Date: 11/30/2009 01:50 PM
Subject: Re: forestry

Both API and Holland and Hart submitted the following reference, (b)(5) Deliberative

Commenter Name: Paul D. Phillips, Robert T. Connery, and James A. Holtkamp
Commenter Affiliation: Holland & Hart
Commenter Type:
Document Control Number: EPA-HQ-OAR-2009-0171-3722R56
Comment Excerpt Number: 1
Form Letter? No
Late Comment? No
Comment Changed? No
[View Original Comment Letter](#)

One commenter (3722) submitted the following reference in support of their comments: T. Kitzberger, P.M. Brown, E.K. Heyerdahl, T.W. Swetnam, and T.T. Veblen, "Contingent Pacific-Atlantic Ocean influence on multicentury wildfire synchrony over western North America," Proceedings of the National Academy of Sciences 104, no.2 (2007): 543-548.

Michael Kolian [attachment "RTC_draft_Volume_6_Fo... 11/30/2009 01:29:53 PM

From: Michael Kolian/DC/USEPA/US
To: Lesley Jantarasami/DC/USEPA/US@EPA
Date: 11/30/2009 01:29 PM
Subject: Re: forestry

[attachment "RTC_draft_Volume_6_Forestry_only_112909[1].doc" deleted by Lesley Jantarasami/DC/USEPA/US]

Lesley Jantarasami Can you send me the version you s... 11/30/2009 01:20:31 PM

From: Lesley Jantarasami/DC/USEPA/US
To: Michael Kolian/DC/USEPA/US@EPA
Date: 11/30/2009 01:20 PM
Subject: forestry

Can you send me the version you sent to Ben?

EPA-EF-003912

Thanks!

EPA-2435

"Sue Eisenfeld"
<Sue.Eisenfeld@erg.com>
11/30/2009 01:58 PM

To Lesley Jantarasami
cc
bcc
Subject Re: Volume 11 for copyediting/formatting

great

Sue Eisenfeld
ERG
Director of Editorial and Video Services
2300 Wilson Blvd., Suite 350
Arlington, VA 22201
P: 703-841-0504
F: 703-841-1440
I am usually in the office M, W, F

>>> <Jantarasami.Lesley@epamail.epa.gov> 11/30/2009 1:45 PM >>>
International Center for Technology Assessment

|----->
| From: |
|----->

>-----
-----|
|"Sue Eisenfeld" <Sue.Eisenfeld@erg.com>
|

>-----
-----|
|----->
| To: |
|----->

>-----
-----|
|Lesley Jantarasami/DC/USEPA/US@EPA
|

>-----

EPA-EF-003914

-----|

|----->

| Cc: |

|----->

>-----

-----|

|William Perkins/DC/USEPA/US@EPA, "Mae Thomas" <Mae.Thomas@erg.com>

|

>-----

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|----->

| Date: |

|----->

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|11/30/2009 01:36 PM

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|----->

| Subject: |

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|Re: Volume 11 for copyediting/formatting

|

>-----

-----|

Thanks for this. Here's another abbreviation I could use help with -
the ICTA petition

Sue Eisenfeld
ERG
Director of Editorial and Video Services
2300 Wilson Blvd., Suite 350

Arlington, VA 22201

P: 703-841-0504

F: 703-841-1440

I am usually in the office M, W, F

>>> <Jantarasami.Lesley@epamail.epa.gov> 11/30/2009 12:36 PM >>>

Sure.

FUND - Climate Framework for Uncertainty, Negotiation, and Distribution model (not a true acronym since it leaves out the C, but that's what people call it) by Richard Tol at The Economic and Social Research Institute in Dublin, Ireland.

