Water is Critical to Our Economy

When it comes to supporting the economy by spending money on water-based tourism, I do my share. Like most Americans, I love swimming, fishing, boating and even just hanging out by lakes, streams and beaches in the summertime. This summer for example, I spent a weekend on the Delaware shore; a week in Wyoming hiking and fishing in pure mountain streams; and a week in New York swimming in the state park beaches. None of that comes cheap – but it is well worth it because I will remember these family vacations forever and my children will as well.

Water is also vital to a number of other economic sectors. Water is used to extract energy and mineral resources from the earth, refine petroleum and chemicals, roll steel, mill paper, and produce uncounted other goods, from semiconductors to the foods and beverages that line supermarket shelves. Water cools the generators and drives the turbines that produce electricity, and sustains the habitat and fish stocks that are vital to the commercial fishing industry. Rivers, lakes, and oceans provide natural highways for commercial navigation. Every sector of the U.S. economy is influenced by water.

Here at EPA, we have studied this issue more closely and are releasing a report on the *Importance of Water to the U.S. Economy*. This report is intended to help raise the awareness of water's importance to our national economic welfare and to summarize information that public and private decision-makers can use to sustainably manage the nation's water resources. The report's main findings:

Water is absolutely fundamental to the U.S. economy
Energy production, food production and water supply account for 94 percent of withdrawl from the nation's groundwater, streams, rivers and lakes. All parts of the economy are directly or indirectly dependent on energy, food and water supply, so changes in one part of the energy-food-water nexus can impact the others and have a ripple effect through the whole economy.

Water value and competition will rise
Available data does not reflect water's true worth in the economy. For example, pricing does not usually reflect the marginal value enjoyed by Americans in having safe tap water available from community water systems 24 hours a day, which is a benefit that many citizens in other countries do not enjoy. As a result of water being undervalued, current use may be inefficient and unsustainable. Also, competition for water will increase as consumption rises, water quality decreases, and the impacts of climate change are felt.

Decision-makers in the private and public sectors need more information
Increased demand for information on reducing water-related risks is growing in the private sector. More robust data and tools could be valuable for decision making by public water systems and water management agencies. Generating better data and tools will require collective efforts and research by all stakeholders.

EPA hopes this report will be a catalyst for a broader discussion about water's critical role in the U.S. economy. I encourage you to leave comments below, share your thoughts through Facebook and Twitter, and send email to importanceofwater@epa.gov.

To: Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Penman, Crystal
Sent: Mon 4/22/2013 2:32:11 PM
Subject: FW: This meeting moved from today to next week - so sorry for the last minute noticed.. Discuss State of Preference Survey for 316b Rule

When: Tuesday, April 23, 2013 11:00 AM-11:45 AM (GMT-05:00) Eastern Time (US & Canada).
Where: 3412 ARN

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

-----Original Appointment-----
From: Acting Administrator
Sent: Friday, April 19, 2013 10:02 AM
To: Acting Administrator; Sussman, Bob; Goo, Michael; Stoner, Nancy; Kopocis, Ken; Gilinsky, Ellen; Garbow, Avi; Vaught, Laura; Ganesan, Arvin; Wood, Robert; Southerland, Elizabeth; Hewitt, Julie; Maddox, Donald; Penman, Crystal; Patrick, Monique; Poole, Jacqueline; Kime, Robin
Subject: FYI: This meeting moved from today to next week - so sorry for the last minute noticed.. Discuss State of Preference Survey for 316b Rule
When: Tuesday, April 23, 2013 11:00 AM-11:45 AM (GMT-05:00) Eastern Time (US & Canada).
Where: 3412 ARN

-----Original Appointment-----
From: Porterfield, Teri **On Behalf Of** Acting Administrator
Sent: Tuesday, April 16, 2013 6:07 PM
To: Acting Administrator; Sussman, Bob; Goo, Michael; Stoner, Nancy; Kopocis, Ken; Gilinsky, Ellen; Garbow, Avi; Vaught, Laura; Ganesan, Arvin; Wood, Robert; Southerland, Elizabeth; Hewitt, Julie
Cc: Maddox, Donald; Penman, Crystal; Patrick, Monique; Poole, Jacqueline; Kime, Robin
Subject: Discuss State of Preference Survey for 316b Rule
When: Tuesday, April 23, 2013 11:00 AM-11:45 AM (GMT-05:00) Eastern Time (US & Canada).
Where: 3412 ARN

Ct: Bob Sussman

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Shapiro, Mike[Shapiro.Mike@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Keehner, Denise[Keehner.Denise@epa.gov]; Lape, Jeff[lape.jeff@epa.gov]; Hill, Randy[Hill.Randy@epa.gov]; Best-Wong, Benita[Best-Wong.Benita@epa.gov]; Sawyers, Andrew[Sawyers.Andrew@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Grevatt, Peter[Grevatt.Peter@epa.gov]
Cc: Telleen, Katherine[Telleen.Katherine@epa.gov]; Flaharty, Stephanie[Flaharty.Stephanie@epa.gov]; Zipf, Lynn[Zipf.Lynn@epa.gov]; Faller, Heidi[Faller.Heidi@epa.gov]; Peck, Gregory[Peck.Gregory@epa.gov]; Lousberg, Macara[Lousberg.Macara@epa.gov]; Evalenko, Sandy[Evalenko.Sandy@epa.gov]; Skane, Elizabeth[Skane.Elizabeth@epa.gov]; Ruf, Christine[Ruf.Christine@epa.gov]; Loop, Travis[Loop.Travis@epa.gov]; Scozzafava, MichaelE[Scozzafava.MichaelE@epa.gov]; Code, Tanya[Code.Tanya@epa.gov]; Ortiz, Agnes[Ortiz.Agnes@epa.gov]; Krieger, Andrew[Krieger.Andrew@epa.gov]; Lopez-Carbo, Maria[Lopez-Carbo.Maria@epa.gov]; Sanelli, Diane[Sanelli.Diane@epa.gov]; Peterson, Jeff[Peterson.Jeff@epa.gov]; Bathersfield, Nizanna[Bathersfield.Nizanna@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Frace, Sheila[Frace.Sheila@epa.gov]
From: Nelson, Tomeka
Sent: Fri 4/19/2013 7:58:29 PM
Subject: 2-week review report
4.19.2013 OP Review Status Update and Planning.docx

Tomeka Nelson,
OW Water Policy Staff (Detail)
202-566-1291
Room 3226C EPA East

To: Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Southerland, Elizabeth
Sent: Fri 4/19/2013 2:27:47 PM
Subject: RE: Meeting with Bob p on stated preference issues

I am dead serious when I say that I really enjoy your sense of humor! God knows, we need humor today……

Elizabeth Southerland, Director

Office of Science & Technology

Office Water

Room 5233A - MC - 4301T

Washington, D. C. 20460

Direct: (202) 566-0328

Fax: (202) 566-0441

From: Kopocis, Ken
Sent: Friday, April 19, 2013 10:24 AM
To: Southerland, Elizabeth
Subject: Re: Meeting with Bob p on stated preference issues

This was originally a politicals only meeting. We did not want to confuse the discussion with actual facts.

From: Southerland, Elizabeth
Sent: Friday, April 19, 2013 10:20:44 AM
To: Sussman, Bob; Stoner, Nancy; Kopocis, Ken; Gilinsky, Ellen; Wood, Robert
Cc: Goo, Michael; Scozzafava, MichaelE; Hewitt, Julie
Subject: RE: Meeting with Bob p on stated preference issues

We will prepare briefing materials and will join the meeting now that it has been rescheduled for Tuesday. Because I was not aware of this Friday meeting, I had submitted a meeting request form to brief Bob P on this issue next week and was waiting to hear back on that before

preparing material. We will also include options on the ESA consultation since that is also a time-sensitive issue.

Elizabeth Southerland, Director

Office of Science & Technology

Office Water

Room 5233A - MC - 4301T

Washington, D. C. 20460

Direct: (202) 566-0328

Fax: (202) 566-0441

From: Sussman, Bob
Sent: Friday, April 19, 2013 10:07 AM
To: Stoner, Nancy; Kopocis, Ken; Gilinsky, Ellen; Southerland, Elizabeth; Wood, Robert
Cc: Goo, Michael; Scozzafava, MichaelE
Subject: Meeting with Bob p on stated preference issues

We're canceling and rescheduling the meeting with Bob p today on stated preference issues for the 316b rulemaking. The hope is to have the meeting on Monday.

There seems to be some confusion about the purpose of the meeting (at least based on the materials I've seen) so let me try to clarify what we're trying to accomplish.

The goal to make decisions on how to address the stated preference study in the final rule.

Ex. 5 - Deliberative

Ex. 5 - Deliberative

Ex. 5 - Deliberative

I assume briefing materials will be prepared on these issues.

I'd like career staff at this meeting so that detailed questions from Bob or others can be answered.

Robert M. Sussman

Senior Policy Counsel to Administrator

Office of the Administrator

U.S. Environmental Protection Agency

Washington DC

(202)-564-7397

To: Sussman, Bob[Sussman.Bob@epa.gov]; Goo, Michael[Goo.Michael@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Vaught, Laura[Vaught.Laura@epa.gov]; Ganesan, Arvin[Ganesan.Arvin@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Maddox, Donald[Maddox.Donald@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Patrick, Monique[Patrick.Monique@epa.gov]; Poole, Jacqueline[Poole.Jacqueline@epa.gov]; Kime, Robin[Kime.Robin@epa.gov]
From: Porterfield, Teri
Sent: Fri 4/19/2013 2:03:57 PM
Subject: FYI: This meeting moved from today to next week - so sorry for the last minute noticed.. Discuss State of Preference Survey for 316b Rule

When: Tuesday, April 23, 2013 11:00 AM-11:45 AM (GMT-05:00) Eastern Time (US & Canada).
Where: 3412 ARN

Note: The GMT offset above does not reflect daylight saving time adjustments.

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-----Original Appointment-----
From: Porterfield, Teri **On Behalf Of** Acting Administrator
Sent: Tuesday, April 16, 2013 6:07 PM
To: Acting Administrator; Sussman, Bob; Goo, Michael; Stoner, Nancy; Kopocis, Ken; Gilinsky, Ellen; Garbow, Avi; Vaught, Laura; Ganesan, Arvin; Wood, Robert; Southerland, Elizabeth; Hewitt, Julie
Cc: Maddox, Donald; Penman, Crystal; Patrick, Monique; Poole, Jacqueline; Kime, Robin
Subject: Discuss State of Preference Survey for 316b Rule
When: Tuesday, April 23, 2013 11:00 AM-11:45 AM (GMT-05:00) Eastern Time (US & Canada).
Where: 3412 ARN

Ct: Bob Sussman

To: Sussman, Bob[Sussman.Bob@epa.gov]; Goo, Michael[Goo.Michael@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Vaught, Laura[Vaught.Laura@epa.gov]; Ganesan, Arvin[Ganesan.Arvin@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]
Cc: Maddox, Donald[Maddox.Donald@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Patrick, Monique[Patrick.Monique@epa.gov]; Poole, Jacqueline[Poole.Jacqueline@epa.gov]; Kime, Robin[Kime.Robin@epa.gov]
From: Porterfield, Teri
Sent: Fri 4/19/2013 2:01:38 PM
Subject: Discuss State of Preference Survey for 316b Rule

When: Tuesday, April 23, 2013 11:00 AM-11:45 AM (GMT-05:00) Eastern Time (US & Canada).
Where: 3412 ARN

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

Ct: Bob Sussman

To: Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Gilinsky, Ellen
Sent: Fri 4/19/2013 1:44:23 PM
Subject: Re: Is 316b mtg at noon political only?

Ken betsy said someting about new ESA idea that would be ready to discuss nxt week if we could wait?

From: Kopocis, Ken
Sent: Friday, April 19, 2013 9:41:58 AM
To: Porterfield, Teri; Gilinsky, Ellen
Cc: Southerland, Elizabeth
Subject: Re: Is 316b mtg at noon political only?

Whatever is Bob's preference on schedule.

From: Porterfield, Teri
Sent: Friday, April 19, 2013 9:40:19 AM
To: Kopocis, Ken; Gilinsky, Ellen
Cc: Southerland, Elizabeth
Subject: RE: Is 316b mtg at noon political only?

OK - should I keep the 316b on for today and just remove Betsy and Rob???

-----Original Message-----
From: Kopocis, Ken
Sent: Friday, April 19, 2013 9:31 AM
To: Gilinsky, Ellen; Porterfield, Teri
Cc: Southerland, Elizabeth
Subject: Re: Is 316b mtg at noon political only?

The only reason for Rob and Betsy would be to discuss Steam Electric.
They are not necessary for 316(b). They are more valuable on ELG today.

From: Gilinsky, Ellen
Sent: Friday, April 19, 2013 9:20:08 AM
To: Porterfield, Teri
Cc: Southerland, Elizabeth; Kopocis, Ken
Subject: Re: Is 316b mtg at noon political only?

We are in a meeting right now. Rob and betsy slammed with steam electric does this have to be today?

From: Porterfield, Teri
Sent: Friday, April 19, 2013 9:18:10 AM
To: Gilinsky, Ellen
Cc: Southerland, Elizabeth
Subject: RE: Is 316b mtg at noon political only?

Per Don Maddox - Bob Sussman wanted to include Betsy and Ron Wood. Don Maddox is getting ready to call you...

-----Original Message-----
From: Gilinsky, Ellen
Sent: Friday, April 19, 2013 9:16 AM
To: Porterfield, Teri
Cc: Southerland, Elizabeth

Subject: Is 316b mtg at noon political only?

Some confusion as betsy just got invite
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To: Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]
Cc: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Porterfield, Teri
Sent: Fri 4/19/2013 1:39:26 PM
Subject: RE: Is 316b mtg at noon political only?

Ellen,
Bob is OK moving this to next week. I just told Don Maddox so he could inform Bob Sussman.

-----Original Message-----
From: Gilinsky, Ellen
Sent: Friday, April 19, 2013 9:20 AM
To: Porterfield, Teri
Cc: Southerland, Elizabeth; Kopocis, Ken
Subject: Re: Is 316b mtg at noon political only?

We are in a meeting right now. Rob and betsy slammed with steam electric does this have to be today?

From: Porterfield, Teri
Sent: Friday, April 19, 2013 9:18:10 AM
To: Gilinsky, Ellen
Cc: Southerland, Elizabeth
Subject: RE: Is 316b mtg at noon political only?

Per Don Maddox - Bob Sussman wanted to include Betsy and Ron Wood. Don Maddox is getting ready to call you...

-----Original Message-----
From: Gilinsky, Ellen
Sent: Friday, April 19, 2013 9:16 AM
To: Porterfield, Teri
Cc: Southerland, Elizabeth
Subject: Is 316b mtg at noon political only?

Some confusion as betsy just got invite
ÿ

To: Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Gilinsky, Ellen
Sent: Thur 4/18/2013 8:36:52 PM
Subject: Fw: Do you all need any materials for 316(b) SP discussion tomorrow?
Use of Stated Preference Studies in 316(b) 2004 rule.docx
Stated preference FAQ_v7_clean.docx

Oops here are attachments let her know if you need more

From: Hewitt, Julie
Sent: Thursday, April 18, 2013 3:01:22 PM
To: Gilinsky, Ellen
Cc: Southerland, Elizabeth; Wood, Robert
Subject: Do you all need any materials for 316(b) SP discussion tomorrow?

The invite appears to be just political, incl. you, Ken and Nancy, but I'm not sure who from OW can actually go.

OP sent some materials forward, FYI. Attached, thanks to Mike Scozzafava. The FAQ page is fine; I'm not sure why the other page is about what the 2004 rule said, although I think it's all correct, too. **Ex. 5 - Deliberative**

Also FYI: Gina fielded a question about SP surveys at her confirmation hearing. I don't know the particulars of the question, but her response was basically "SP is a tool that the Agency has used in the past, and it is discussed in EPA's peer-reviewed Guidelines for Preparing Economic Analyses. I commit if confirmed to ensuring quality economic analyses."

To: Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Gilinsky, Ellen
Sent: Thur 4/18/2013 7:13:33 PM
Subject: Fw: Do you all need any materials for 316(b) SP discussion tomorrow?
Use of Stated Preference Studies in 316(b) 2004 rule.docx
Stated preference FAQ_v7_clean.docx

Do you?

From: Hewitt, Julie
Sent: Thursday, April 18, 2013 3:01:22 PM
To: Gilinsky, Ellen
Cc: Southerland, Elizabeth; Wood, Robert
Subject: Do you all need any materials for 316(b) SP discussion tomorrow?

The invite appears to be just political, incl. you, Ken and Nancy, but I'm not sure who from OW can actually go.

OP sent some materials forward, FYI. Attached, thanks to Mike Scozzafava. The FAQ page is fine; I'm not sure why the other page is about what the 2004 rule said, although I think it's all correct, too. **Ex. 5 - Deliberative**

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To: Kopocis, Ken[Kopocis.Ken@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Bathersfield, Nizanna[Bathersfield.Nizanna@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]
From: Scozzafava, MichaelE
Sent: Thur 4/18/2013 6:31:34 PM
Subject: FW: Material for the 4.19.13 -- 316(b) Stated Preference Meeting
Stated preference FAQ_v7_clean.docx
Use of Stated Preference Studies in 316(b) 2004 rule.docx

FYI- OP materials for the 316b meeting tomorrow. I told the scheduling office that OW will have materials as well

From: Kime, Robin
Sent: Thursday, April 18, 2013 2:29 PM
To: Scozzafava, MichaelE; Burley, Veronica; briefings
Cc: Kime, Robin; Bluhm, Kate
Subject: Material for the 4.19.13 -- 316(b) Stated Preference Meeting

Good afternoon,

Attached is supplemental material for the Acting Administrator's 316(b) meeting tomorrow 4/19/13. Please feel free to contact me with any questions.