DICE - Dynamic Integrated Model of Climate and Economics by William Nordhaus at Yale University.

|----->
| From: |
|----->

>-----
-----|

|"Sue Eisenfeld" <Sue.Eisenfeld@erg.com>

|

>-----
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|----->
| To: |
|----->

>-----
-----|

|William Perkins/DC/USEPA/US@EPA

|

>-----
-----|

|----->

| Cc: |
|----->

>-----
-----|

|Lesley Jantarasami/DC/USEPA/US@EPA, "Mae Thomas" <Mae.Thomas@erg.com>

|

>-----
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|----->
| Date: |
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|11/30/2009 12:26 PM

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|----->
| Subject: |
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|Re: Volume 11 for copyediting/formatting

|

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-----|

Can you tell me what the FUND model and the DICE model stand for (so I can spell out), and whose model they are? Thanks.

Sue Eisenfeld
ERG
Director of Editorial and Video Services
2300 Wilson Blvd., Suite 350
Arlington, VA 22201
P: 703-841-0504
F: 703-841-1440
I am usually in the office M, W, F

>>> <Perkins.William@epamail.epa.gov> 11/29/2009 9:44 PM >>>

Matt and Sue,

Here is Volume 11. As I noted before, please also include the lines between each comment/response set. Also, as I stated earlier the deadline is not until 0900 on Tuesday for this because we got this to you so late. However, it looks right now like we may have multiple volumes, big ones, coming your way tomorrow; so my advice would be to try to get this to us tomorrow to clear your plate. Thank you and please let me know if you have any questions or concerns.

Cheers,

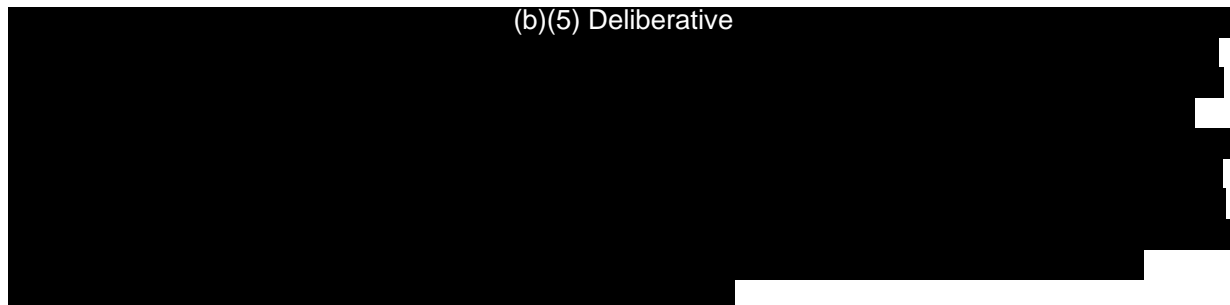
Bill

(See attached file: RTC Volume 11 to ERG 112909.doc)

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(C) (b)(6)

Comment:

(b)(5) Deliberative

A large rectangular area of the document is completely redacted with a solid black fill. The text "(b)(5) Deliberative" is centered at the top of this redacted area.

Response:

(b)(5) Deliberative

A large rectangular area of the document is completely redacted with a solid black fill. The text "(b)(5) Deliberative" is centered at the top of this redacted area.

Christopher P. Weaver, Ph.D.
Global Change Research Program

U.S. Environmental Protection Agency
Office of Research and Development
National Center for Environmental Assessment

EPA-EF-003920

Tel: +1 703 347 8621
Fax: +1 703 347 8694
Email: weaver.chris@epa.gov

Mailing address:
US EPA (8601-P)
1200 Pennsylvania Ave.
Washington, DC 20460

EPA-2437

David
Chalmers/DC/USEPA/US
11/30/2009 02:08 PM

To Marcus Sarofim
cc Rona Birnbaum
bcc
Subject Vol. 4 Master

Hi Marcus,

Please find the Vol. 4 master attached with all of Dina's revisions/comments in sections 3-7 addressed, plus a few entirely new summaries and responses based on QA/QC of the 'top ten' comments.

Please paste the revised model and emission projection sections into the attached once you've been able to hammer those out (I already deleted the old ones from the attached). At that point, the entire volume should be ready to go to OGC. I assume that it should go through Rona (who may want to take a quick look through?) and Lesley rather than straight to Carol but please check with Rona on that. Please don't hesitate to call or write with any questions or if there's anything I can do to help with the final comments/revisions from sections 1 and 2. Also, I made a number of changes to the sea level and abrupt change sections based on Dina's comments and the QA/QC process; if you have time, can you please give those a quick look before you send the volume out?