Thank you

Robin

202.564.6587

To: Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Vaught, Laura
Sent: Thur 4/18/2013 2:57:22 PM
Subject: 316b for budget hearing
316b.docx

Per conversation - thanks!

To: Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Porterfield, Teri
Sent: Wed 4/17/2013 12:48:19 PM
Subject: RE: Discuss State of Preference Survey for 316b Rule

-----Original Appointment-----
From: Penman, Crystal **On Behalf Of** Kopocis, Ken
Sent: Wednesday, April 17, 2013 8:44 AM
To: Stroman, Gladys; Porterfield, Teri; Dickerson, Aaron; Anderson, Denise
Subject: Accepted: Discuss State of Preference Survey for 316b Rule
When: Friday, April 19, 2013 12:00 AM-1:00 AM (GMT-05:00) Eastern Time (US & Canada).
Where: 3412 ARN

To: Scozzafava, MichaelE[Scozzafava.MichaelE@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]
Cc: Penman, Crystal[Penman.Crystal@epa.gov]; Cash, Debbie[Cash.Debbie@epa.gov]
From: Bathersfield, Nizanna
Sent: Tue 4/16/2013 2:28:47 PM
Subject: OW & Senior Policy Counsel
OW & Senior Policy Counsel 4_17_13.docx

Hi everyone,

Here are the items that I have for the agenda for tomorrow's OW and Senior Policy Counsel meeting. Additionally, the current draft of the Agenda is attached to this message. Please let me know if you have any additions/changes. I did not include MSGP since it seems that it's now moving forward. Let me know if I should add this back in.

Thanks!

Nizanna

1. 316(b)

2. Steam Electric

3. Bristol Bay

4. CAFO FOIA

****

Nizanna Bathersfield

Special Assistant

Office of Water

U.S. Environmental Protection Agency

1201 Constitution Avenue

Rm. 3311

Washington, DC 20004

Phone: 202.564.2258

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OW & Senior Policy Counsel Weekly

April 17, 2013

ARN 3309

AGENDA

Review Agenda

Discussion Topics:

1. 316(b)
2.
3.
4.

Ex. 5 - Deliberative

To: Mccarthy, Gina[McCarthy.Gina@epa.gov]; Hooks, Craig[Hooks.Craig@epa.gov]; Bennett, Barbara[Bennett.Barbara@epa.gov]; Frank, Joyce[Frank.Joyce@epa.gov]; Jones, Jim[Jones.Jim@epa.gov]; Giles-AA, Cynthia[Giles-AA.Cynthia@epa.gov]; Jackson, Malcolm[jackson.malcolm@epa.gov]; Mallory, Brenda[Mallory.Brenda@epa.gov]; DePass, Michelle[DePass.Michelle@epa.gov]; Elkins, Arthur[Elkins.Arthur@epa.gov]; Kadeli, Lek[Kadeli.Lek@epa.gov]; Stanislaus, Mathy[Stanislaus.Mathy@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Spalding, Curt[Spalding.Curt@epa.gov]; Enck, Judith[Enck.Judith@epa.gov]; Garvin, Shawn[garvin.shawn@epa.gov]; KeyesFleming, Gwen[KeyesFleming.Gwendolyn@epa.gov]; Hedman, Susan[hedman.susan@epa.gov]; Curry, Ron[Curry.Ron@epa.gov]; Brooks, Karl[brooks.karl@epa.gov]; Cantor, Howard[cantor.howard@epa.gov]; Blumenfeld, Jared[BLUMENFELD.JARED@EPA.GOV]; McLerran, Dennis[mclerran.dennis@epa.gov]
Cc: Perciasepe Bob[Perciasepe.Bob@epamail.epa.gov]; Thompson, Diane[Thompson.Diane@epa.gov]; Monger, Jon[Monger.Jon@epa.gov]; Sussman, Bob[Sussman.Bob@epa.gov]; Imohiosen, Charles[Imohiosen.Charles@epa.gov]; Gilfillan, Brendan[Gilfillan.Brendan@epa.gov]; Ganesan, Arvin[Ganesan.Arvin@epa.gov]; Garcia, Lisa[Garcia.Lisa@epa.gov]; Dietrich, Debbie[Dietrich.Debbie@epa.gov]; Pallone, Sarah[Pallone.Sarah@epa.gov]; Woodka, Janet[Woodka.Janet@epa.gov]; Dickenson, Denise[DICKENSON.DENISE@EPA.GOV]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Foos, Brenda[Foos.Brenda@epa.gov]; Bittleman, Sarah[Bittleman.Sarah@epa.gov]; Kime, Robin[Kime.Robin@epa.gov]; Kenny, Shannon[Kenny.Shannon@epa.gov]; Barron, Alex[Barron.Alex@epa.gov]; Cristofaro, Alexander[Cristofaro.Alexander@epa.gov]; Schaaff, Lesley[Schaaff.Lesley@epa.gov]; Balserak, Paul[Balserak.Paul@epa.gov]; Cummings, Evangeline[Cummings.Evangeline@epa.gov]; Pritchard, Eileen[Pritchard.Eileen@epa.gov]; Schillo, Bruce[Schillo.Bruce@epa.gov]; Geller, Michael[Geller.Michael@epa.gov]; Hanley, Mary[Hanley.Mary@epa.gov]; Martin, KarenL[Martin.KarenL@epa.gov]; Ingram, Amir[Ingram.Amir@epa.gov]; Scozzafava, MichaelE[Scozzafava.MichaelE@epa.gov]; DAA[DAA@epa.gov]; Coleman, Sam[Coleman.Sam@epa.gov]
From: Goo, Michael
Sent: Tue 4/16/2013 12:52:50 PM
Subject: Final April-May 60 Day List
Chron 60 Day List April-May 2013.docx
60 Day List April-May 2013.docx

Based on your input, attached is a final 60-Day List for April and May 2013. The list, organized by program office and region, contains brief descriptions and timelines of EPA actions upcoming between now and the end of May. Also included are some priority policy actions, which are included without regard to the projected date of their next milestone. Also attached is a shorter, chronological version of this list.

I hope you and your immediate staff find this to be of use. Please feel free to contact me or Alex Cristofaro with any comments or questions.

Thanks

Michael

To: Goo, Michael[Goo.Michael@epa.gov]; Kime, Robin[Kime.Robin@epa.gov]; Poole, Jacqueline[Poole.Jacqueline@epa.gov]; Vaught, Laura[Vaught.Laura@epa.gov]; Sussman, Bob[Sussman.Bob@epa.gov]; Maddox, Donald[Maddox.Donald@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]
From: Robison, Ryan
Sent: Mon 4/15/2013 6:49:27 PM
Subject: Meeting with Edison Electric Institute on 316b

When: Monday, April 15, 2013 3:00 PM-4:00 PM (GMT-05:00) Eastern Time (US & Canada).
Where: Alm Conference Room

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

Ct: Ann Loomis - 202-585-4205

Attendees:
Lew Hay - NextEra
Tom Farrell - Dominion
Marv Fertel - Nuclear Energy Institute
Chris Crane - Exelon (not confirmed)
Randy LaBauve - NextEra
Joe Dominguez - Exelon
Ann Loomis - Dominion
Quin Shea - EEI

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Shapiro, Mike[Shapiro.Mike@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Keehner, Denise[Keehner.Denise@epa.gov]; Lape, Jeff[lape.jeff@epa.gov]; Hill, Randy[Hill.Randy@epa.gov]; Best-Wong, Benita[Best-Wong.Benita@epa.gov]; Sawyers, Andrew[Sawyers.Andrew@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Grevatt, Peter[Grevatt.Peter@epa.gov]
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From: Nelson, Tomeka
Sent: Fri 4/12/2013 7:14:17 PM
Subject: 2-week review report
4.12.2013 OP Review Status Update and Planning.docx

Have a great weekend!

Thanks!

Tomeka Nelson,
OW Water Policy Staff (Detail)
202-566-1291
Room 3226C EPA East

To: Goo, Michael[Goo.Michael@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; sussman.robert@epa.gov[sussman.robert@epa.gov]
Cc: Barron, Alex[Barron.Alex@epa.gov]
From: SKAFF, William
Sent: Fri 4/12/2013 2:53:53 PM
Subject: New Units at Existing Facilities

Michael, Ken, and Bob,

The Nuclear Energy Institute would like to thank you for extending to the electric power industry a generous amount of your time to express its concerns on Clean Water Act Section 316(b) regulations for existing facilities.

We unfortunately did not have time to get to what we consider a very important issue, **new units at existing facilities**, which is *not* about the *definition* of a new plant, but about the *treatment* of new plants at existing sites under the rule. I provided Michael with hardcopy of a letter I sent last year, but, for your convenience, I provide a brief discussion in electronic form here.

EPA had specifically requested comment in the preamble to the proposed rule "on whether the new unit provision should be deleted, therefore subjecting these units to the same site-specific entrainment BTA determination required of existing units." 76 Fed. Reg. at 22,275.

The industry believes that new units at existing facilities should be treated the same as existing units at the same site when determining entrainment measures. That is, new units should be subject to the same site-specific process for determining entrainment BTA, according to the nine factors that must be considered: organisms, water body, cost-benefit, thermal discharge, reliability, air pollution, land availability, plant life, and water consumption.

Otherwise, the rule will be self-defeating in terms of environmental protection. A state permitting authority would be constrained to require closed-cycle cooling, such as a cooling tower, for a *new* unit at an existing site when it had already determined this technology to be environmentally and socially unacceptable for *existing* units at that site and its ecosystem. I would suggest that this will occur fairly frequently. Considering nuclear energy alone, of the 30 new nuclear units proposed to be built, 26 of them are to be on brownfield sites.

Aside from cost-benefit considerations, there are potential environmental impacts from cooling towers that may not make them desirable at various sites. For instance, cooling towers consume twice as much

water as once-through systems. This water would not be available to aquatic life and downstream users, because it is, in fact, eliminated from the watershed entirely through evaporation. Also, cooling towers emit air pollution in the form of particulate matter and, if located on an estuary or coast, salt drift as well. For these reasons, the state permitting authority may not want to approve an air emissions permit for a cooling tower under Clean Air Act air quality regulations, and may not be able to do so anyway if the site is located in a non-attainment area.

Regarding impingement requirements for new units at existing facilities, we respectfully suggest that new units should be subject to the same impingement requirements as existing units at that site, for the same environmental reasons as stated above.

Thank you for considering our views on this aspect of the proposed rule.

William Skaff, Ph.D.

Director, Policy Analysis

Nuclear Energy Institute

202.739.8036

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Web site address: www.NEI.org/CongressionalResourceGuide

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Cc: Balserak, Paul[Balserak.Paul@epa.gov]; Cristofaro, Alexander[Cristofaro.Alexander@epa.gov]; Schaaff, Lesley[Schaaff.Lesley@epa.gov]; Barron, Alex[Barron.Alex@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; McGartland, Al[McGartland.Al@epa.gov]; Newbold, Steve[Newbold.Steve@epa.gov]
From: Poole, Jacqueline
Sent: Thur 4/11/2013 3:43:44 PM
Subject: Meeting with A. Loomis re: 316(b) - Call in number: **Non-Responsive**

When: Thursday, April 11, 2013 4:15 PM-5:15 PM (GMT-05:00) Eastern Time (US & Canada).
Where: EPA/ 1200 Pennylvania Ave., NW Washington, DC - DCRoomARN3500/OPEI

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

Please contact Jacqueline Poole or Verna Irving for escort - 202 564 - 4332

POC: Robin Kime

Robin,

On behalf of EEI and several companies, I would like to request a meeting with Michael Goo and others on his team to discuss the major issues involving the proposed 316b, cooling water intake structure rule. Several CEO's and leadership with EEI are scheduled to meet with Acting Administrator Perciasepe on April 15 at 3:00 pm. Staff for these companies would like to discuss some of the issues in advance of the meeting on the 15th. Companies who usually participate are NextEra, PSEG, PGE, Exelon and Dominion.

Since a few have to fly into town for the meeting, we are hoping something could be scheduled for Thursday afternoon or Friday this week. Let me know if you have any questions.

Thanks,

Ann Loomis
Senior Advisor for Federal &
Environmental Policy
Dominion
202-585-4205

To: Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Gilinsky, Ellen
Sent: Thur 4/11/2013 3:18:34 PM
Subject: FW: News Forwarded: Fishing for a reason to regulate...

Ellen Gilinsky

Ellen Gilinsky, Ph.D.

Senior Policy Advisor

EPA Office of Water

Room 3111 EPA East, Mail Code 4101M

1200 Pennsylvania Ave, NW

Washington, DC 20460

Phone: 202-564-2549

Cell: 202-236-6882

email: gilinsky.ellen@epa.gov

From: Gilinsky, Ellen
Sent: Thursday, April 11, 2013 11:11 AM
To: Stoner, Nancy
Subject: News Forwarded: Fishing for a reason to regulate...

You will want to read this – lambasts our stated preference study for 316b

Fishing for a reason to regulate
4/10/2013
Hill - Online, The

By Jeff Rosen, former general counsel, White House Office of Management and Budget - 04/10/13 10:30 AM ETThis Thursday, when the Senate holds its hearing on President Obama's nomination of Gina McCarthy for EPA administrator, attention is likely to be ...

Link: http://washingtonscene.thehill.com/blogs/congress-blog/energy-a-environment/292741-fishing-for-a-reason-to-regulate

To: Scozzafava, MichaelE[Scozzafava.MichaelE@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]
Cc: Penman, Crystal[Penman.Crystal@epa.gov]; Cash, Debbie[Cash.Debbie@epa.gov]
From: Bathersfield, Nizanna
Sent: Wed 4/10/2013 12:20:26 PM
Subject: OW & Senior Policy Counsel
OW & Senior Policy Counsel_4_11_2013.docx

Hi everyone,

Here are the items that I have for the agenda for tomorrow's OW and Senior Policy Counsel meeting. Additionally, the current draft of the Agenda is attached to this message. Please let me know if you have any additions/changes.

1. Steam Electric
2. 316(b)

Thank you!

Nizanna

****

Nizanna Bathersfield

Special Assistant

Office of Water

U.S. Environmental Protection Agency

1201 Constitution Avenue

Rm. 3311

Washington, DC 20004

Phone: 202.564.2258

****

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OW & Senior Policy Counsel Weekly

April 11, 2013

ARN 3309

AGENDA

Review Agenda

Discussion Topics:

1. Ex. 5 - Deliberative
2. 316(b)

To: Mccarthy, Gina[McCarthy.Gina@epa.gov]; Hooks, Craig[Hooks.Craig@epa.gov]; Bennett, Barbara[Bennett.Barbara@epa.gov]; Frank, Joyce[Frank.Joyce@epa.gov]; Giles-AA, Cynthia[Giles-AA.Cynthia@epa.gov]; Jackson, Malcolm[jackson.malcolm@epa.gov]; Mallory, Brenda[Mallory.Brenda@epa.gov]; DePass, Michelle[DePass.Michelle@epa.gov]; Elkins, Arthur[Elkins.Arthur@epa.gov]; Jones, Jim[Jones.Jim@epa.gov]; Kadeli, Lek[Kadeli.Lek@epa.gov]; Stanislaus, Mathy[Stanislaus.Mathy@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Spalding, Curt[Spalding.Curt@epa.gov]; Enck, Judith[Enck.Judith@epa.gov]; Garvin, Shawn[garvin.shawn@epa.gov]; KeyesFleming, Gwen[KeyesFleming.Gwendolyn@epa.gov]; Hedman, Susan[hedman.susan@epa.gov]; Curry, Ron[Curry.Ron@epa.gov]; Brooks, Karl[brooks.karl@epa.gov]; Martin, James[martin.james@epa.gov]; Blumenfeld, Jared[BLUMENFELD.JARED@EPA.GOV]; McLerran, Dennis[mclerran.dennis@epa.gov]
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From: Goo, Michael
Sent: Tue 4/9/2013 12:11:45 PM
Subject: Draft April-May 60-day List for Your Review and Comment
draft 60 Day List April-May 2013.docx

OP has prepared a draft 60-Day List report for April-May 2013. This document contains brief descriptions and timelines of EPA actions upcoming between now and the end of May. It also contains descriptions and timelines for some priority policy actions regardless of the projected date of their next milestone. Major active IRIS assessments and high-profile NEPA reviews are also included regardless of next milestone date. The report is generated using the Scout database and is intended to be used you and your immediate office staff.

As before, I'd appreciate your help in finalizing the attached report. In particular, I would like to make sure that:

(1) all relevant actions/milestones for your office are listed;

(2) the associated dates are as up-to-date as possible; and

(3) the associated descriptions are adequate and accurate.

If milestone dates need to be revised, those changes should be made directly in Scout (or in ADP Tracker for tiered actions) by your staff. Suggested changes to the 60-Day List titles and descriptions can be made in Scout by your staff using instruction previously provided them, or can be e-mailed to Lesley Schaaff and Bruce Schillo.

Please make any changes in Scout or provide us with any additional information by COB, Thursday, April 11.

If you or your staff have Scout related questions, please contact Bruce Schillo at 564-6552. If you have any other questions, please let me or Bruce Schillo know.

Thanks very much

- Michael

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Shapiro, Mike[Shapiro.Mike@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Keehner, Denise[Keehner.Denise@epa.gov]; Lape, Jeff[lape.jeff@epa.gov]; Hill, Randy[Hill.Randy@epa.gov]; Best-Wong, Benita[Best-Wong.Benita@epa.gov]; Sawyers, Andrew[Sawyers.Andrew@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Grevatt, Peter[Grevatt.Peter@epa.gov]; Flaharty, Stephanie[Flaharty.Stephanie@epa.gov]; Zipf, Lynn[Zipf.Lynn@epa.gov]; Faller, Heidi[Faller.Heidi@epa.gov]; Peck, Gregory[Peck.Gregory@epa.gov]; Lousberg, Macara[Lousberg.Macara@epa.gov]; Evalenko, Sandy[Evalenko.Sandy@epa.gov]; Skane, Elizabeth[Skane.Elizabeth@epa.gov]; Ruf, Christine[Ruf.Christine@epa.gov]; Loop, Travis[Loop.Travis@epa.gov]; Scozzafava, MichaelE[Scozzafava.MichaelE@epa.gov]; Code, Tanya[Code.Tanya@epa.gov]; Ortiz, Agnes[Ortiz.Agnes@epa.gov]; Krieger, Andrew[Krieger.Andrew@epa.gov]; Lopez-Carbo, Maria[Lopez-Carbo.Maria@epa.gov]; Sanelli, Diane[Sanelli.Diane@epa.gov]; Peterson, Jeff[Peterson.Jeff@epa.gov]; Bathersfield, Nizanna[Bathersfield.Nizanna@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Telleen, Katherine[Telleen.Katherine@epa.gov]
Cc: Nelson, Tomeka[Nelson.Tomeka@epa.gov]; Evalenko, Sandy[Evalenko.Sandy@epa.gov]
From: Evalenko, Sandy
Sent: Mon 4/8/2013 5:37:19 PM
Subject: 2-week review report
4 8 2013 OP Review Status Update and Planning.docx

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]
Cc: Hall, Jessica[Hall.Jessica@epa.gov]
From: Levine, MaryEllen
Sent: Sun 4/7/2013 2:34:59 PM
Subject: RE: Briefs in the Entergy Supreme Court case
Riverkeeper Supreme Court Brief in Entergy.pdf
Riverkeeper Op Cert Brief in Entergy.pdf
Riverkeeper Final Supp Brief - Phase II.pdf
Riverkeeeper's Final Brief April 2006.pdf
Riverkeeper's Final Reply Brief.pdf

Attached are the briefs your requested. I included the 2nd Circuit briefs since I am in the office now and can do it.

Mary Ellen

Mary Ellen Levine
Assistant General Counsel
Water Law Office
(202) 564-5487
Ariel Rios North Rm. 7510C

-----Original Message-----
From: Stoner, Nancy
Sent: Sunday, April 07, 2013 9:35 AM
To: Kopocis, Ken; Levine, MaryEllen; Witt, Richard; Neugeboren, Steven; Garbow, Avi
Subject: RE: Briefs in the Entergy Supreme Court case

Does anyone have the briefs that Riverkeeper filed? I gather from reading these briefs that Riverkeeper discussed the ELG standards at some length. Please send if you have them. thx

---

From: Kopocis, Ken
Sent: Friday, April 05, 2013 3:13 PM
To: Stoner, Nancy
Subject: FW: Briefs in the Entergy Supreme Court case

Somewhere you fell out of the e-mail chain.

From: Witt, Richard

Ex. 5 - Attorney Client

No. 07-588, 07-589 and 07-597

In the Supreme Court of the United States

ENTERGY CORPORATION, PETITIONER

v.

ENVIRONMENTAL PROTECTION AGENCY, ET AL.

PSEG FOSSIL LLC, ET AL., PETITIONERS

v.

RIVERKEEPER, INC., ET AL.

UTILITY WATER ACT GROUP, PETITIONER

v.

RIVERKEEPER, INC., ET AL.

On Writ of Certiorari
to the United States Court of Appeals
for the Second Circuit

BRIEF FOR RESPONDENTS
RIVERKEEPER, INC., ET AL.

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600 New Jersey Ave., N.W.
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REED W. SUPER
116 John Street
Suite 3100
New York, NY 10038
(212) 791-1881

* Counsel of Record

QUESTION PRESENTED

Whether Section 316(b) of the Clean Water Act, 33 U.S.C. § 1326(b), authorizes the Environmental Protection Agency to compare costs with benefits in determining the "best technology available for minimizing adverse environmental impact" at cooling water intake structures.

PARTIES TO THE PROCEEDING

In the United States Court of Appeals for the Second Circuit, the petitioners were Riverkeeper, Inc., Natural Resources Defense Council, Waterkeeper Alliance, Soundkeeper, Inc., Scenic Hudson, Inc., Save the Bay – People for Narrangansett Bay, Friends of Casco Bay, American Littoral Society, Delaware Riverkeeper Network, Hackensack Riverkeeper, Inc., New York/New Jersey Baykeeper, Santa Monica Baykeeper, San Diego Baykeeper, California Coastkeeper, Columbia Riverkeeper, Conservation Law Foundation, Surfrider Foundation, State of Rhode Island, State of Connecticut, State of Delaware, Commonwealth of Massachusetts, State of New Jersey, State of New York, Appalachian Power Co., Illinois Energy Ass'n, Utility Water Act Group, Entergy Corp., and PSEG Fossil LLC and PSEG Nuclear LLC. The respondents were the United States Environmental Protection Agency (EPA) and Stephen L. Johnson, in his official capacity as Administrator of EPA. Appalachian Power Co. and the Illinois Energy Ass'n were petitioners before the Second Circuit and are not parties in the proceedings now before this Court.

Pursuant to Supreme Court Rules 24.1 and 29.6, there is no change in the corporate disclosure statement previously filed by Riverkeeper, Inc., Natural Resources Defense Council, Waterkeeper Alliance, Soundkeeper, Inc., Scenic Hudson, Inc., Save the Bay – People for Narrangansett Bay, Friends of Casco Bay, American Littoral Society, Delaware Riverkeeper Network, Hackensack Riverkeeper, Inc., New York/New Jersey Baykeeper, Santa Monica Baykeeper, San Diego Baykeeper, California Coastkeeper, Columbia Riverkeeper, Conservation Law Foundation, or Surfrider Foundation.

TABLE OF CONTENTS

Page

Statement 1

A. Background 1

1. The Use of Cooling Water in theP roductiono fP ower 1

2. Cooling Water Intake Structures and their Adverse Environ-mentall mpact 3

3. TheC leanW aterA ct 5

4. EPAI nitiall mplementation 14

B. Administrative and Judicial ProceedingsB elow..... 16

1. EPAP hasel IR ulemaking 16

2. LowerC ourtD ecision 17

Summaryo fA rgument 19

Argument..... 22

Section 316(b) of the Clean Water Act does not authorize EPA to determine the "best technology available for minimizing adverse environmental impact" based on the agency's own comparison of the costs and benefits of possiblet echnologies 22

A. The plain meaning of Section 316(b) makes clear that comparing costs and benefits is outside the scope of EPA's authority in determining the "best technology available for minimizing adverse environmental impact" of cooling water intake structures . 23

B. The statutory structure and context confirm Section 316(b)'s plain meaning. 33

C. EPA's implementation of Section 316(b) doesn otd efeati tsp lainm eaning.....4 3

D Resort to legislative history is unnecessary in this case, but its examination reinforces Section 316(b)'s plain meaning 4 7

E. This Court must respect the policy choice madeb yC ongress 5 0

Conclusion 5 4

TABLE OF AUTHORITIES

Cases: Page

Ali v. Federal Bureau of Prisons, 128 S. Ct. 831 (2008) 53

Allison Engine v. U.S. ex rel. Saunders, 128 S. Ct. 2123 (2008)..... 33

American Textile Manufacturers Institute, Inc.v. Donovan, 452 U.S. 490 (1981) 28, 42

Appalachian Power Co. v. Train, 566 F.2d 451 (1977) 15

Chemical Manufacturers Ass'n v. NRDC, 470 U.S. 116 (1985) 32, 36

Chevron v. Natural Resources Defense Council, Inc., 467 U.S. 837 (1984) 41, 43, 46

City of Chicago v. Environmental Defense Fund, 511 U.S. 328 (1994) 42, 43

ConocoPhillips Co., et al. v. EPA, No. 06-60662 (5th Cir.) 16, 32

Davis v. Michigan Dept. of Treasury, 489 U.S. 803 (1989)..... 42

Dept. of Revenue, Kentucky v. Davis, 128 S. Ct. 1801 (2008)..... 28

Dolan v. Postal Service, 546 U.S. 481 (2006) 42

Cases—Continued: Page

E.I. du Pont de Nemours & Co. v. Train, 430 U.S. 112 (1977) 32, 53

EPA v. California State Water Resources Control Board, 426 U.S. 200 (1976)..... 6, 7, 48

EPA v. National Crushed Stone, 449 U.S. 64 (1980) 12, 35, 36

Gonzalez v. Oregon, 546 U.S. 243 (2006) 37

Keene Corp. v. U.S., 508 U.S. 200 (1993) 33

Mason v. Hill, 110 Eng. Rep. 692 (1833) 2

Milwaukee v. Illinois, 451 U.S. 304 (1981)..... 6

Motor Vehicles Manufacturers. Ass'n v. State Farm, 463 U.S. 29 (1983) 54

Natural Resources Defense Council, Inc. v. EPA, 863 F.2d 1420 (9th Cir. 1988) 15

Norfolk Southern Railway Co. v. Sorrell, 127 S. Ct. 799 (2007)..... 31

North Carolina v. EPA, 531 F.3d 896 (D.C. Cir. 2008) 53

Riverkeeper, Inc. v. EPA, 358 F.3d 174 (2nd Cir. 2004) 15, 16

Russello v. U.S., 464 U.S. 15 (1983) 33

Cases—Continued: Page

Sandusky Portland Cement Co. v. Dixon Pure Ice Co., 251 F. 506 (7th Cir. 1918) 2

Seacoast Anti-Pollution League v. Costle, 597 F.2d 306 (1st Cir. 1979) 45

Union Electric Co. v. EPA, 427 U.S. 246 (1976) 42

Whitman v. American Trucking Ass'ns, 531 U.S. 457 (2001) 37, 42

Statutes and Regulations

Clean Water Act

33 U.S.C. § 1311(c) 38

33 U.S.C. § 1311(g) 39

33 U.S.C. § 1311(h) 39

33 U.S.C. § 1311(m) 39

33 U.S.C. § 1311(n) 39

33 U.S.C. § 1314(b)(1)(B) 34, 37

33 U.S.C. § 1314(b)(2)(B) 35, 36, 37

33 U.S.C. § 1314(b)(4)(B) 39

33 U.S.C. § 1326(a).....14, 21, 38, 39, 49

33 U.S.C. § 1326(b)..... passim

Statutes and Regulations—Continued: Page

33 U.S.C. § 1342(a)(1)(B) 15, 46

40 C.F.R.

§ 125.85 46

§ 125.91 16

§ 125.94(a) 16

§ 125.94(a)(1)(i) 16

§ 125.94(a)(5)(i) 17

§ 125.94(b) 16

§ 125.94(b)(2)(ii)(A) 32

§ 125.94(b)(2)(ii)(B) 33

Federal Water Pollution Control Act Amendments of 1972, Pub. L. 92-500

86 Stat. 816 6

§ 301(b), 86 Stat. 844-45 (1972)..... 7

§ 302, 86 Stat. 846 (1972) 34, 37

§ 302(b)(2), 86 Stat. 846 (1972)..... 34

§ 304(b), 86 Stat. 851 (1972) 7

§ 306, 86 Stat. 854-56 (1972) 7

Miscellaneous

113 Cong. Rec. 30129 (1967) 5

41 Fed. Reg. (1976):

p. 17387 14

p. 17388 ..... 15, 25, 44

66 Fed. Reg. (2001)

p. 65256 16

p. 65309 46

71 Fed. Reg. 35006 (2006) 16

A Possible Basis for Agreement on Thermal Pollution 14

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House Proposal on Thermal Discharges (offered 9/14), § 316(e)(1)&(2) 13

FOIA 2014-009508 Interim 2

Miscellaneous—Continued: Page

Legislative History of the Water Pollution Control Act Amendments of 1972 (Committee Print compiled for the Senate Committee on Public Works by the Library of Congress), Ser. No. 93-1 (1973)

Vol. 1

86 Stat. 876, 1 Leg. Hist. 63 14

H.R. 11896, § 301(b)(2)(A), 1 Leg. Hist. 963-64 10

H.R. 11896, § 304(b)(1)(B), 1 Leg. Hist. 980-81 9

H.R. 11896, § 304(b)(2)(B), 1 Leg. Hist. 980-81 9

H.R. 11896, § 316(b), 1 Leg. Hist. 1044..... 49

H.R. 11896, § 316(d), 1 Leg. Hist. 1043-44 ..... 13, 49

H.R. Rep. No. 92-911, 1 Leg. Hist. 789..... 9

House Debate on H.R. 11896, 1 Leg. Hist. 350-51, 359-60 (Remarks of Reps. Blatnik and Jones) 6

ED_000110PST_00003818-00012

Miscellaneous—Continued: Page

Pub. L. 92-500 § 502(6), 1 Leg. Hist. 73 14

Statement of Sen. Muskie, 1 Leg. Hist. 161 ..... 7, 12, 36

Veto Message 1 Leg. Hist. 137 11-12

Vol. 2

Hearings on H.R. 11896, 2 Leg. Hist. 1132 9

S. 2770 § 304(b)(1)(B), 2 Leg. Hist. 1615 37

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FOIA 2014-009508 Interim 2

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ED_000110PST_00003818-00014

FOIA 2014-009508 Interim 2

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FOIA 2014-009508 Interim 2

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ED_000110PST_00003818-00016

BRIEF FOR RESPONDENTS
RIVERKEEPER, INC., ET AL.

STATEMENT

This Court granted certiorari to consider "whether Section 316(b) of the Clean Water Act authorizes the Environmental Protection Agency to compare costs with benefits in determining the 'best technology available for minimizing adverse environmental impact' at cooling water intake structures." The statutory language of Section 316(b) directly answers that question by denying EPA the authority the Agency claims to compare costs with benefits. The judgment of the court of appeals should be affirmed.

A. Background

1. The Use of Cooling Water in the Production of Power

The federal regulations challenged in this case apply to power plant cooling water intake structures that withdraw more than 50 million gallons of cooling water per day. Water has long served a central role in the production of power because of its remarkable physical and chemical characteristics.

During the nation's early years, water mills exploited the energy potential within water's liquid flow. 1 Louis C. Hunter, A History of Industrial Power in the United States 1780-1930 1-3 (1979). With the introduction of the steam engine in the middle of the eighteenth century, however, water became a power source based on its ability to convert from a liquid to a gas and then to cool. 2 Louis C. Hunter, A History of

Industrial Power in the United States 1780-1930 2 (1985).

A steam engine produces power by raising the temperature of liquid water sufficiently high to convert it to a gas and then by using the pressure generated by the gas in a confined space to produce mechanical power – for instance, to drive a piston. The first steam engines did not utilize water's cooling capacity, but as early as 1698, a newly-designed steam engine was able to produce greater power by spraying cooling water to condense the steam back to liquid water – the resulting vacuum generated further pressure capable of producing more power. See 2 Hunter, A History of Industrial Power, supra, at 1-2, 5-7, 671; see also Henry C. Meyer, Jr., Steam Power Plants: Their Design and Construction, 142-43 (3d ed. 1912). The increased demand by steam engines for water inevitably generated conflicts between competing users of waterways. See Mason v. Hill, 110 Eng. Rep. 692 (1833); Sandusky Portland Cement Co. v. Dixon Pure Ice Co., 251 F. 506 (7th Cir. 1918).

The steam engine's design remains basically the same today, whether the heat necessary to convert water from a liquid to a gas is produced by fossil fuel combustion or nuclear fission and whether the power drives a piston or a turbine to produce electricity. See M. M. Samuels, Power Unleashed: The Story of Electricity and Power, 222-24 (1943). What has dramatically changed is the physical scale of power plant operations and, accordingly, their environmental impact. Today, a typical 500 megawatt coal-fired power plant uses approximately 12 million gallons of cooling water per hour, or approximately 300 million gallons per day. For larger power plants, cooling water consumption can be greater than three billion gallons

per day. In 2000, thermoelectric power plants used 136 billion gallons of fresh water per day, which represents about 39 percent of the total withdrawal of fresh water in the United States. See U.S. Department of Energy, Addressing the Critical Link Between Fossil Energy and Water, 1-4 (2005). Thermoelectric power is also currently the single largest source of withdrawal of total water (fresh water and saline water) in the nation, accounting for 47 percent of that total. Pet. App. 170a.[1] The power plants covered just by the Phase II rule at issue in this case "withdraw more than 214 billion gallons of cooling water a day from waters of the United States." Id. at 169a-170a.

2. Cooling Water Intake Structures and their Adverse Environmental Impact

Because cooling water intake structures withdraw such extraordinarily large amounts of water, their withdrawals necessarily affect the full spectrum of organisms in the aquatic ecosystem at all life stages. Aquatic organisms are drawn into cooling water systems where they are either "impinged" onto components of the intake structure or "entrained" within the cooling water system itself. Pet. App. 170a. Impingement occurs when organisms are trapped against intake screens by the force of the water being withdrawn into the structure. Id. at 170a-171a. Entrainment happens when aquatic organisms are instead drawn through the cooling system. Entrained organisms are subject to severe mechanical, thermal, and toxic stresses. Id. at 171a.

[1] Citations to the Pet. App. refer to the appendix filed in No. 07-588.

As EPA has acknowledged, it is impossible to quantify with any precision the nature and extent of the adverse environmental impacts caused by the withdrawal of approximately 80 trillion gallons of water per year by cooling water intake structures. EPA has nonetheless estimated, looking only to fish and shellfish mortality caused by entrainment and impingement, that the cooling water intake structures covered just by the Phase II regulations at issue in this case cause the death of more than 3.4 billion fish and shellfish each year, expressed in terms of "age 1 equivalents."[2] Id. at 168a-174a; see National Wildlife Federation Amicus Br. I.A.1.