Thanks so much for your help with this; I could not have got through all this without you and really appreciate your crashing through such thorny sections during your 'vacation'. I look forward to seeing you tomorrow.

One last thing: please confirm receipt as webmail is not always reliable with attachments.

Thanks,
David

(b)(5) Deliberative

RTC draft Volume 4 MASTER 113009.doc

EPA-EF-003922

EPA-2439

John Hannon/DC/USEPA/US
11/30/2009 02:22 PM

To Lesley Jantarasami
cc Carol Holmes
bcc

Subject Re: confirmation of OGC review of (b)(5) deliberative
[REDACTED]

This comment is addressed in various edits already in the Findings. Thanks.

John Hannon
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW (MC 2344A)
Washington, D.C. 20460
Phone (202) 564-5563
Fax (202) 564-5603

Lesley Jantarasami Hi John, ERG did a QA/QC of its co... 11/30/2009 11:01:14 AM

From: Lesley Jantarasami/DC/USEPA/US
To: John Hannon/DC/USEPA/US@EPA
Cc: Carol Holmes/DC/USEPA/US@EPA
Date: 11/30/2009 11:01 AM
Subject: confirmation of OGC review of (b)(5) deliberative

Hi John,

ERG did a QA/QC of its comment database and sent us a few "new" comments that are most likely duplicates of what we've seen before, but we wanted to double-check that they have been addressed. The comment below is from Landmark Legal Foundation and pertains to the precautionary principle (excerpt in bold). Carol mentioned that she thinks you've read all of Landmark, but could you confirm that this comment has been incorporated somewhere in the RTC?

Thanks so much,

Lesley

Commenter Name: Mark R. Levin
Commenter Affiliation: Landmark Legal Foundation
Commenter Type:
Document Control Number: EPA-HQ-OAR-2009-0171-3553.1
Comment Excerpt Number: 9
Form Letter?
Late Comment?
Comment Changed?

EPA misapplies the U.S. Supreme Court's decision in Massachusetts v. EPA; 2) Improperly utilizes a radical adoption of the "Precautionary Principle" that guarantees a positive endangerment finding; 3) Relies upon incomplete science to buttress its reliance on a improper adoption of the "Precautionary Principle;" 4) Establishes a new regulatory

EPA-EF-003923

paradigm assuring EPA regulation of not only new motor vehicles, but also the widely varied GHG producing activities throughout the economy; and 5) Is premature in that Congress is currently determining whether to take steps to regulate GHGs.

Lesley Jantarasami
US EPA, Climate Change Division
Climate Science & Impacts Branch
202.343.9929
202.343.2202 (fax)
Jantarasami.Lesley@epa.gov

EPA-2440

**Rona
Birnbaum/DC/USEPA/US**
11/30/2009 02:24 PM

To William Perkins
cc Ben DeAngelo, David Chalmers, Jason Samenow, Jeremy Martinich, Lesley Jantarasami, Marcus Sarofim, Michael Kolian
bcc
Subject Re: Submitted journals from Chamber, Holland and Hart, API -- location in database

yes, thank you for that important clarification!

William Perkins [Also, to clarify, those 142 from Holland...](#) 11/30/2009 02:20:45 PM

From: William Perkins/DC/USEPA/US
To: Rona Birnbaum/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA, Jason Samenow/DC/USEPA/US@EPA, Jeremy Martinich/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Marcus Sarofim/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA
Date: 11/30/2009 02:20 PM
Subject: Re: Submitted journals from Chamber, Holland and Hart, API -- location in database

Also, to clarify, those 142 from Holland and Hart that I described below are ones that they submitted a few months ago; the 30 or so new ones received last week (b)(5) Deliberative

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
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(O) 202.343.9460
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(C) (b)(6)

Rona Birnbaum (b)(5) Deliberative 11/30/2009 02:19:14 PM

From: Rona Birnbaum/DC/USEPA/US
To: William Perkins/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA, Jason Samenow/DC/USEPA/US@EPA, Jeremy Martinich/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Marcus Sarofim/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA
Date: 11/30/2009 02:19 PM
Subject: Re: Submitted journals from Chamber, Holland and Hart, API -- location in database

(b)(5) Deliberative
More to follow later today.