The harm caused by a cooling water intake structure is most directly related to the amount of water the structure withdraws, which largely turns on the type of cooling system the facility utilizes. There are generally two types of cooling systems: once-through cooling systems and closed-cycle cooling systems (wet or dry). As its name suggests, a once-through system circulates the water through a condenser and then returns the now-heated water to the water body from which it was withdrawn. U.S. DOE, Addressing the Critical Link, supra, at 3-4. A wet closed-cycle cooling system uses wet cooling towers, ponds, or lakes to dissipate the heat from the cooling water to the atmosphere. Id. A dry cooling system uses air to cool the exhaust steam. Id. The water use requirements of these cooling systems vary significantly. On average, a once-through system requires 37.7 gallons of water per kilowatt hour of power produced. A wet closed-cycle

[2] See Pet. App. 172a ("age 1 equivalents is an accepted method for converting losses of all life stages into individuals of an equivalent age").

cooling system, by contrast, uses only 1.2 gallons per kilowatt hour produced. Id.

3. The Clean Water Act[3]

a. The first reported congressional concern regarding the environmental harm from power plants' accelerating use of cooling water was in the 1960s. In 1967, Senator Warren Magnuson warned that "by 1980 thermal power plants throughout the Nation will require an amount of cooling water greatly in excess of the average flow of the mighty Mississippi at St. Louis." 113 Cong. Rec. 30129 (1967). Congress held extensive hearings in 1968 and 1969 on the effects of waste heat produced by industrial facilities, focusing on the adverse environmental effects of thermal discharges, but also considering the impact of cooling water intake.[4] A 1968 White House report described how "the large volumes of water withdrawn in once-through cooling processes" can

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[3] This brief offers an extensive discussion of the legislative background leading up to Section 316(b)'s congressional enactment. None is necessary for this Court's resolution of the question presented, which is answered by the statutory language's plain meaning without any resort to the legislative history. The legislative history is entirely in keeping with that plain meaning (see pp. 47-50, *infra*), and is provided only for the purpose of refuting petitioners' mischaracterizations of it.

[4] See Thermal Pollution, Hearings before the Subcomm. on Air and Water of the Senate Comm. on Public Works, 90th Cong., pts 1-4 (1968); id. at 1 (statement of Sen. Muskie) ("[b]y the end of the next decade, approximately one-sixth of the total fresh-water runoff in the United States will be required for cooling and condensing purposes."); id. at 98-102, 104, 112-13, 137-38, 143 (testimony on intake impact on aquatic organisms); Environmental Effects of Producing Electric Power, Hearings before the Joint Committee on Atomic Energy, 91st Cong., pt. 1, 341-45, 375-76 (1969) (intake impact).

have "as much or more effect on aquatic life in a stream than the waste discharges on which control measures are required." See Office of Science and Technology of the Executive Office of the President, Considerations Affecting Steam Power Plant Site Selection, 46 (1968).

b. In 1972, "Congress, recognizing that 'the Federal water pollution control program * * * ha[d] been inadequate in every vital aspect * * *,' passed the Federal Water Pollution Control Act Amendments of 1972, Pub. L. 92-500, 86 Stat. 816," now referred to as the Clean Water Act. Milwaukee v. Illinois, 451 U.S. 304, 310 (1981), quoting S. Rep. No. 92-414, 7 (1971), 2 Legislative History of the Water Pollution Control Act Amendments of 1972, 1452 (Committee Print compiled for the Senate Committee on Public Works by the Library of Congress), Ser. No. 93-1 (1973) (hereinafter "2 Leg. Hist."). The 1972 "Amendments were viewed by Congress as a 'total restructuring' and 'complete rewriting' of the existing water pollution legislation." Id. at 317, quoting House Debate on H.R. 11896, 1 Leg. Hist. 350-51, 359-60 (remarks of Reps. Blatnik and Jones).

The single most important regulatory reform achieved by the 1972 Act was the seemingly paradoxical notion that the nation's ambitious water quality goals could best be achieved if they were no longer tied to compliance with water quality standards. Congress concluded that past efforts to maintain such a regulatory link had failed because the science of water ecology was too complex to measure the "tolerable effects" with the precision necessary to have water quality standards serve as the primary touchstone for determining the appropriate level of control. EPA v. California State Water Resources Control Board, 426 U.S. 200, 202-03 (1976).

The 1972 Act, accordingly, fundamentally restructured the law to rely in the first instance on the imposition of a series of categorically-determined technology-based standards that did not themselves depend on site-specific showings of impact of particular activities on water quality. First promoted by Senator Howard Baker and then embraced by Senator Edmund Muskie,[5] these technology-based standards were designed to achieve the maximum reduction in activities that degraded water quality, by focusing on the extent to which certain technology was, depending on the type of source or pollutant, "practicable," "achievable," "available" or "demonstrated." See Pub. L. 92-500, §§ 301(b), 304(b), 306, 86 Stat. 844-45, 851, 854-56 (1972). The new Act retained the prior approach of seeking compliance with state water quality standards, but only as a supplement to the controls first imposed by the technology-based standards. See id. § 301(b)(1)(C); EPA v. California State Water Resources Control Board, 426 U.S. at 205 n.12.

c. Congress accomplished this major reform only after the House and Senate first passed sharply different bills and met 39 times over six months to reach an agreement. Statement of Sen. Muskie, 1 Leg. Hist. 161. A central issue splitting the two chambers was the extent to which Congress should delegate to EPA the authority to consider and compare costs with benefits in determining the technology-based standards.

The Senate favored a technology-based approach that did not depend on EPA's assessment of the associated water quality benefits of such control,

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[5] See Paul Milazzo, *Unlikely Environmentalists – Congress and Clean Water, 1945-1972*, 214, 220-21 (2006).

including a comparison of control costs to benefits. The Senate report accompanying its bill left no question why such a fundamental shift was necessary: "the great difficulty associated with establishing reliable and enforceable precise effluent limitations on the basis of a given stream quality. Water quality standards, in addition to their deficiencies in relying on the assimilative capacity of receiving waters, often cannot be translated into effluent limitations * * * because of the imprecision of models for water quality and the effects of effluents in most waters." S. Rep. 92-414, 2 Leg. Hist. 1426. "With effluent limits, the Administrator can require the best control technology; he need not search for a precise link between pollution and water quality." Id.

The Senate version of the new law required existing point sources of pollution to comply with two phases of technology-based controls that would become increasingly stringent over time: "In Phase I, to be implemented by 1976, all industrial pollution sources must apply the best practicable technology" ("BPT") and "[i]n Phase II, to be implemented by 1981, * * * industries will be required to apply, where the goal of no-discharge cannot be attained, the best available technology" ("BAT"). S. Rep. 92-414, 2 Leg. Hist. 1426. Although for each, the "costs" of control was a factor to be considered in determining the relevant technology-based standard, whether BPT or BAT, there was no allowance for any weighing by EPA of the costs and benefits, consistent with the Senate's decision to remove any linkage between the technology-based standards and a showing of water quality impacts. By contrast, for new point sources, the applicable technology-based standard in the Senate bill did allow for an exemption from the categorically-determined technology-based best

available control technology standard based on facility-specific weighing of costs and benefits, but only for those facilities that became subject to the standard for "new" sources because of a modification of the facilities. S. Rep. 92-414, 2 Leg. Hist. 1475, 1477; see S. 2770, § 306(b)(1)(C), 2 Leg. Hist. 1626-27.

d. The House and the Administration immediately criticized the Senate for its rejection of water quality-based regulation and its related elimination of cost-benefit analysis from almost all aspects of technology-based standards. The EPA Administrator complained that because the Senate bill "eliminates over a period of time the concept of water quality standards and instead depends completely on effluent limitations based on the best available technology or better. * * * Thus, the social benefit we are all seeking – high quality water – is eliminated from the equation and technology is substituted in its place." Hearings on H.R. 11896, 2 Leg. Hist. 1183; see id. at 1132 (testimony of Russell Train, Chairman, Council on Environmental Quality) (criticizing "an across-the-board treatment requirement unrelated to the benefits to be derived"). The Administration produced a cost-benefit analysis that claimed that the costs of the Senate version were exorbitantly high compared to its benefits. Milazzo, Unlikely Environmentalists, supra, at 227-28.

The House-passed bill sharply departed from the Senate version on the role of cost-benefit analysis. For determining both BPT and BAT, the House bill expressly instructed EPA to consider "the cost and the economic, social, and environmental impacts of achieving such effluent reduction." H.R. Rep. No. 92-911, 1 Leg. Hist. 794; see H.R. 11896, § 304(b)(1)(B) & (b)(2)(B), 1 Leg. Hist. 980-81. The House bill also declined to make the Phase II BAT requirement

applicable absent subsequent congressional action. It first required the National Academy of Sciences to complete a cost-benefit analysis. H.R. Rep. No. 92-911, 1 Leg. Hist. 789; see H.R. 11896, § 301(b)(2)(A), 1 Leg. Hist. 963-64. Finally, the House version provided that technology-based provisions for new sources would not apply to modified sources in the absence of a "reasonable relationship" of costs to benefits. Id. at 798.

e. The Conference Committee met over six months before reaching agreement.[6] The two chambers split

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[6] The voluminous materials documenting the committee negotiations on the precise wording of the bill's language, especially regarding technology-based standards and the proper role of cost-benefit analysis, are all available in the National Archives and located in a series of "Cartons" labeled "Accession No. 46-75-003, Senate Public Works Committee, Subcommittee on Environmental Pollution, Federal Water Pollution Legislation Files." Within each box there are "Folders" with topic labels and often smaller individual "Files" with topic labels. Only because the more detailed history documented by the National Archives provides a further layer of historical detail potentially of interest to some members of the Court, this brief includes references to that documentation. See notes 7-8, *infra*. The brief refers to six documents located in four different committee files: (1) a file labeled "316," containing drafts of Section 316, in a Folder labeled "Conference Committee Language" contained in Carton No. 2; (2) a file containing correspondence on "Phase I and Phase II," in a Folder labeled "Conference Committee Memos" in Carton No. 2; (3) files labeled "9/13" and "9/14," containing notes on the individual sessions of the House and Senate conferees held on September 13th and 14th, 1972, in a Folder labeled "House-Senate Conference Committee 1972 Water Pollution Bill," in Carton No. 2; and (4) a file labeled "General," containing internal committee memoranda to Senator Muskie and to the Senate Conferees in a folder labeled "House-Senate Conference Committee 1972 Water Pollution Bill" in Carton No. 2. References to documents within this archival material will hereinafter be referred to by the name of the document, file name and the National Archives (e.g., "*A Possible*

fundamentally on the central policy issue of whether the degree of regulation should be defined, as the Senate preferred, by technology-based standards that did not turn on an assessment of water quality impacts and cost-benefit analysis, or the House version, which did.[7]

In the fall of 1972, the conferees reached agreement on a bill that each chamber passed by overwhelming margins, and then Congress overrode a veto triggered by the President's view that the bill's "unconscionable $24 billion price tag" far outstripped its benefits. Veto

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Basis for Agreement on Thermal Pollution, '316 File' Nat. Arch."). For the Court's convenience, we are filing a motion to lodge copies of the National Archives materials cited.

[7] The internal committee documents in the National Archives show a persistent effort by some House conferees to allow EPA to compare costs and benefits both in the establishment of technology-based standards and in allowing individual facilities to seek water quality variances. And, they also demonstrate an equally persistent effort, mostly by Senate conferees, to resist both efforts on the ground that such provisions would invariably invite back into the regulatory equation the very consideration of water quality impacts they believed would undermine the statute's ability to achieve its goals. See, *e.g.*, *Memorandum from Leon G. Billings [Staff Director] to Senate Conferees, Re: Options to the House Proposal on Title III*, 2 (June 15, 1972) ("Phase I and II File" Nat. Arch.) ("The staff believes that the House proposal which would require the application of new source performance standards to existing sources by 1985 unless social and economic and environmental cost outweighed social, economic and environmental benefits would be disastrous. * * * [T]here is no way to adequately quantify the social and economic and environmental benefits of pollution control in relation to the cost associated with that pollution control."); *id.* at 3 ("The House proposal is directly contrary to the Senate concept in that it would require that * * * no controls could be applied unless there were quantifiable benefits to be achieved. This is nothing more or less than an extension of water quality standards.").

Message, 1 Leg. Hist. 137. The new law embraced the technology-based approach favored by the Senate with a two-phase approach for existing industrial point sources of pollution and a separate standard for new sources, but with a few discrete concessions to the House.

The legislation enacted allowed for some "limited cost-benefit analysis" in BPT's determination for Phase I, but not for BAT in Phase II. Statement of Sen. Muskie, 1 Leg. Hist. 170. "In assessing the BPT the Administrator is to consider 'the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application.'" EPA v. National Crushed Stone, 449 U.S. 64, 70 (1980). But "in assessing BAT total cost is no longer to be considered in comparison to effluent reduction benefits." Id. at 71; see id. at 71 n.10.

f. Congressional consideration of Section 316, including Section 316(b)'s provision regarding a technology-based standard applicable to cooling water intake structures, reflects this same legislative debate concerning the extent to which, if at all, Congress should authorize EPA to compare costs and benefits in regulating activities that adversely affect the aquatic environment. The House and the Senate were, at the outset, focusing largely on the impact of thermal discharges, until the House introduced the related issue of cooling water intake that had been discussed in the prior legislative hearings.

On the discharge issue, the Senate bill favored subjecting the discharge of heat to the generally applicable technology-based standards for existing and new sources. Statement of Sen. Muskie, 1 Leg. Hist. 175. The House bill, however, considered "heat"

appropriate for regulation based on a cost-benefit analysis. The House bill, accordingly, instructed EPA to exempt a thermal discharge from regulation upon a determination by EPA that "the economic and social costs of implementing the regulations at a point source bear no reasonable relationship to the economic and social benefits (including water quality objectives) to be attained." H.R. 11896, § 316(d), 1 Leg. Hist. 1043-44. The House also called for consideration of "alternative methods" for control, including "cooling devices," "once-through cooling," and "evaporative cooling towers," and instructed EPA to take into account "their relative social and economic costs and benefits," and "their relative impact on the environment, considering not only water quality but also * * * conservation of natural resources." Id. § 316(b).

The House and Senate conferees met over the summer on Section 316 without reaching agreement, but then reached a compromise agreement by drawing a distinction between the regulation of thermal discharges and cooling water intake.[8] Both would be

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[8] The stalemate continued over the summer (see *Memorandum from Leon Billings to Senator Muskie on "Status of the Water Pollution Conference,* 2-3 (July 11, 1972) ("General File" Nat. Arch.)). On September 13th and 14th, the conferees broke the logjam by representatives within each chamber suggesting a water-quality approach for thermal *discharge* and a technology-based approach for cooling water *intake*. Under the House proposal, regulation of thermal discharges would have been based on water quality standards, and "cooling water intake facilities" would be subject to a two-phase technology-based standard approach, with a July 1, 1977, deadline for compliance with "best practicable control technology" and a July 1, 1983 deadline for application of "best available demonstrated technology." See *House Proposal on Thermal Discharges (offered 9/ 14)*, §316(e)(1)&(2), ("316 File" Nat. Arch.) Among the Senate conferees, Senator Jennings Randolph

subject to technology-based standards, with "heat" expressly defined as a "pollutant" and thereby triggering the BPT and BAT technology-based standards (see § 502(6), 1 Leg. Hist. 73), but a biologically-based variance – expressed in terms of protection of fish populations – would be made available for thermal discharges under Section 316(a). See 86 Stat. 876, 1 Leg. Hist. 63. Section 316(b) set forth a distinct statutory approach to cooling water intake. It simply announced a technology-based standard for the express purpose of "minimizing adverse environmental impact" without any allowance for the kind of relaxing of a technology-based standard contemplated by Section 316(a). Id.

4. EPA Initial Implementation

a. EPA first promulgated Section 316(b) regulations in 1976. 41 Fed. Reg. 17387 (J.A. 38). The Agency then refuted any claim of authority to compare costs and benefits in determining the "best technology available" ("BTA") required for cooling water intake structures under Section 316(b). Rejecting an industry recommendation, EPA explained not only that "[n]o comparison of monetary costs with the social benefits of minimizing adverse environmental impacts * * * is

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proposed a similarly-bifurcated approach to thermal discharge and cooling water intake, except that it provided that "[t]he design and construction of cooling water intake structures would have to be in accordance with the best available technology for minimizing environmental effects." See *A Possible Basis for Agreement on Thermal Pollution* ("316 File" Nat. Arch.); Notes on 9/13 and 9/14 Conference Meetings ("9/13 File" & "9/14 File" Nat. Arch.) (describing Senator Randolph's proposal at "9/13 File," p. 3). The documents within the relevant files belie the Solicitor General's assumption (Br. 11, 23, 34) that Section 316(b) was a mere "afterthought."

required by the terms of the Act" (id. at 17388), but also indicated that the Agency had no discretion to do so, because "[t]he statute directs the Agency to insure that enumerated aspects of cooling water intake structures reflect the best technology available for minimizing adverse environmental effects" and, consequently, "the effort must be to select the most effective means of minimizing (i.e., 'reducing to the smallest possible amount or degree') those adverse effects." Id. (emphases supplied).

b. The Fourth Circuit in Appalachian Power Co. v. Train, 566 F.2d 451 (1977) invalidated EPA's Section 316(b) regulations on procedural grounds. After more than 15 years of inaction, EPA entered into a consent decree to promulgate new regulations, which the Agency ultimately accomplished in three specific phases:[9] (1) Phase I for cooling water intake structures at new facilities that withdraw daily at least two million gallons of water; (2) Phase II for intakes at larger existing power plants; and (3) Phase III for structures at new offshore and coastal oil and gas extraction facilities, existing manufacturing facilities, and smaller existing power plants. Pet. App. 6a. In the absence of applicable Section 316(b) regulations in the interim years, cooling water intake standards have been relegated to ad hoc determination by individual permit writers – typically state agencies, exercising "best professional judgment" pursuant to 33 U.S.C. § 1342(a)(1)(B). See Natural Resources Defense Council, Inc. v. EPA, 863 F.2d 1420, 1424 (9th Cir. 1988).

c. In 2001, EPA promulgated its Phase I

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[9] These "phases" are entirely distinct from the two "phases" Congress contemplated for technology-based standards under Sections 301 and 304. See p. 12, *supra*.

regulations, which were mostly upheld in Riverkeeper, Inc. v. EPA, 358 F.3d 174 (2nd Cir. 2004). See 66 Fed. Reg. 65256 (2001). EPA promulgated its Phase II regulations, challenged here, in 2004. See Pet. App. 122a-593a. The Agency promulgated its Phase III regulations in 2006 (see 71 Fed. Reg. 35006), and a challenge to that rulemaking is currently pending. See ConocoPhillips Co. v. EPA, No. 06-60662 (5th Cir.).

B. Administrative and Judicial Proceedings Below

1. EPA Phase II Rulemaking

EPA's Phase II Section 316(b) rulemaking applies to cooling water intake structures with a design flow of at least 50 million gallons of water per day at existing power producing facilities subject to Section 301 of the Clean Water Act. Pet. App. 9a-10a (40 C.F.R. § 125.91)). EPA determined that closed-cycle cooling systems were not required and that a covered point source could meet the BTA standard by utilizing any of a "suite of technologies" capable of meeting national technology-based performance standards. Id. at 12a. These performance standards required that impingement mortality and entrainment be reduced for all life stages of fish and shellfish within specified numeric ranges (expressed as percentage reductions from a baseline), with some facilities exempted from the entrainment requirement. Id. at 12a-14a (40 C.F.R. § 125.94(b)).

The Phase II regulations established several compliance alternatives for achieving these standards. Pet. App. 10a (40 C.F.R. § 125.94(a)). The first included a reduction in flow commensurate with a closed-cycle recirculating system, which would be deemed sufficient to meet both impingement mortality and entrainment performance standards. Id. at 12a (§ 125.94(a)(1)(i)).

Another option was "a site-specific compliance alternative" that required a permitting authority to make a site-specific determination of BTA that is "as close as practicable" to national performance standards if a facility demonstrated that its compliance costs would be "significantly greater than the benefits of complying" with the performance standards. See id. at 14a (§ 125.94(a)(5)(i)).

2. Lower Court Decision

Both industry petitioners and environmental and state respondents petitioned for review of the EPA Phase II rulemaking, which was heard on direct review by the Second Circuit. The appellate court denied almost all industry challenges[10] and granted relief in response to all respondents' claims.[11] Pet. App. 1a-94a.

First, the court held that EPA had failed to explain adequately the basis of it s rulemaking. The "record evidence alone * * * is oblique, complicated, and insufficient to permit us to determine what the EPA relied upon in reaching its conclusion." Pet. App. 35a;

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[10] The court rejected industry challenges to EPA's application of Section 316(b) to existing sources, definition of "adverse environmental impact," assumption of zero entrainment survival, lack of definition of "Great Lakes," and failure to account for the supposedly disproportionate impact on the nuclear industry. None of those rulings is affected by this Court's disposition of this case.

[11] Because the question presented by this case is distinct from most of these rulings in favor of respondents below, a remand to EPA is necessary regardless of the outcome in this case. Lower court rulings include that facilities cannot meet national performance standards based on use of restoration measures, that the ranges within EPA's national performance standards impermissibly allowed facilities capable of meeting higher standards to meet lower standards instead, and that there was inadequate notice of various other aspects of the rule.

see also id. at 33a ("difficult to discern from the record how EPA determined that the cost of closed-cycle cooling could not be reasonably borne by the industry").

Second, the court held that "the language of 316(b) itself plainly indicates that facilities must adopt the best technology available and that cost-benefit analysis cannot be justified in light of Congress's directive." Pet. App. 23a-24a (emphasis omitted). The court stressed, however, that EPA could take costs into account. The terms "best available" meant EPA should consider whether the costs of a particular technology could be "reasonably borne" by the industry. Id. at 24a. The court also made clear that if more than one technology achieves "essentially the same results," EPA can "appropriately choose the cheaper technology" on cost-effectiveness grounds. Id. at 27a.

On this same ground, the court faulted both EPA's rejection of the closed-cycle cooling option for national performance standards and its allowance of a site-specific cost-benefit compliance variance option. With regard to the former, the court ruled that it could not discern whether EPA had improperly relied on a cost-benefit comparison because, as previously described, the Agency had failed to articulate the basis of its decision. The court, accordingly, remanded to EPA for an adequate explanation of its decision. Id. at 32a, 36a-37a.

The court, however, squarely concluded that the cost-benefit variance option was invalid: "The Agency is * * * precluded from undertaking such cost benefit analysis because the BTA standard represents Congress's conclusion that the costs imposed on industry in adopting the best cooling water intake structure available * * * are worth the benefits in reducing adverse environmental impacts." Pet. App.

57a-58a. The court further noted how the site-specific cost-benefit compliance option directly contravened Congress's policy choice in the Act not to relax technology-based standards on the basis of local water quality. Id. at 58a.

SUMMARY OF ARGUMENT

The short answer to the question posed by this Court in granting certiorari is that Congress did not authorize EPA in Section 316(b) of the Clean Water Act to compare costs and benefits in determining the "best technology available for minimizing adverse environmental impact" of cooling water intake structures. Congress instead exercised its prerogative to answer that essential policy question itself by prescribing the extent to which both costs should be incurred and benefits should be achieved. And, Congress's deliberate decision to adopt a technology-based performance standard approach that precludes EPA from striking a different cost-benefit balance is entirely in keeping with the legislature's highly successful decision in 1972 to free the safeguarding of the nation's waters from the scientific and economic uncertainties inherent in the application of water quality standards.

A. To find the answer to the question posed by this Court, one need look no further than the plain meaning of Section 316(b)'s language. The statute provides that EPA must develop standards governing the design, location, construction, and capacity of cooling water intake structures that reflect the "best technology available for minimizing adverse environmental impact." Congress, accordingly, made clear the two defining touchstones for EPA's determination of this particular "best technology" standard. The technology

must be "available" and it must be the best of those available technologies for "minimizing adverse environmental impact." The former governs the extent to which costs can and must be tolerated, and the latter establishes the extent to which environmental benefits can and must be achieved consistent with those costs.

What is not left for EPA is any authority to reconsider how those costs and benefits should be weighed in comparison to each other. EPA can no more determine that the costs of available technology do not warrant the benefits of minimizing the adverse environmental impact than it can conclude that the benefits warrant a cost higher than that supported by available technology. Congress took both those inquiries off the table.

B. The Clean Water Act's overall structure confirms Section 316(b)'s plain meaning. Throughout the Act, Congress used precise and particular language to make clear to what extent costs and benefits could be considered by EPA in the establishment of various technology-based performance standards and when, in carefully limited contexts, any independent comparison by EPA of the relation of those costs to pollution control benefits would be permissible. Within that broader statutory context, Congress's contrasting failure to provide EPA with any such cost-benefit comparison authority in Section 316(b) is dispositive of the question presented in this case.

C. In the face of such clear statutory meaning, the legislative history need not be consulted. But, not surprisingly, that history fully corroborates the statutory text's plain meaning. What that history reveals is that the single most important policy issue facing Congress and the White House in 1972 was the

extent to which Congress should strike the cost-benefit balance itself or instead delegate such authority to EPA in the establishment of water pollution controls capable of meeting the nation's ambitious goals for protecting water quality. The Senate and House embraced sharply contrasting approaches and reached a compromise bill only after more than six months of conference committee deliberations on the precise statutory wording on the role of costs, benefits, and their comparison. The final bill repeatedly eliminated language in different sections that would have authorized EPA to engage in the kinds of cost-benefit comparisons petitioners here advocate.

Indeed, Section 316 itself expresses a clear congressional compromise directly relevant to the resolution of this case, based on the different policy approaches that Congress embraced in addressing the regulation of thermal discharges in Section 316(a) and cooling water intake in Section 316(b). For the former, Congress rejected a House proposal to authorize EPA to engage in cost-benefit analysis, but Congress did allow EPA to excuse compliance with a technology-based standard upon demonstration of achievement of a prescribed biologically-based standard. But for the latter, Congress required a strict technology-based approach under which Congress itself answered the question of how costs and benefits should be compared: the adverse environmental impact must be "minimized" by use of the "best technology available."

D. What EPA plainly cannot now do is write back into the statute the very wide-ranging authority to compare costs and benefits that Congress purposely denied EPA. Nor can this Court second-guess that legislative policy determination. The judgment of the court of appeals should be affirmed.

ARGUMENT

SECTION 316(b) OF THE CLEAN WATER ACT DOES NOT AUTHORIZE EPA TO DETERMINE THE "BEST TECHNOLOGY AVAILABLE FOR MINIMIZING ADVERSE ENVIRONMENTAL IMPACT" BASED ON THE AGENCY'S OWN COMPARISON OF THE COSTS AND BENEFITS OF POSSIBLE TECHNOLOGIES

We note at the outset that industry petitioners and the Solicitor General fundamentally disagree on the proper analytic framework for resolving the question presented.[12] Industry petitioners believe that Section 316(b)'s meaning is plain and unambiguously authorizes EPA to compare costs and benefits in establishing BTA. See Entergy Br. 31-32; UWAG Br. 31. The Solicitor General, however, contends that the statutory language "does not speak to the question presented" but is instead ambiguous. U.S. Brief 15. The Solicitor General nonetheless argues that EPA's view of Section 316(b) should be upheld as a reasonable interpretation of ambiguous statutory language. Id. at 15-23.

The Solicitor General is correct that the statute's plain meaning does not support industry petitioners' reading of Section 316(b). But the Solicitor General is wrong in contending that the language is ambiguous and can be reasonably construed to allow EPA authority to compare costs and benefits. The plain meaning, as

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[12] Because the Solicitor General on behalf of respondent EPA is aligned with industry petitioners on the question before this Court, general references in this brief to the "petitioners" will refer both to the Solicitor General and industry petitioners. Otherwise, these parties will be referred to separately as the "Solicitor General" and "industry petitioners."

evidenced by the language Congress used in Section 316(b), the statutory structure and purpose, and the legislative history, denies EPA any such authority, and the relevant statutory language cannot be reasonably construed to support the Solicitor General's position.

A. The Plain Meaning of Section 316(b) Makes Clear that Comparing Costs and Benefits Is Outside the Scope of EPA's Authority in Determining the "Best Technology Available for Minimizing Adverse Environmental Impact" of Cooling Water Intake Structures

1. Petitioners strive mightily to avoid the plain meaning of the words Congress actually wrote in Section 316(b) by seizing on a series of "sometimes" (U.S. Br. 16) meanings of the statutory language derived not from the primary, secondary, or even tertiary definitions of the relevant terms but from the octonary ones. They accordingly concoct an extraordinary reading of Section 316(b) that is boundless in its delegation of lawmaking authority to EPA:

> [T]he 'best technology available for minimizing adverse environmental impact' may be the most suitable or desirable technology available for reducing such impact, to whatever extent the decisionmaker believes appropriate in light of competing values.

Entergy Br. 36.

"Best" is therefore stripped out of its statutory context to allow EPA to select the technology it prefers based on whatever factors it deems appropriate. See Entergy Br. 33; U.S. Br. 15-16. The statutory requirement that the technology be best "for minimizing

adverse environmental impact" is completely undone by the claim that the word "for" allows EPA to decide whether a particular technology is "suitable" or "appropriate" based on whichever factors it deems proper, wholly apart from the statutory requirement that adverse environmental impacts be "minimiz[ed]" by available technology. See U.S. Br. 16. And, finally, the "minimizing" standard itself is transformed into no more than a "reduction" aspiration that EPA is permitted to pursue while simultaneously pursuing other competing values of its choice. See U.S. Br. 17-18; Entergy Br. 34-35.

Contrary to petitioners' proffer, however, the role of a court in construing statutory language is not to determine its strained meaning, but its plain meaning. While discernment of the former might call for a journey into rarefied and unlikely uses of language, the latter is much simpler and therefore more judicial. It looks to the primary and ordinary meaning of the language Congress used in its context. Here, moreover, the ordinary meaning of the language at issue is wholly consistent with the primary definitions of all the relevant terms. Section 316(b) means exactly what it says.

a. First, the word "best" in no manner authorizes EPA to engage in wide-ranging cost-benefit analysis. The primary, ordinary meaning of "best" when used, as in Section 316(b), as an adjective is "surpassing all others in excellence." The American Heritage Dictionary of the English Language 173 (4th ed. 2000); see Webster's Third New International Dictionary 208 (1971) ("excelling or surpassing all others of its kind"); 2 The Oxford English Dictionary 139 (2d ed. 1989).

If, of course, Section 316(b) provided only that EPA

should determine the "best technology," without more, then petitioners might reasonably argue that Congress had delegated to EPA authority to determine what the technology should be "best" at accomplishing. But Section 316(b) does no such thing. The statute expressly dictates precisely what the technology must be best "for": "minimizing adverse environmental impact."

b. Here too, the meaning of "for" is clear and we need look no further than its primary meaning: "used to indicate the object, aim, or purpose of an action or activity." The American Heritage Dictionary, supra, at 686. The Solicitor General's desperate seizure of an eighth meaning in support of its claim that the word "for" instead confers on EPA broad discretion to decide whether technology is "suitable" or "appropriate" is self-refuting. See The American Heritage Dictionary, supra, at 686 (8th definition); 6 The Oxford English Dictionary, supra, at 24 (13th definition); Edwin B. Williams et al. eds., The Scribner-Bantam English Dictionary 356 (1977) ("appropriate" listed as the 18th definition). And, in all events, the statutory language prescribes precisely what the technology must be suitable for: minimizing adverse environmental impact.

c. Nor is there any more merit in petitioners' contention that the word "minimizing" merely calls for EPA "to reduce" based on the Agency's own balancing of the value of such reduction compared to other competing values. As EPA originally recognized in 1976 (see 41 Fed. Reg. 17388 (J.A. 41)), the ordinary definition of "minimize" in its statutory context is "to reduce to the smallest possible amount, extent, size, or degree" and not simply "to reduce." The American Heritage Dictionary, supra, at 1119; 9 The Oxford English Dictionary, supra, at 815; Webster's Third New International Dictionary, supra, at 1438.

Even more fundamentally, the plain meaning of "minimizing" does not contemplate a balance at all, let alone a cost-benefit comparison. The purpose of a cost-benefit balance is not to minimize adverse environmental impact, but to determine the permissible environmental impact based on the wholly different policy premise that the cost of reduction should not be greater than the corresponding benefits. A "minimizing" standard permits no such comparison.

Nor, of course, does the "minimizing" requirement mandate that one must reduce at all costs. Where, as with Section 316(b), the statute further provides that the technology must be "available," that separate requirement ensures that costs are considered in determining whether the technology is available. But, consideration of costs is a far cry from a cost-benefit comparison.[13]

d. There is, to be sure, some potential ambiguity in terms of what the word "available" means – in particular, whether it extends beyond physically available to include economically available. See The American Heritage Dictionary, supra, at 123 ("present and ready for use; at hand; accessible"); Webster's Third New International Dictionary, supra, at 150 ("accessible or may be obtained"). The Second Circuit held that the term "available" allows EPA to consider costs in determining whether a particular technology is feasible for a particular category of facilities. This has long been

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[13] Petitioners repeatedly conflate the two, suggesting that the issue here is whether EPA can consider costs under Section 316(b) and further suggesting environmental respondents contend EPA cannot do so. We make no such claim, and that is not the issue before the Court, which is limited to EPA's authority to undertake cost-benefit comparisons.

EPA's view, and we do not dispute that threshold proposition. But permitting EPA to consider economic feasibility in determining whether a given technology is "available" on a categorical basis is wholly different from permitting the Agency, contrary to the statute's plain terms, to decide that the costs of such technology, while economically feasible for an industry, do not warrant "minimizing adverse environmental impact."

2. The only limitation on the extent of benefits to be achieved, therefore, is the cost of available technology. The statute leaves no room for EPA to conclude that those benefits are not worth the costs of available technology. Nor does the statutory language, conversely, authorize EPA to conclude that the benefits to be obtained warrant expenditures even higher than those called for by available technology. Both those policy inquiries are outside the bounds of congressionally delegated lawmaking authority under Section 316(b).

The Solicitor General's contrary argument rests on a false syllogism. He argues that because Congress authorized EPA to consider costs and to consider benefits, the legislature must be deemed to have authorized the Agency to compare the two. See U.S. Br. 30. But that is precisely what Congress did not do. And, deliberately so.

Congress instructed EPA to consider the costs in order to ensure "availability." And the legislature likewise instructed the Agency to consider the benefits in order to ensure that environmental impact was minimized. But Congress did not permit EPA to second-guess the legislative judgment that environmental impact must be minimized with available technology by authorizing the Agency to weigh the benefits of the

former against the costs of the latter. "Congress itself defined the basic relationship between costs and benefits * * *" (American Textile Manufacturers Institute, Inc. v. Donovan, 452 U.S. 490, 509 (1981)) and did not leave it to EPA to decide what value to assign to these competing interests. Cf. Dept. of Revenue, Kentucky v. Davis, 128 S. Ct. 1801, 1821 (2008) (Scalia, J., concurring in part) ("Of course you cannot decide which interest 'outweighs' the other without deciding which interest is more important to you.").