William Perkins [All, As you know, several organizations...](#) 11/30/2009 01:58:43 PM

From: William Perkins/DC/USEPA/US
To: Jeremy Martinich/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA, Ben DeAngelo/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Marcus

EPA-EF-003925

Sarofim/DC/USEPA/US@EPA, Jason Samenow/DC/USEPA/US@EPA, Lesley
Jantarasami/DC/USEPA/US@EPA
Cc: Rona Birnbaum/DC/USEPA/US@EPA
Date: 11/30/2009 01:58 PM
Subject: Submitted journals from Chamber, Holland and Hart, API -- location in database

All,

As you know, several organizations submitted CDs to us with a large number of journal articles for our consideration. However, the comment number of the journal articles in the ERG database is not the same as the main comment number for those submitters. Rather, when you see these CD-submitted journals in the database they are as follows:

Chamber of Commerce: 4632, R1 to R69 in the database
Holland and Hart: 3722, R1 to R142 in the database
API: 5058 R1 to R61 in the database

Big thank you to Lesley for bringing this to my attention so that I could clarify with everyone in case you are wondering where those submitted journals are. They are all in the database (b) 5 deliberative [REDACTED] but under those different numbers. Thank you.

Cheers,

Bill

Bill Perkins
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(C) (b)(6)

EPA-2441

William
Perkins/DC/USEPA/US
11/30/2009 02:50 PM

To Mae Thomas
cc Jason Samenow
bcc
Subject Fw: need a study pronto, can't find it in any erg resource
(ftp/database)

Mae,

Also, if you find this, please send it directly to Jason to save time. Thank you.

Cheers,

Bil

Bill Perkins
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Climate Science and Impacts Branch
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(C) (b)(6)

----- Forwarded by William Perkins/DC/USEPA/US on 11/30/2009 02:49 PM -----

From: William Perkins/DC/USEPA/US
To: Mae Thomas <Mae.Thomas@erg.com>
Date: 11/30/2009 02:49 PM
Subject: Fw: need a study pronto, can't find it in any erg resource (ftp/database)

Mae,

Do you guys have this or can you get it for us as soon as possible? It was cited by commenter 11348 and is on the master reference list but is not on the journal/DCN list you sent me a few days ago. Presumably (b)(5) Deliberative but if you can find it for us quick-turnaround that would be fantastic. Thank you for your help here.

Cheers,

Bill

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
Climate Change Division
U.S. Environmental Protection Agency
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(F) 202.343.2202
(C) (b)(6)

----- Forwarded by William Perkins/DC/USEPA/US on 11/30/2009 02:45 PM -----

From: Jason Samenow/DC/USEPA/US
To: William Perkins/DC/USEPA/US@EPA
Date: 11/30/2009 02:36 PM

EPA-EF-003927

Subject: need a study pronto, can't find it in any erg resource (ftp/database)

it was cited by commenter 11348

**Moore, Thomas G (1998) "Health and Amenity Effects of Global Warming" Economic Inquiry
36(3) July: 471-488**

the web site for the journal is

<http://www3.interscience.wiley.com/journal/119940811/abstract>

i was able to get earlier versions of this study off google, but i gotta have the 1998 version from the economic inquiry journal

need this asap.

thanks,
jason

EPA-2442

William
Perkins/DC/USEPA/US
11/30/2009 02:50 PM

To Jason Samenow
cc
bcc

Subject Re: need a study pronto, can't find it in any erg resource
(ftp/database)

just cc'd you on the email to Mae w/ explanation

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
Climate Change Division
U.S. Environmental Protection Agency
perkins.william@epa.gov
(O) 202.343.9460
(F) 202.343.2202
(C) (b)(6)