3. Petitioners dangle the usual parade of absurd results they claim will result from reading Section 316(b) based on its plain meaning. None has credence. Although Section 316(b)'s plain meaning defeats petitioners' claim that EPA can compare costs and benefits in determining BTA, EPA retains discretion to administer Section 316(b) in a manner that is both consistent with congressional intent and capable of avoiding petitioners' proffered horribles.

a. For example, Section 316(b)'s denial of any authority to EPA to compare costs and benefits in determining BTA does not mean that EPA lacks any discretion in determining which "adverse environmental impact" must be minimized. Many of petitioners' proposed absurdities are rooted in the notion that EPA is authorized to minimize only entrainment and impingement (which EPA found to be the "primary, harmful environmental effects" that specific technologiescan reduce (Pet. App. 234a)), and EPA can give no regard to other kinds of possible adverse environmental impacts related to the location, design, construction, and capacity of cooling water intake structures. Nothing in the plain meaning of Section 316(b), however, compels such an illogical result. Indeed, the Second Circuit acknowledged EPA's

authority to consider also energy efficiency and other environmental impacts. See Id. at 26a-27a n.12.[14]

b. Nor is there any merit to the absurd result most often repeated by petitioners and their amici: the specter of industry paying billions of dollars to save one fish (or trillions to save one hapless individual plankton). Although the meaning of "minimizing" is plainly not merely to reduce, it is also just as plainly not so constricted as to require EPA to require industry petitioners to spend billions to save one more fish or plankton. Certainly nothing in the plain meaning of the terms "minimizing adverse environmental impact" compels EPA to establish its BTA standards as precise single-number limitations without any flexibility or margin of error. Just as in other legal contexts, there can be de minimis differences. And, the Agency has some discretion (albeit not boundless) to determine that further differences in reduction would be so minor as to be unnecessary for compliance with the minimizing requirement. Petitioner UWAG acknowledges this critical point: "Minimizing adverse environmental impact" is "indisputably broad enough to authorize EPA * * * to decide at what point [impacts] have been 'minimized.'" UWAG Br. 45. We agree.

Hence, if the reduction in adverse environmental impact to be gained from an "enormously expensive" technology would be without "any meaningful environmental consequence" (Entergy Br. 50), with "no

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[14] The full range of "adverse environmental impacts" EPA can consider and the weight each is assigned are not before the Court because they present questions distinct from EPA's authority to compare costs and benefits. Prudence supports deferral of their resolution to a case where, unlike here, they are squarely and necessarily presented.

corresponding environmental benefit" (API Amicus Br. 4), or "identical" to much less expensive measures (American Chemistry Council Amicus Br. 8), Section 316(b) would not compel adoption of the more expensive technology because impacts will have already been minimized by the less expensive technology.

It would not, for this same reason, require a facility that withdraws cooling water from a water body with no aquatic organisms at all – a completely implausible scenario – to implement expensive controls to meet BTA. See Entergy Br. 50. Section 316(b) does not, after all, require EPA to order that a certain technology be used, but permits the Agency instead to establish performance standards that reflect the use of available technology. In the Phase II rule, EPA did just that, expressing the performance standards as percentage ranges for the reduction of impingement mortality and entrainment. If a water body has no aquatic life and therefore a facility has no adverse environmental impact, then it should be able to meet such a performance-based standard without the need for the expensive controls that would be necessary for facilities in other areas. In that (unlikely) scenario, run-of-the-mill technology would protect exactly the same number of fish (and therefore have the same environmental impact) as state-of-the-art technology, and satisfy the environmental performance standard.[15]

In other ways, EPA possesses discretion to announce a standard that satisfies the minimization of

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[15] But, of course, if the intake structure's past operations are the reason for the current lack of aquatic organisms, which would return in significant amounts upon intake reduction, then one could not posit that the continued withdrawal of large volumes of water is having no "adverse environmental impact."

adverse environmental impact requirement without adopting a one-size-fits-all rule. As the court below explained, in doing so EPA retains discretion to decide that the minimization requirement does not mandate some precise numerical reduction ("identically effective") but can be satisfied by a reduction within a prescribed range or, presumably, by not harming more than a prescribed amount. Pet. App. 28a. Cost-benefit comparison authority is not necessary to achieve this sensible end.[16]

c. Finally, equally unavailing are the absurd hypotheticals that petitioners advance based on the supposition that EPA is always required to make BTA determinations on the broadest categorical basis conceivable. Thus, petitioners claim that our suggested reading of Section 316(b)'s terms means that EPA will be forced to ignore any and all differences among facilities and their locations. See UWAG Br. 43-50;

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[16] That is why the court did not rule below (Pet. App. 38a-44a), nor did we argue, that EPA was precluded from using any ranges in its BTA national performance standards describing the reduction of adverse environmental impact to be achieved. The problem with EPA's ranges in its Phase II rulemaking was not the mere fact that they were ranges, but that the rule allowed facilities fully capable of achieving performance near the upper end of the range to choose technology to meet only the lower end. *Id.* at 43a. For this same reason, moreover, regardless of the Court's disposition of the question presented in this case, the Court should reject the claim of the Solicitor General (Br. 39 n.3) and Entergy (Br. 58-59) that this Court should also reverse the lower court's ruling on the validity of EPA's ranges. The Second Circuit's invalidation of those ranges rested on a legal ground distinct from the cost-benefit question now before the Court, petitioners chose not to petition on that distinct issue, and they should not be allowed now to "smuggle additional questions into a case before [the Court] after the grant of certiorari." *Norfolk Southern Railway Co. v. Sorrell*, 127 S. Ct. 799, 805 (2007).

Nuclear Energy Institute Amicus Br. 22-25; Nebraska, et al. Amicus Br 8-10.

Petitioners and their amici are confusing distinct issues and trying to inject a legal issue into the case not in fact presented. Whether EPA can compare costs and benefits in determining BTA and whether EPA can determine BTA based on site-specific, narrow, or broad categorical bases present different legal issues.[17] We do not deny, moreover, that the language of Section 316(b), focusing on features such as "location, design, construction, and capacity," naturally lends itself to tailored agency regulation based on less broad categories. And, we did not challenge in this case several aspects of the Phase II rule that drew distinctions based on considerations such as location. See, e.g., 40 C.F.R. § 125.94(b)(2)(ii)(A) (2007) ("Your facility uses cooling water withdrawn from a tidal river,

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[17] Industry petitioners and their amici insist that the only sensible approach is site-specific, not categorical, determinations of BTA performance standards. Entergy Br. 46-48; UWAG Br. 7-10,45-57; Nuclear Energy Institute Amicus Br. 4, 22-25; Nebraska, et al. Amicus Br. 8-10. The sole question presented in this case, however, is whether EPA can compare costs and benefits in setting BTA standards under Section 316(b), and the answer to that question does not depend on whether EPA is making its BTA determination on a categorical (whether broadly or narrowly drawn) or site-specific basis. The extent of EPA's discretionary authority to make determinations on site-specific grounds or on a narrow rather than broad categorical basis is an entirely distinct issue (see *Chemical Manufacturers Ass'n v. NRDC*, 470 U.S. 116, 131 (1985); *E.I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112, 126-129 (1977)) and, in the context of Section 316(b), is at issue now in the Fifth Circuit's review of EPA's Phase III regulations. See *ConocoPhillips Co., et al. v. EPA*, No. 06-60662 (5th Cir.). Here again, industry petitioners should not be allowed to inject new questions not fairly presented by the Court's grant of review. See note 16, *supra*.

estuary, ocean, or one of the Great Lakes * * *") (Pet. App. 560a); Id. § 125.94(b)(2)(ii)(B) ("Your facility uses cooling water withdrawn from a freshwater river or stream * * *") (Pet. App. 560a).

Of course, as always, EPA's discretion here is not boundless, because otherwise EPA could too easily subvert the technology-forcing aspect of the BTA standard. But that limit's outer bounds are not implicated by this case. For the purposes of this case, it should be sufficient to note that none of the arguments we present as to Section 316(b)'s plain meaning on the question in fact presented in this case compels the crabbed reading of EPA's authority upon which petitioners' projected absurdities depend.

In sum, there is nothing absurd about applying Section 316(b) according to its plain terms. Section 316(b) may well be Herculean in its ambition, but there is nothing "Sisyphean" in the tasks it assigns. Entergy Br. 52.

B. The Statutory Structure and Context Confirm Section 316(b)'s Plain Meaning

The Clean Water Act's statutory structure and context confirm Section 316(b)'s plain meaning by underscoring the deliberate and limited way Congress chose to authorize EPA to relate costs to benefits in the establishing of environmental protection standards under the Act. "Where Congress includes particular language in one section of a statute but omits it in another * * *, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion." Keene Corp. v. U.S., 508 U.S. 200, 208 (1993), quoting Russello v. U.S., 464 U.S. 15, 23 (1983); see Allison Engine v. U.S. ex rel. Saunders, 128 S. Ct. 2123, 2129 (2008).

When Congress passed the Clean Water Act in 1972, it displayed a striking reluctance to authorize EPA to base its determination of environmental performance standards on a comparison of costs and benefits. As previously described (see pp. 6-8, supra), Congress deliberately severed the determination of those performance standards from a showing of water quality impacts because of the tremendous scientific and economic uncertainties associated with measuring and assessing those impacts. The Act mandated that EPA promulgate a series of demanding requirements, yet expressly authorized EPA to compare costs and benefits in determining the degree of controls to be imposed in only two extremely limited circumstances.

1. First, Congress authorized EPA to compare costs and benefits in the promulgation of one technology-based effluent limitation. Section 304(b)(1)(B) provided that among the factors that EPA shall consider in determining BPT is the "total cost of application of technology in relation to the effluent reduction benefits to be achieved * * *." 33 U.S.C. § 1314(b)(1)(B). The only other instance in 1972 when Congress expressly called for a direct cost-benefit comparison was in providing for an exemption from the application of water quality based effluent limitations that are more stringent than technology-based effluent limitations under Section 302. See Pub. L. 92-500, § 302, 86 Stat. 846 (1972) (subsequently amended). Under that provision, EPA cannot apply any such more stringent standard to a person who demonstrates that "there is no reasonable relationship between the economic and social costs and the benefits to be obtained * * *." Id. § 302(b)(2). Neither of these examples advances petitioners' cause.

a. In 1972, when Congress created the BPT

standard, Congress made clear its intent to phase BPT out and replace it no later than 1983 with a different technology-based standard, BAT, that was designed to be more stringent than BPT and lacked any comparable allowance for EPA to relate costs and benefits in its determination. Indeed, this Court has noted the contrast between the statutory language used for BPT and BAT, the absence of any cost-benefit language for BAT, and Congress's obvious desire not to authorize EPA to engage in such a comparison in determining BAT. See Crushed Stone, 449 U.S. at 71 ("in assessing BAT total cost is no longer to be considered in comparison to effluent reduction benefits").

Petitioners and their amici ignore the clear import of the congressional decision to provide for limited cost-benefit analysis in determining BPT for a few years and to eliminate any such analysis in BAT's determination by asserting that the only difference between BPT and BAT is that the Agency is required to engage in limited cost-benefit analysis for the former and permitted to do so for the latter. See U.S. Br. 21, 24; Entergy Br. 39-40; UWAG Br. 35-36; ACC Amicus Br. 22-23. Their primary textual support for this extraordinary claim is the inclusion in Section 304(b)(2)(B), which lists the factors EPA is to consider in determining BAT, of a final clause referring to "such other factors as the Administrator deems appropriate." 33 U.S.C. § 1314(b)(2)(B).

That clause cannot, however, be reasonably construed to completely upend the selective and deliberate manner in which Congress had otherwise carefully prescribed the precise extent to which costs and benefits could be considered, and when, if ever, the Agency was empowered to compare one to the other. There is not even a hint of support in the text or

legislative history of the clause for petitioners' radical notion that the only policy dispute separating the House and Senate was whether EPA would be required to engage in cost-benefit analysis, including assessment of water quality impacts, rather than authorized to do so.[18]

Just the opposite is true. As this Court has previously noted, the legislative history leaves no question that Congress intended for BAT to be more stringent than BPT, and the absence of authority to engage in cost-benefit analysis consideration in determining BAT was a major basis for that intended difference. The Court described in Crushed Stone how the statute sets forth "[s]imilar directions" for the determination of BPT and BAT in Sections 304(b)(1)(B) and 304(b)(2)(B) with the single exception that "in assessing BAT total cost is no longer to be considered in comparison to effluent reduction benefits." 449 U.S. at 71; see 1 Leg. Hist. 170 (statement of Senator Muskie) ("In making the determination of 'best available' for a category or class, the Administrator is expected to apply the same principles involved in making the determination of 'best practicable' (outlined above) except as to cost-benefit analysis.") (emphasis supplied).

In light of the contrasting language and the clear congressional purpose to ensure that BAT was "more stringent" than the "more modest" BPT (Chemical Manufacturers Ass'n, 470 U.S. at 118; Crushed Stone, 449 U.S. at 75 n.14), it is beyond any notion of plausibility to construe the final clause in Section

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[18] The difference between petitioners' notion of mandate versus permission is also likely illusory. If, as petitioners contend (Entergy Br. 31), EPA is permitted to compare costs and benefits, no doubt industry petitioners would also argue that EPA would be acting arbitrarily and capriciously by not doing so.

304(b)(2)(B) as, in effect, permitting EPA to inject back into the BAT determination any factor of its choosing, including presumably cost-benefit analysis even more forgiving than that provided for in Section 304(b)(1)(B) for BPT.[19] "Congress * * * does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions – it does not, one might say, hide elephants in mouseholes." Whitman v. American Trucking Ass'ns, 531 U.S. 457, 468 (2001); Gonzalez v. Oregon , 546 U.S. 243, 274 (2006). It is significant in this regard that the language of this final clause was not added during the lengthy Senate and House conference discussions, but was included in the original Senate bill, which eschewed providing EPA with the kind of open-ended authority petitioners nonetheless claim here. See S. 2770 §§ 304(b)(1)(B) & 304(b)(2)(B), 2 Leg. Hist. 1615 ("and such other factors as the Administrator deems appropriate").[20]

b. Section 302 is likewise unavailing to petitioners. It requires EPA to undertake a cost-benefit comparison, but not for the purpose of relaxing compliance with a technology-based standard, let alone for determining such a standard. See Pub. L. 92-500, § 302, 86 Stat. 846. Instead, costs and benefits are compared under Section 302 only for the very different purpose of relaxing application of a water quality standard that is

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[19] Of course, whatever its meaning, in no event is the language of Section 304(b)(2)(B) part of Section 316(b). The Solicitor General is correct that "[t]he only direct consequence of the cross-reference [in Section 316(b) to Sections 301 and 306] is a procedural one," indicating which standards must require BTA for cooling water intake structures. U.S. Br. 18-19.

[20] For a further refutation of petitioners' claim on this issue, see Environmental Law Professors Amicus Br. II.B; Environment America Amicus Br.

more stringent than a technology-based standard if there is "no reasonable relationship" of costs to benefits. § 302(b)((2). Such a differently-directed provision provides no support for petitioners' suggestion that Congress intended to confer authority on EPA in Section 316(b) to compare costs and benefits in determining BTA.[21]

c. Nor are petitioners supported by the two instances in which Congress in 1972 authorized EPA to take water quality impact into account as a possible basis for relaxing a technology-based standard. The first allows for a modification of BAT for individual sources for which compliance cost is particularly onerous so long as the source demonstrates further reasonable progress toward discharge elimination. See 33 U.S.C. § 1311(c). The second, Section 316(a), applies to thermal discharges and allows for an exemption from a technology-based effluent limitation upon a showing that its application is not necessary to meet statutorily-described fish population objectives. Neither of these narrowly-drawn provisions, however, contemplates EPA's undertaking a cost-benefit comparison or otherwise authorizes EPA to determine how the cost-benefit balance should be struck. In each, Congress declared how the balance should be struck. Both accordingly provide further reason for believing that

[21] Indeed, a parenthetical within Section 302 made clear that Congress assumed that technology-based standards were not based on cost-benefit comparisons. The parenthetical provides that the lack of a reasonable cost-benefit relationship is grounds for relaxing the water-quality-based effluent limitation "whether or not such technology * * * [is] available," further underscoring Congress's belief that a technology could be "available" even absent a reasonable relationship between costs and benefits. Pub. L. 92-500, § 302(b)(2).

Congress did not intend to provide EPA with sweeping authority to engage in cost-benefit comparisons in the absence of express legislative authorization. Perhaps that is why the Solicitor General fails even to acknowledge Section 316(a)'s existence in his brief.

2. Petitioners and their amici also mistakenly rely on a host of other Clean Water Act provisions in an effort to buttress their argument that Congress intended, with statutory silence, to authorize EPA to compare costs and benefits in determining BTA. Hence, they point out the Act also provides for :

- A technology-based standard for conventional pollutants that, like BPT, allows for some consideration of the relationship of costs and benefits (33 U.S.C. § 1314(b)(4)(B)); see U.S. Br. 20; Entergy Br. 39; ACC Amicus Br. 19); and
- A series of variances for:
  - Some pollutants to allow their control to be reduced from BAT to BPT (33 U.S.C. § 1311(g); see U.S. Br. 21; UWAG Br. 47; Entergy Br. 43-44);
  - Some kinds of discharges into deep waters or marine waters (33 U.S.C. § 1311(h)&(m); see Entergy Br. 36); and
  - Some discharges of toxic pollutants subject to BAT standards (33 U.S.C. § 1311(n); see Entergy Br. 44-45).

None of these provisions, however, aids petitioners' claim on the issue presented. First, Congress added each of these provisions long after 1972 and the

question in this case is what Congress intended in 1972, when it enacted Section 316(b), and not in later years when it changed other provisions of the Clean Water Act unrelated to Section 316(b). No less important, each of these provisions demonstrates that Congress continued after 1972 to take extreme care and to act with great precision in deciding when to authorize EPA to compare costs and benefits either in establishing environmental performance standards or excusing facilities from compliance with such standards.

For instance, the reason Congress decided to create the BCT standard was that, contrary to petitioners' submission here, Congress understood that the BAT standard is "not subject to any test of cost in relation to effluent reduction benefits or any form of cost/benefit analysis" and that "in establishing limitations for conventional pollutants * * * the best available technology may not be the most appropriate technology in terms of the relationship of the cost of achieving a particular level of reduction and the amount of reduction actually achieved." 3 Legislative History of the Clean Water Act of 1977 – A Continuation of the Legislative History of the Federal Water Pollution Control Act Amendments of 1972, 427 (Committee Print compiled for the Senate Committee on Environment and Public Works by the Library of Congress), Ser. No. 95-14 (1975) (hereinafter " 3 Leg. Hist.") (statement of Senate Manager Senator Muskie). For this reason, and for conventional pollutants only, Congress amended the Act to include the same kind of limited cost-benefit analysis already available in BPT as part of the basis for determining BCT: to ensure that costs for one narrow class of pollutants did not increase "beyond the 'knee of the curve,' the take-off point where incremental costs begin to exceed incremental benefits." Id. at 330

(statement of House Manager Rep. Roberts).

So, too, some of the justifications that Congress gave for making subsequent changes in the law to provide for additional variances in narrowly-defined circumstances mirror some of the arguments petitioners advance now before this Court. See, e.g., 3 Leg. Hist. 258 (Conference Report) (new variance in "recognition that there are some coastal areas of the United States * * * where natural factors provide *** sufficient elimination of traditional forms of pollution"). But, of course, that is precisely why the subsequent amendments upon which petitioners rely cut against petitioners' position. They demonstrate the correct way to change the law if one believes, as petitioners plainly do, that statutory provisions enacted in 1972 may be unduly harsh in some possible application. No doubt petitioners are disappointed that their efforts to date to persuade Congress have been unsuccessful. See, e.g., H.R. Rep. No. 112 104th Cong., 1st Sess. Pt. 1, at 27-28 (1995) (H.R. 961, § 318, proposing to amend Section 316(b) to allow for consideration of "[t]he relative environmental, social, and economic costs and benefits"). But such failure before Congress provides no basis for crossing the street and seeking relief from this Court.

3. Finally, there is no merit to petitioners' contentions that the ruling below relied on a "plain statement rule" disfavoring cost-benefit analysis or somehow contravened this Court's decision in Chevron v. Natural Resources Defense Council, Inc., 467 U.S. 837 (1984), by failing to treat statutory silence as establishing ambiguity. See U.S. Br. 30-32; Entergy Br. 24, 26 n.8.

a. First, neither environmental respondents nor

the Second Circuit relied on any "plain statement rule" that disfavors in all contexts a conclusion that Congress has authorized an agency to engage in cost-benefit comparison. Like the court below, we contend only that the meaning of the words Congress has chosen depends on their statutory context and whether that context makes it more or less likely that Congress intended a particular result in the absence of an express statement one way or the other. See, e.g., Dolan v. Postal Service, 546 U.S. 481, 486 (2006); Davis v. Michigan Dept. of Treasury, 489 U.S. 803, 809 (1989). That is why "'[i]t is generally presumed that Congress acts intentionally and purposely' when it 'includes particular language in one section of a statute but omits it in another.'" City of Chicago v. Environmental Defense Fund, 511 U.S. 328, 338 (1994).

This Court has applied this reasoning repeatedly in construing statutes, including in cases where the question relates to the agency's authority to compare costs with benefits (American Textile Manufacturers Institute, Inc. v. Donovan, 452 U.S. at 510) or even to consider costs at all (Union Electric Co. v. EPA, 427 U.S. 246, 257 n.5 (1976)). Of particular relevance, the Court did so most recently in Whitman v. American Trucking, in determining whether Congress intended to authorize EPA to consider compliance costs in establishing air quality standards under the Clean Air Act. The Court "refused to find implicit in ambiguous sections of the Clean Air Act an authorization to consider costs that has elsewhere, and so often, been expressly granted." 531 U.S. at 467. The same reasoning applies here. See 531 U.S. at 468-69 ("The implausibility of Congress's leaving a highly significant issue unaddressed (and thus 'delegating' its resolution to the administering agency) is assuredly one of the factors to be considered in

determining whether there is ambiguity.").

b. Nor is there any tension between relying on Section 316(b)'s plain meaning and Chevron. A statute is not "silent" for Chevron purposes whenever the statutory language does not expressly address the precise legal question at issue. The Clean Air Act in American Trucking did not have to provide expressly that EPA could not consider costs in establishing national ambient air quality standards for the Act to have a plain meaning. Nor did the Resource Conservation and Recovery Act in City of Chicago v. Environmental Defense Fund have to provide expressly that a particular ash residue was not exempt from hazardous waste regulation for that Act to have a plain meaning. In light of the statutory language and structure, the absence of an express exemption was what mattered. 511 U.S. at 334-35. The same is true here.

C. EPA's Implementation of Section 316(b) Does Not Defeat Its Plain Meaning

1. Petitioners claim that the lower court's plain meaning interpretation cannot be squared with EPA's interpretation of Section 316(b) over the last thirty years. See U.S. Br. 27, UWAG Br. 15, 37, 41. They are mistaken. Contrary to their characterization of EPA's past practice, until the rulemaking at issue in this case, EPA did not claim the authority to inject a wide-ranging cost-benefit analysis into standard setting under Section 316(b). Indeed, EPA had denied, rather than claimed, such authority, and its current rulemaking finds no historical precedent.

When EPA first faced the question presented in this case in the original 1976 rulemaking designed to implement Section 316(b), it flatly rejected industry's

claim that cost-benefit analysis was required (see 41 Fed. Reg. 17388) and, even more important, did not leave any room for petitioners' claim that the Agency was addressing only whether such analysis was "required" rather than "permitted." See UWAG Br. 38-39. EPA then explained that cost-benefit analysis was not appropriate because "[t]he statute directs the Agency to insure that enumerated aspects of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact." 41 Fed. Reg. 17388 (emphasis supplied). Accordingly, "[o]nce such adverse effects have been identified * * *, then the effort must be to select the most effective means of minimizing (i.e., 'reducing to the smallest possible amount or degree') those adverse effects." Id. (emphasis supplied). See J.A. 41.

To be sure, in the years between the judicial rejection of EPA's initial rulemaking and the Agency's promulgation of the rules challenged here, EPA did claim that the Clean Water Act allowed permitting agencies in individual permit proceedings to apply a "wholly disproportionate" test in fashioning requirements applicable to a particular cooling water intake structure. See, e.g., U.S. Br. 5, 27-28. We do not read this past Agency administrative practice as supporting EPA's now far more expansive claim of cost-benefit analysis authority under Section 316(b) or as necessarily inconsistent with our own view of Section 316(b)'s plain meaning.

a. As conceded by the Solicitor General, EPA's newly-claimed cost-benefit authority has a greater "extent" and is "less stringent" than the narrow "wholly disproportionate" test applied by EPA and state agencies in individual permitting decisions. U.S. Br. 5, 27, 41 n.5. In no manner is EPA's current claim of

authority to engage in cost-benefit analysis under Section 316(b) supported by 30 years of administrative practice. U.S. Br. 27; Entergy Br. 23; UWAG Br. 37.

b. Moreover, the wholly disproportionate test is not necessarily, in proper application, inconsistent with Section 316(b)'s plain meaning – so long as it is applied only when the cost is considered "wholly disproportionate" because there are only de minimis environmental benefits to be gained by the further expenditures. In that circumstance, Section 316(b)'s plain meaning would be satisfied because EPA could reasonably conclude that the "adverse environmental impact" had already been minimized. See pp. 29-30, supra. Indeed, that is all EPA did in the permitting decision in Seacoast Anti-Pollution League v. Costle, 597 F.2d 306, 311 (1st Cir. 1979), on which petitioners and their amici repeatedly rely. See UWAG Br. 41; U.S. Br. 27; Entergy Br. 57 n.25.[22] There, EPA concluded that a huge increase in cost was not warranted by an insubstantial additional reduction in adverse environmental impact on juvenile smelt or flounder larvae. 597 F.2d at 309-311. Such reasoning is no different from the Second Circuit's ruling below that Section 316(b) permits EPA to decline to require the expenditure of higher compliance costs when the adverse environmental impact to be achieved is "essentially the same" as that obtained by a lower cost option. See Pet. App. 26a.

Significantly, EPA's understanding that it lacked authority to compare costs and benefits under Section

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[22] Contrary to industry petitioners' claims, the First Circuit did not uphold the "wholly disproportionate" test, nor was it asked to pass on it, as the Solicitor General acknowledges. See U.S. Br. in Opp. 13.

316(b) continued through its Phase I rulemaking, long after its announcement of a wholly disproportionate test. In that rulemaking, the Agency made clear that it "ha[d] not selected the best technology available on a cost-benefit basis," but on the basis of technological and economic feasibility, an approach "analogous to the economic achievability analysis it conducts for other technology-based rules under sections 301 and 306 * * *." 66 Fed. Reg. 65309 (2001). And, the site-specific variance EPA included in the Phase I rule was based on compliance costs "wholly out of proportion to the costs EPA was considering in establishing the requirement at issue" and therefore was a cost-cost variance, not a cost-benefit variance. 40 C.F.R. § 125.85.

2. In all events, even if EPA had in the past applied a "wholly disproportionate" analysis more broadly, any such practice would have no significant bearing on the resolution of this case. The first reason is that EPA was not in any of those individual permitting proceedings interpreting Section 316(b) in a manner, such as a notice-and-comment rulemaking, entitled to Chevron deference. Since EPA's initial Section 316(b) regulation was struck down on procedural grounds, EPA has merely been filling the existing regulatory gap during permitting as provided for by Section 402(a)(1)(B). 33 U.S.C. § 1342(a)(1)(B).

The second reason is even more fundamental. In no event can an agency administrative practice trump a statute's plain meaning. That is what this Court meant when it said in Chevron that if the meaning of the statutory language is plain, "that is the end of the matter." 467 U.S. at 842-43.

D. Resort to Legislative History Is Unnecessary in this Case, but Its Examination Reinforces Section 316(b)'s Plain Meaning

Given the statutory language's plain meaning, as buttressed by its structure and context, examination of the legislative history is unnecessary. Only because petitioners nonetheless purport to proffer some legislative history in support of their claim, we offer further discussion for those interested.

1. To support their claim, petitioners seize upon an isolated floor statement by a single member of Congress who describes the Section 316(b) standard in terms of "practicability." Indeed, EPA in its rulemaking effectively treats this statement as though its words were the statutory language. Pet. App. 252a. In no event can this statement support the weight petitioners claim.

Whatever one thinks of legislative history, it can never add words to the statute, let alone significant ones. But, that is precisely what petitioners seek to do. They want to add to Section 316(b) the word "practicable," which nowhere appears in the statutory provision. And, then, once added, they want to claim that this same word is of enormous substantive import.

2. A more in-depth examination of Section 316(b)'s historical origins, moreover, leaves no doubt that Congress intended the meaning that is plain on the face of the statute. As described above (see pp. 6-14, supra), in drafting the statute in 1972, the legislators engaged in intense and protracted debate on the extent to which EPA should be authorized to consider costs and also to relate costs to benefits in establishing environmental protection standards. This dispute went to the core of the legislative policy debate.

a. The Senate and House initially had sharply contrasting views on the issue, with the Senate favoring a technology-based approach that denied EPA such authority and the House favoring a water quality approach that provided for such agency authority. Following months of debate and precise drafting, the two chambers finally reached agreement on a bill that adopted the Senate approach in almost all significant respects and, even then, had to override a veto triggered by the President's concerns about costs and benefits. The formal legislative history, especially the accompanying legislative reports, makes clear the dramatic new direction that Congress ultimately embraced. The legislators completely revamped the federal water quality protection program in every significant respect, including its primary reliance on application of water quality standards. See EPA v. California State Water Resources Control Board, 426 U.S. at 202. The less formal history, including the numerous documents prepared by members of Congress and committee staff leadership during the conference proceedings – draft statutory language, memoranda, and notes on meetings – tells the same story, only in greater detail. See notes 6-8, supra.

The final legislative enactment rejected a series of House proposals to confer on EPA the authority to engage in a comparison of costs and benefits in determining environmental protection standards. Congress rejected providing EPA with such authority in determining BAT (see p. 9, supra); in determining whether BAT would even apply (id. at 9-10); in determining BDT for new sources (id. at 10); and in determining controls on thermal discharges (id. at 12-13). Such a consistent manifestation of congressional intent to refuse to enact language that would have

provided EPA with general authority to compare costs and benefits leaves no room for petitioners' effort to read such authority back into the statute by way of strained and unnatural readings of the words of the law Congress did pass.

b. Not surprisingly, the drafting history of Section 316(b) is in full accord. As previously described (see pp. 5-6, 12-13, supra), Congress became aware of the cooling water intake issue at first because of its relationship to the thermal discharge issue. Congress ultimately decided to break the two apart into two distinct subsections. But, although the House ultimately prevailed in its effort to allow for a biologically-based exception to the application of technology-based requirements in Section 316(a) – "the pro[t]ection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife" (33 U.S.C. § 1326(a)) – the compromise the conferees finally struck in the closing days of the conference did not include a similar exemption in Section 316(b), let alone the sweeping cost-benefit comparison authority EPA now seeks to assert. See note 8, supra. Instead, Section 316(b) demanded a technology-based standard that would "minimiz[e] adverse environmental impact" using "best technology available" and, unlike Section 316(a), would not relax that standard based on achievement of a statutorily-prescribed biological standard. The final bill also rejected the original House proposal for Section 316(a), which would have broadly authorized EPA to consider the "relative costs and benefits" of control options and to exempt a source if the costs bore "no reasonable relationship to the economic and social benefits." H.R. 11896, § 316(b)&(d), 1 Leg. Hist. 1044. Here too, Congress displayed its determination to deny EPA authority to engage in cost-benefit analysis – an intent

wholly inconsistent with petitioners' claim that Congress delegated EPA such authority under Section 316(b).

E. This Court Must Respect the Policy Choice Made by Congress

1. No less than in 1972, many today sharply disagree about the use of cost-benefit analysis in the establishment of environmental performance standards and, relatedly, the wisdom of delegating to EPA the authority to base those standards on its independent weighing of costs and benefits. Some support such a delegation (e.g., Cass R. Sunstein, The Cost-Benefit State: The Future of Regulatory Protection (2002)); others oppose (e.g., David M. Driesen, Distributing the Costs of Environmental, Health, and Safety Protection: The Feasibility Principle, Cost-Benefit Analysis, and Regulatory Reform, 32 B.C. Envtl. Aff. L. Rev. 1 (2005); Frank Ackerman & Lisa Heinzerling, Pricing the Priceless: Cost-Benefit Analysis of Environmental Protection, 150 U. Pa. L. Rev. 1553 (2002)); and some propose a middle ground (e.g., Richard L. Revesz & Michael A. Livermore, Retaking Rationality – How Cost-Benefit Analysis Can Better Protect the Environment and Our Health, 1-45 (2008); Sidney A. Shapiro & Christopher H. Schroeder, Beyond Cost-Benefit Analysis: A Pragmatic Reorientation, 32 Harv. Envtl. L. Rev. 433 (2008)).

2. But, as the Solicitor General acknowledges, "[t]he question presented here is not whether or to what extent cost benefit analysis is a good thing." U.S. Br. 14. The only question before the Court is the strictly legal question posed by this Court in granting the petition: whether Congress authorized EPA in Section 316(b) to compare costs and benefits in determining BTA. Unlike

several of petitioners' amici (e.g., American Enterprise Institute, Pacific Legal Foundation), many of those who advocate greater use of cost-benefit analysis also apprehend the limits of the judicial function. They recognize the essential difference between what they believe the law should be and what the law is; they acknowledge that Congress has in fact widely rejected the view that cost-benefit analysis should be the central touchstone in all environmental lawmaking; and they understand the reasons for that congressional determination, even if they disagree with it as a matter of policy. See Hon. Stephen Breyer, Breaking the Vicious Circle – Toward Effective Risk Regulation, 41-42 (1993) ("There are institutional reasons * * * why Congress may wish to write legislation of this kind. * * * * * Congress may distrust the Executive Branch to carry out a more broadly worded instruction with sufficient vigor."); see also id. at 57 (referring to "a history of conflict arising out of what Congress saw as an Executive Branch effort to curtail environmental regulation"); Robert H. Frank & Cass R. Sunstein, Cost-Benefit Analysis and Relative Position, 68 U. Chi. L. Rev. 323, 331 (2001) ("Presidents and courts have circumscribed authority; they must act consistently with federal statutes, which often forbid cost-benefit balancing. Consider, for example, * * * the Clean Water Act * * *, which contain[s] provisions banning agencies from balancing costs against benefits."); Cass R. Sunstein, Which Risks First?, 1997 U. Chi. Legal F. 101, 134 (identifying BAT as one of the "most criticized features" of the Clean Water Act because of the absence of cost-benefit comparison authority); Eric A. Posner, Controlling Agencies with Cost-Benefit Analysis: A Positive Political Theory Perspective, 68 U. Chi. L. Rev. 1137, 1182 (2001) ("Agencies often provide implausible estimates of costs and benefits, use different discount

rates and valuations across regulations, and even fail to monetize or quantify all the relevant costs and benefits."); see also Revesz & Livermore, Retaking Rationality, supra at 55-147 (detailing "eight fallacies" of cost-benefit analysis).

3. Finally, the rulemaking at issue in this case highlights the reasons why Congress decided against authorizing EPA to strike its own cost-benefit balance in determining BTA. See Economists Frank Ackerman, et al. Amicus Br. 29-35; OMB Watch Amicus Br. II.C. In purporting to engage in cost-benefit analysis, EPA assigned no dollar value to one of the most significant impacts of regulating cooling water intake structures: saving aquatic organisms that remain in the ecosystem. EPA monetized only fish that could be caught and sold commercially. Pet. App. 482a-485a. By its own admission, the Agency gave no dollar value to 98.2 percent of organisms saved by its own Phase II rule, let alone those greater numbers that might have been saved by more demanding performance standards, not because they lacked any value, but because it was too difficult to determine a meaningful market value for them. See id. at 499a. This is just one of the many limitations in the cost-benefit comparison that EPA performed in the Phase II rulemaking. See J.A. 211-244 (comment letter of Dr. Frank Ackerman).[23]

It was just because of these kinds of limitations in the application of cost-benefit analysis to the aquatic environment, which had plagued the pre-1972 law, that

[23] Relatedly, several states complained about the enormous burden that would be imposed on them, in their capacity as permitting authorities, were they required to undertake the factfinding necessary for cost-benefit comparisons. See J.A. 209-210, 252, 257-58, 270-71.