Jason Samenow after some more sleuthing, i did find a... 11/30/2009 02:50:02 PM

From: Jason Samenow/DC/USEPA/US
To: William Perkins/DC/USEPA/US@EPA
Date: 11/30/2009 02:50 PM
Subject: Re: need a study pronto, can't find it in any erg resource (ftp/database)

after some more sleuthing, i did find an html article of the 1998 version of the study here:
<http://www.stanford.edu/~moore/HealthAmenity.html>

however, having the pdf from the journal would be good...to verify i'm looking at the right version.

jason

Jason Samenow it was cited by commenter 11348 Moo... 11/30/2009 02:36:34 PM

From: Jason Samenow/DC/USEPA/US
To: William Perkins/DC/USEPA/US@EPA
Date: 11/30/2009 02:36 PM
Subject: need a study pronto, can't find it in any erg resource (ftp/database)

it was cited by commenter 11348

**Moore, Thomas G (1998) "Health and Amenity Effects of Global Warming" Economic Inquiry
36(3) July: 471-488**

the web site for the journal is

<http://www3.interscience.wiley.com/journal/119940811/abstract>

i was able to get earlier versions of this study off google, but i gotta have the 1998 version from the
economic inquiry journal

EPA-EF-003929

need this asap.

thanks,
jason

EPA-2443

William Perkins/DC/USEPA/US
11/30/2009 02:54 PM

To David Chalmers
cc
bcc
Subject Fw: Ongoing ERG task list 11/30

David,

Fyi for docketing, although those dates will probably shift right.

Cheers,

Bill

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
Climate Change Division
U.S. Environmental Protection Agency
perkins.william@epa.gov
(O) 202.343.9460
(F) 202.343.2202
(C) (b)(6)

----- Forwarded by William Perkins/DC/USEPA/US on 11/30/2009 02:54 PM -----

From: William Perkins/DC/USEPA/US
To: Mae Thomas <Mae.Thomas@erg.com>
Date: 11/30/2009 02:53 PM
Subject: Ongoing ERG task list 11/30

Mae,

Here is what I am tracking for outstanding tasks; please let me know if anything looks inaccurate. As we discussed yesterday, we may need support this weekend, especially on copyediting. Thank you.

Cheers,

Bill

<u>Task</u>	<u>Deadline</u>	<u>Status</u>
Copyediting RTC Volumes anticipated today; 4,6,9 tomorrow or Wednesday	varies	1,2, 3,7, 8,10 done; 11 underway; 5
Process memo to EPA	today	
Docketing RTC references	12/1	non-copyrighted uploaded immediately;
copyrighted procedure (list and DVDs) underway for 12/2 send to docket		
Master reference list for docket (x2) references; ERG preparing for 2nd EPA review	12/1	1) Commenter submissions 2) EPA
Process new comments + supportives complete and matches everything received (access file given to EPA)	12/2	ensure that web interface is fully
Access file of web database info excerpts by category	12/2	also making pdfs of the category list + for all
2nd round (quick) RTC/TSD copyedit	mid-to-late-week	
Docketing new TSD references (post-OMB) will be added later this week	complete for now	any additional new TSD references

EPA-EF-003931

Comms material support

TBD

on call for early-to-mid week this week

Bill Perkins
Climate Change Adaptation Analyst
Climate Science and Impacts Branch
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(O) 202.343.9460
(F) 202.343.2202
(C) (b)(6)

EPA-2444

"Matthew Mitchell"
<Matthew.Mitchell@erg.com>
11/30/2009 03:05 PM

To William Perkins
cc Lesley Jantarasami, "Mae Thomas", "Sue Eisenfeld"
bcc
Subject volume 2 references

Here's the reference list for Volume 2. It's rather elaborately color-coded at the moment:

- Entries we filled in (that is, references that were cited in the text but weren't in the reference list) and are pretty confident about are highlighted in green.
- Entries we filled in but aren't confident about are highlighted in yellow. These are mostly stuff we tracked down through online research; in a couple of cases we found a couple of possible entries to go with a particular citation.
- Entries we couldn't find (just names and dates, generally) are highlighted in red, as are a couple of other "problem" references.
- A couple of entries are highlighted in gray; these are entries in the reference list that don't seem to be cited anywhere in the text.

To be on the slightly redundant safe side, we've also added a lot of comments to the list. Let me know if things are unclear.

>>> <Perkins.William@epamail.epa.gov> 11/30/2009 12:08 PM >>>
Matt and Sue,

Thank you. Lesley will be in touch with any questions. As a side note for future volumes, we decided this morning that we will want to have the reference lists at the end of each volume (rather than as a separate Word file) -- so if we send you separate docs for future volumes (don't worry about Vol2) please go ahead and integrate them into one.

Cheers,

Bill

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From: "Matthew Mitchell" <Matthew.Mitchell@erg.com>
To: William Perkins/DC/USEPA/US@EPA, "Sue Eisenfeld"

EPA-EF-003933

<Sue.Eisenfeld@erg.com>

Cc: Lesley Jantarasami/DC/USEPA/US@EPA, "Mae Thomas"
<Mae.Thomas@erg.com>

Date: 11/30/2009 12:02 PM

Subject: volume 2

Hi Bill and Lesley--

Here's the edited Volume 2. The separate reference list is coming soon--Mae and her staff have found a number of the missing entries. (I'm not sure [REDACTED] (b)(5) Deliberative [REDACTED])

Oh, also, I'm afraid there's another global fix to be made to the foreword: "principle" should be "principal" in the last paragraph, second sentence. I've fixed this in Volume 2 and we'll fix it going forward.

>>> <Perkins.William@epamail.epa.gov> 11/30/2009 9:40 AM >>>

Sue and Matt,

We now anticipate for 1st-round review:

Volume	Date to ERG
4	12/1
5	11/30
6	12/1 or 12/2
9	12/1 or 12/2

Cheers,

Bill

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(C) [REDACTED] (b)(6)

[attachment "RTC volume 2 113009 mm jt.doc" deleted by William Perkins/DC/USEPA/US]

(b)(5) Deliberative

volume 2 references_mt.doc

EPA-2445

Michael Kolian/DC/USEPA/US

11/30/2009 03:09 PM

To Chris Weaver

cc Anne Grambsch, Ben DeAngelo, Darrell Winner, Mike Kolian
bcc

Subject Re: Fw: vol 5 (use this version, please) -- CALL AT 2 TODAY?!

All,
Section 8(a) of the current TSD.

Cheers.

(b)(5) Deliberative

Section 8a_tsd 11_27.doc

Michael Kolian, USEPA
Office of Atmospheric Programs
Climate Change Division
1200 Pennsylvania Avenue, NW (6207J)
Washington, DC 20460
Phone: (202) 343-9261
Email: kolian.michael@epa.gov

Chris Weaver I can make it at 2 pm. Anne probably ca... 11/30/2009 11:55:35 AM

From: Chris Weaver/DC/USEPA/US
To: Ben DeAngelo/DC/USEPA/US@EPA
Cc: Anne Grambsch/DC/USEPA/US@EPA, Darrell Winner/DC/USEPA/US@EPA, Mike Kolian <kolian.michael@epa.gov>
Date: 11/30/2009 11:55 AM
Subject: Re: Fw: vol 5 (use this version, please) -- CALL AT 2 TODAY?!

I can make it at 2 pm. Anne probably can too. Hopefully we can help.

Send us the call-in # and we'll talk to you soon.

-Chris

Ben DeAngelo Darrell, Anne, Chris, We're looking for... 11/30/2009 11:12:41 AM

From: Ben DeAngelo/DC/USEPA/US
To: Darrell Winner/DC/USEPA/US@EPA, Anne Grambsch/DC/USEPA/US@EPA, Chris Weaver/DC/USEPA/US@EPA
Cc: Mike Kolian <kolian.michael@epa.gov>
Date: 11/30/2009 11:12 AM
Subject: Fw: vol 5 (use this version, please) -- CALL AT 2 TODAY?!

Darrell, Anne, Chris,

We're looking for (b)(5) Deliberative

Darrell said he's available at this time. Sorry for the late notice but we're in the final throws of getting everything together.

EPA-EF-003936

Can help explain on the phone. Think we're looking for (b)(5) Deliberative

Thanks.
-Ben

----- Forwarded by Ben DeAngelo/DC/USEPA/US on 11/30/2009 11:01 AM -----

From: Ben DeAngelo/DC/USEPA/US
To: Darrell Winner/DC/USEPA/US@EPA
Cc: Mike Kolian <kolian.michael@epa.gov>
Date: 11/30/2009 09:40 AM
Subject: Fw: vol 5 (use this version, please)

Darrell,

Please see the comments below from John Hannon from OGC regarding our responses to comments
(b)(5) Deliberative

Would you have time today to get on a call to go over this??

Thanks for any help.

-Ben

----- Forwarded by Ben DeAngelo/DC/USEPA/US on 11/30/2009 09:36 AM -----

From: John Hannon/DC/USEPA/US
To: Jason Samenow/DC/USEPA/US@EPA
Cc: Ben DeAngelo/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill Perkins <perkins.william@epa.gov>, Rona Birnbaum/DC/USEPA/US@EPA
Date: 11/29/2009 01:00 PM
Subject: Re: vol 5 (use this version, please)

Here are comments on the rest of volume 5. Not much, except in the area of (b)(5) Deliberative

I think this means two things:

(1) (b)(5) Deliberative

(b)(5) Deliberative

[Redacted]

(2) (b)(5) Deliberative

[Redacted]

[Redacted]

[Redacted]

[attachment "RTC_draft_Volume_5_complete_1128 -jh1129.doc" deleted by Chris Weaver/DC/USEPA/US]

John Hannon
Office of General Counsel
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW (MC 2344A)
Washington, D.C. 20460
Phone (202) 564-5563
Fax (202) 564-5603

Jason Samenow | Sorry for multiple emails on this....but... | 11/28/2009 11:38:10AM

From: Jason Samenow/DC/USEPA/US
To: Rona Birnbaum/DC/USEPA/US@EPA, Dina Kruger/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA, Carol Holmes/DC/USEPA/US@EPA

Cc: Ben DeAngelo/DC/USEPA/US@EPA, Michael Kolian/DC/USEPA/US@EPA, Bill Perkins <perkins.william@epa.gov>, Lesley Jantarasami/DC/USEPA/US@EPA, David Chalmers/DC/USEPA/US@EPA
Date: 11/28/2009 11:38 AM
Subject: vol 5 (use this version, please)

Sorry for multiple emails on this....but please refer to this version of Volume 5.
Jason

(Ben and Mike, please check the first comment and response on air quality and make sure both of your edits to that one were appropriately incorporated)

[attachment "RTC_draft_Volume_5_complete_1128.doc" deleted by Chris Weaver/DC/USEPA/US]

EPA-2446

Lesley
Jantarasami/DC/USEPA/US
11/30/2009 03:10 PM


To Carol Holmes
cc
bcc

Subject Fw: endangerment finding response to comments

----- Forwarded by Lesley Jantarasami/DC/USEPA/US on 11/30/2009 03:10 PM -----

From: Steven Silverman/DC/USEPA/US
To: Robin Moran/AA/USEPA/US@EPA
Cc: John Hannon/DC/USEPA/US@EPA, Lesley Jantarasami/DC/USEPA/US@EPA, Rebecca White/DC/USEPA/US@EPA
Date: 11/30/2009 03:09 PM
Subject: Re: Fw: endangerment finding response to comments

(b)(5) Deliberative ACP



Robin Moran Rebecca & Lesley, here's a draft respo... 11/27/2009 11:40:10AM

From: Robin Moran/AA/USEPA/US
To: Rebecca White/DC/USEPA/US@EPA
Cc: Lesley Jantarasami/DC/USEPA/US@EPA, Steven Silverman/DC/USEPA/US@EPA, John Hannon/DC/USEPA/US@EPA
Date: 11/27/2009 11:40 AM
Subject: Re: Fw: endangerment finding response to comments

EPA-EF-003940

Rebecca & Lesley, here's a draft response to this comment. I adapted this from the recent SEPW Administrator Q&A's . I've cc'd OGC so they can weigh in:

Comment:

(b)(5) Deliberative

Response:

(b)(5) Deliberative

(b)(5) Deliberative

Robin Moran
Senior Policy Advisor
Assessment and Standards Division
U.S. EPA, Office of Transportation and Air Quality
2000 Traverwood Dr.
Ann Arbor, MI 48105
(734) 214-4781
(734) 214-4821 (fax)

Rebecca White [Rebecca White EPA Office of Transpor...](#) 11/24/2009 04:23:27 PM

From: Rebecca White/DC/USEPA/US
To: Robin Moran/AA/USEPA/US@EPA
Date: 11/24/2009 04:23 PM
Subject: Fw: endangerment finding response to comments

Rebecca White
EPA Office of Transportation and Air Quality

EPA-EF-003941

202-564-5949

----- Forwarded by Rebecca White/DC/USEPA/US on 11/24/2009 04:23 PM -----

From: Lesley Jantarasami/DC/USEPA/US
To: Rebecca White/DC/USEPA/US@EPA
Date: 11/24/2009 04:17 PM
Subject: Re: endangerment finding response to comments

Hi Rebecca,

We're hoping to send a draft of this volume OGC by the end of the week, so if you are able to get us something (even if very draft language) by tomorrow or Friday, that would be fantastic. You'll have a chance to review and edit this comment and others from this volume that you may be interested in early next week.

Thanks so much,

Lesley

Lesley Jantarasami
US EPA, Climate Change Division
Climate Science & Impacts Branch
202.343.9929
202.343.2202 (fax)
Jantarasami.Lesley@epa.gov

Rebecca White Hi: Sure, when do you need input by? 11/24/2009 02:45:41 PM

From: Rebecca White/DC/USEPA/US
To: Lesley Jantarasami/DC/USEPA/US@EPA
Date: 11/24/2009 02:45 PM
Subject: Re: endangerment finding response to comments

Hi:

Sure, when do you need input by?

Lesley Jantarasami Hello Rebecca, I work with Rona o... 11/24/2009 10:49:35 AM

From: Lesley Jantarasami/DC/USEPA/US
To: Rebecca White/DC/USEPA/US@EPA
Cc: Rona Birnbaum/DC/USEPA/US@EPA
Date: 11/24/2009 10:49 AM
Subject: endangerment finding response to comments

Hello Rebecca,

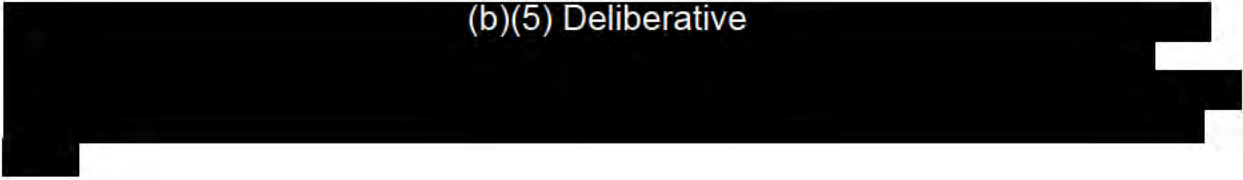
I work with Rona on the endangerment finding's response to public comments document. Regarding the comment below, we were wonderin [REDACTED] (b)(5) Deliberative [REDACTED] We would like to get your input in developing a response to ensure that we are consistent with you. Thanks so much!

Comment:

[REDACTED] (b)(5) Deliberative [REDACTED]

EPA-EF-003942

(b)(5) Deliberative



Best,

Lesley

Lesley Jantarasami
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