Congress made a different policy choice in favor of technology-based performance standards such as BTA. Many believe that Congress's bold move in 1972 in choosing the technology-based approach over the prior water quality and cost-benefit balancing approach is the major reason for much of the Clean Water Act's success during the past several decades. See Environmental Law Professors Amicus Br. I.C. But here, too, it is ultimately for Congress to decide which regulatory techniques will be most effective in addressing the nation's environmental problems.

"The question * * * is not what a court thinks is generally appropriate to the regulatory process; it is what Congress intended for these regulations." E.I. du Pont de Nemours , 430 U.S. at 138; see Ali v. Federal Bureau of Prisons, 128 S. Ct. 831, 841 (2008) ("We are not at liberty to rewrite the statute to reflect a meaning we deem more desirable. Instead, we must give effect to the text Congress enacted * * *."). "All the policy reasons in the world cannot justify reading a substantive provision out of a statute." North Carolina v. EPA, 531 F.3d 896, 910 (D. C. Cir. 2008).[24]

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[24] Because the Second Circuit invalidated EPA's rejection of closed-cycle cooling and its proffered "suite of technologies" on a ground entirely separate and independent from the single issue on which this Court granted review – EPA's authority to compare costs and benefits – the lower court's remand of those aspects of the rulemaking will, in all events, be undisturbed by the Court's resolution of the question presented. The court's threshold ruling was the absence of any adequate EPA explanation of the rulemaking's basis. The court made clear that this was an independent error: "EPA was required to explain its judgment and the basis for it" (Pet. App. 35a); and "[t]he record evidence alone here * * * is oblique, complicated, and insufficient to permit us to determine what the EPA relied upon in reaching its conclusion" (*id.*). The court faulted EPA for failing to provide (1) a record that

CONCLUSION

The judgment of the court of appeals should be affirmed.

Respectfully submitted.

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SEPTEMBER 2008

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would permit a court "to discern * * * how the EPA determined that the cost of closed-cycle cooling could not be reasonably borne by the industry" (Pet. App. 33a); (2) an explanation of "its statement that the suite of technologies 'approach[es]' the performance of closed-cycle cooling" (*id.*); and (3) an "adequate comparison in the Rule's proposal, the final Rule or its preamble, or the EPA's submissions to this Court of the effectiveness of closed-cycle cooling and the group of technologies whose effectiveness provided the basis for the Phase II Rule's performance standards" (*id.* at 33a-34a). An agency must at a minimum "cogently explain why it has exercised its discretion in a given manner." See *Motor Vehicles Manufacturers Ass'n v. State Farm*, 463 U.S. 29, 48 (1983). In all events, should this Court reverse on the sole question presented, it should leave for the Second Circuit the question of the impact, if any, on that court's other rulings. As described above, moreover, the Court should decline petitioners' efforts to have this Court consider issues distinct from the question presented, including the reasonableness of EPA's ranges (see note 16, *supra*) and the need for site-specific BTA determinations (see note 17, *supra*).

Nos. 07-588, 07-589 and 07-597

In the Supreme Court of the United States

ENTERGY CORPORATION, PETITIONER

v.

ENVIRONMENTAL PROTECTION AGENCY, ET AL.

PSEG FOSSIL LLC, ET AL., PETITIONERS

v.

RIVERKEEPER INC., ET AL.

UTILITY WATER ACT GROUP, PETITIONER

v.

RIVERKEEPER INC., ET AL.

ON PETITIONS FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

BRIEF FOR THE FEDERAL RESPONDENTS IN OPPOSITION

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QUESTIONS PRESENTED

1. Whether Section 316(b) of the Clean Water Act, 33 U.S.C. 1326(b), authorizes the Environmental Protection Agency (EPA) to compare costs with benefits in determining the "best technology available for minimizing adverse environmental impact" at cooling water intake structures.

2. Whether Section 316(b) prohibits the use of restoration measures as a means of minimizing the adverse environmental impact associated with cooling water intake structures.

3. Whether Section 316(b) authorizes EPA to regulate cooling water intake structures at existing facilities, as well as at new facilities.

TABLE OF CONTENTS

Page

Opinion below 1
Jurisdiction 2
Statement 2
Argument 9
Conclusion 25

TABLE OF AUTHORITIES

Cases:

American Textile Mfrs. Inst. v. *Donovan*, 452 U.S. 490 (1981) 11
Appalachian Power Co. v. *Train*, 566 F.2d 451 (4th Cir. 1977) 4
Barnhart v. *Walton*, 535 U.S. 212 (2002) 11
BP Exploration & Oil, Inc. v. *United States EPA*, 66 F.3d 784 (6th Cir. 1995) 11
Chevron U.S.A. Inc. v. *NRDC,* 467 U.S. 837 (1984) 11, 23
Citizens Coal Council v. *United States EPA*, 447 F.3d 879 (6th Cir. 2006) 11
EPA v. *National Crushed Stone Ass'n*, 449 U.S. 64 (1980) 14
Garcia v. *DHS*, 437 F.3d 1322 (Fed. Cir. 2006) 24
Holderfield v. *MSPB*, 326 F.3d 1207 (Fed. Cir. 2003) 23
King v. *Department of the Navy*, 130 F.3d 1031 (Fed. Cir. 1997) 24
Michigan v. *United States EPA*, 213 F.3d 663 (D.C. Cir. 2000), cert. denied, 532 U.S. 903, and 532 U.S. 904 (2001) 12
NLRB v. *City Disposal Sys., Inc.*, 465 U.S. 822 (1984) 23

Cases—Continued: Page

Northern Ill. Steel Supply Co. v. *Secretary of Labor*, 294 F.3d 844 (7th Cir. 2002) 24

NRDC v. *United States EPA*, 859 F.2d 156 (D.C. Cir. 1988) 20, 21

Riverkeeper, Inc. v. *United States EPA*, 358 F.3d 174 (2d Cir. 2004) 5

Seacoast Anti-Pollution League v. *Costle*, 597 F.2d 306 (1st Cir. 1979) 9, 13

Sierra Club v. *United States EPA*, 314 F.3d 735 (5th Cir. 2002) 12

Travelers Cas. & Sur. Co. of Am. v. *Pacific Gas & Elec. Co.*, 127 S. Ct. 1199 (2007) 22

United States v. *Gabriel*, 125 F.3d 89 (2d Cir. 1997) 22

United States Steel Corp. v. *Train*, 556 F.2d 822 (7th Cir. 1977) 20

Virginia Elec. & Power Co. v. *EPA*, 566 F.2d 446 (4th Cir. 1977) 21

Statutes and regulations:

Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1251 *et seq.*:

33 U.S.C. 1251(a) 19

33 U.S.C. 1311 (§ 301) . . . . . *passim*

33 U.S.C. 1311(b) 18

33 U.S.C. 1311(b)(1)(A) 3, 10, 11

33 U.S.C. 1311(b)(2)(A) 3, 10, 11

33 U.S.C. 1314(b)(1)(B) 3, 10

33 U.S.C. 1314(b)(2)(B) 3, 10

33 U.S.C. 1316 (§ 306) . . . . . *passim*

Statutes and regulations—Continued: Page

33 U.S.C. 1316(a)(1) 3, 10
33 U.S.C. 1316(b) 18
33 U.S.C. 1326(b) (§ 316(b)) . . . . . *passim*
33 U.S.C. 1342 4
33 U.S.C. 1342(a)(1) (§ 402(a)(1)) 20
33 U.S.C. 1342(a)(3) 14
33 U.S.C. 1342(b)(1)(B) 14
33 U.S.C. 1369(b)(1)(E) 21

National Environmental Policy Act of 1969,
42 U.S.C. 4321 *et seq.* 21

40 C.F.R.:
Section 125.84(d)(1) 16
Section 125.90(a) 4
Section 125.94(a)(1)-(4) 5
Section 125.94(a)(5) 5
Section 125.94(b) 5
Section 125.94(c) 8
Section 401.14 4

Miscellaneous:

Central Hudson Gas & Elec. Corp., In re,
Op. EPA Gen. Counsel, NPDES No. 63,
1977 WL 28250 (July 29, 1977) 4, 15, 1 9

41 Fed. Reg. 17,387 (1976) 4

44 Fed. Reg. (1979):
p. 32,854 4
p. 32,956 4

Miscellaneous—Continued: Page

66 Fed. Reg. (2001):
p. 65,256 4
pp. 65,270-65,271 5
69 Fed. Reg. (2004):
p. 41,576 5
pp. 41,598-41,599 5
p. 41,599 5
p. 41,605 . . . . . 6, 15
pp. 41,605-41,606 6
p. 41,606 6
p. 41,608 14
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p. 35,006 5
p. 35,011 19
p. 35,015 16
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Staff of the Senate Comm. on Public Works, 93d Cong., 1st Sess., *A Legislative History of the Water Pollution Control Act Amendments of 1972* (Comm. Print 1973) 13

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BRIEF FOR THE FEDERAL RESPONDENTS IN OPPOSITION

OPINION BELOW

The opinion of the court of appeals (07-589 Pet. App. 1a-86a) is reported at 475 F.3d 83.

JURISDICTION

The judgment of the court of appeals was entered on January 25, 2007. A petition for rehearing was denied on July 5, 2007 (07-589 Pet. App. 87a-89a). On September 25, 2007, Justice Ginsburg extended the time within which to file a petition for a writ of certiorari to and including November 2, 2007, and the petitions were filed on that date. The jurisdiction of this Court is invoked under 28 U.S.C. 1254(1).

STATEMENT

1. Steam electric power plants and other industrial and manufacturing facilities employ cooling water intake structures (intake structures) to absorb heat. The intake structures at such plants collectively withdraw large amounts of water each day from the Nation's lakes, rivers, and other water bodies. Among the adverse environmental impacts that occur as those structures withdraw water are "impingement," which occurs when aquatic organisms are trapped against the intake structures by the force of the inflowing water, and "entrainment," which occurs when smaller organisms are pulled into a facility's cooling system. See 07-589 Pet. App. 2a.

Section 316(b) of the Clean Water Act (CWA or the Act) requires that "[a]ny standard established pursuant to" Section 301 or 306 of the Act "and applicable to a point source shall require that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact." 33 U.S.C. 1326(b). That provision is unique among CWA provisions in that it addresses the *intake* of water, in contrast to other

provisions that regulate the *discharge* of pollutants into waters of the United States.

The CWA does not define the substantive standard specified in Section 316(b)—"best technology available for minimizing adverse environmental impact" (BTA). 33 U.S.C. 1326(b). Section 316(b) does, however, cross-reference Sections 301 and 306 of the CWA by requiring that any standards established pursuant to those sections also require that intake structures reflect the BTA. *Ibid.* Section 301 authorizes the Environmental Protection Agency (EPA) to establish, among other things, effluent limitations based on the "best practicable control technology currently available" (BPT) or the "best available technology economically achievable" (BAT). 33 U.S.C. 1311(b)(1)(A) and (2)(A). Section 306 directs EPA to establish performance standards based on the "best available demonstrated control technology" (BADT). 33 U.S.C. 1316(a)(1).

The CWA specifies that, in establishing BPT, EPA must consider, among other factors, "the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application * * * and such other factors as the Administrator deems appropriate." 33 U.S.C. 1314(b)(1)(B). In determining BAT, EPA may consider factors similar to the BPT factors, including "the cost of achieving such effluent reduction * * * and such other factors as the Administrator deems appropriate." 33 U.S.C. 1314(b)(2)(B). The limitations and standards promulgated under Sections 301, 306, and 316(b) are implemented through National Pollutant Discharge Elimination System (NPDES) permits, which are issued for terms of up to five years, either by States with approved NPDES programs or, in States without an ap-

proved NPDES program, by EPA. See 33 U.S.C. 1342; 40 C.F.R. 125.90(a).

2. a. EPA first promulgated regulations implementing Section 316(b) in 1976. 41 Fed. Reg. 17,387. The Fourth Circuit remanded those regulations to EPA for procedural reasons. *Appalachian Power Co.* v. *Train*, 566 F.2d 451 (1977). When EPA subsequently withdrew the remanded regulations, it left intact a separate provision, which had not been remanded, that directs permitting authorities to use their best professional judgment to determine the BTA for each facility on a case-by-case basis. See 44 Fed. Reg. 32,854, 32,956 (1979); 40 C.F.R. 401.14. In 1977, EPA also issued a General Counsel opinion confirming its previous interpretation that, while Section 316(b) does not require a full cost-benefit analysis, it would be unreasonable "to interpret Section 316(b) as requiring use of technology whose cost is wholly disproportionate to the environmental benefit to be gained." *In re Central Hudson Gas & Elec. Corp.*, Op. EPA Gen. Counsel, NPDES No. 63, 1977 WL 28250, at *8 (July 29, 1977) (citation omitted). Thus, for more than 30 years, permitting authorities have considered costs and benefits to at least that extent in determining a facility's BTA.

b. In 1995, EPA entered into a consent decree establishing deadlines for proposing and taking final action on regulations implementing Section 316(b). That consent decree was later amended to provide for three phases of rulemaking addressing different categories of facilities. See 07-589 Pet. App. 4a-5a.

EPA published a Phase I rule in 2001. 66 Fed. Reg. 65,256. That rule governs new facilities that meet certain threshold specifications, and it provides that closed-cycle cooling technology (which reuses withdrawn wa-

ter) is generally the BTA for such facilities. *Id.* at 65,270-65,271. The Second Circuit largely upheld the Phase I rule. *Riverkeeper, Inc.* v. *United States EPA*, 358 F.3d 174, 181 (2004). The Phase II rule, which is at issue here, establishes requirements for intake structures at large, existing power plants that meet certain threshold specifications. 69 Fed. Reg. 41,576 (2004). The Phase III Rule, which governs new offshore and coastal oil and gas facilities and existing manufacturing and industrial facilities and smaller power plants, see 71 Fed. Reg. 35,006 (2006), is pending review in the Fifth Circuit. *ConocoPhillips Co.* v. *EPA*, No. 06-60662 (filed July 14, 2006).

In the Phase II rule at issue here, EPA selected a suite of technologies to reflect the BTA. 69 Fed. Reg. at 41,598-41,599. Those technologies include, among others, relocation of intakes, fine mesh passive screens, double-entry single exit traveling screens, velocity caps, larger intakes to decrease intake velocity, and barrier nets. See *id.* at 41,599. Based on that suite of technologies, EPA adopted national performance standards for reducing impingement mortality by 80%-95% and entrainment by 60%-90%. 40 C.F.R. 125.94(b). Facilities may use any combination of control technologies or operational controls, including restoration measures, to meet those standards. 40 C.F.R. 125.94(a)(1)-(4). A facility may request a variance that results in a site-specific BTA determination if the facility demonstrates that the cost of complying with the national performance standards is significantly greater than the benefits of compliance. 40 C.F.R. 125.94(a)(5).

EPA considered treating closed-cycle recirculating cooling towers, which it had determined to be the BTA for (new) Phase I facilities, as the BTA for (existing)

Phase II facilities. See 69 Fed. Reg. at 41,605-41,606. EPA rejected that alternative, however, because of its "generally high costs (due to conversions), the fact that other technologies approach the performance of this option, concerns for energy impacts due to retrofitting existing facilities, and other considerations." *Id.* at 41,605. EPA explained that: the cost of closed-cycle recirculating cooling towers for Phase II facilities was many times higher than for Phase I facilities (at least $130-$200 million per tower, and probably more than that, with additional annual operating costs up to $20 million per facility); such cooling towers were less energy efficient than EPA's chosen alternatives; and, "[a]lthough not identical, the ranges of impingement and entrainment reduction are similar" under EPA's chosen option and the closed-cycle alternative. *Id.* at 41,605, 41,606.

3. After several parties petitioned for review, the petitions were consolidated in the Second Circuit. See 07-589 Pet. App. 1a-86a. As relevant here, the court of appeals held that: (i) EPA may not consider the relationship between an alternative's costs and benefits in determining the BTA, *id.* at 17a-33a; (ii) Section 316(b) precludes the use of restoration measures as a means of minimizing adverse environmental impacts, *id.* at 40a-45a; and (iii) EPA may apply Section 316(b)'s requirements to both new and existing facilities through the NPDES permit process, *id.* at 65a-70a.

a. The court of appeals recognized that "Section 316(b) does not itself set forth * * * the specific factors that the EPA must consider in determining BTA." 07-589 Pet. App. 18a. Because Section 316(b) cross-references Sections 301 and 306, however, the court looked to the factors that EPA may consider in implementing

various standards under those sections. *Id.* at 18a-20a. While those standards treat costs in different ways, including by requiring cost-benefit analysis in some circumstances, the court concluded that Congress had manifested a clear intent in those other provisions "to move cost considerations under the CWA from a cost-benefit analysis to a cost-effectiveness one." *Id.* at 20a. The court further asserted that, if Congress had intended to permit a comparison of costs and benefits, it would have said so expressly in the statute. *Id.* at 22a-23a.

The court of appeals then held that EPA may not engage in cost-benefit analysis, but instead "may permissibly consider cost in two ways: (1) to determine what technology can be 'reasonably borne' by the industry and (2) to engage in cost-effectiveness analysis." 07-589 Pet. App. 23a. After consulting the definition of "cost-effectiveness" found in an Office of Management and Budget (OMB) circular, the court explained that, in its view, permissible cost-effectiveness review is limited to choosing "a less expensive technology that achieves essentially the same results" as the best technology that industry can reasonably bear. *Id.* at 20a n.10, 23a-24a. "For example, assuming the EPA has determined that power plants governed by the Phase II Rule can reasonably bear the price of technology that saves between 100-105 fish, the EPA, given a choice between a technology that costs $100 to save 99-101 fish and one that costs $150 to save 100-103 fish * * * could appropriately choose the cheaper technology on cost-effectiveness grounds." *Id.* at 24a. Thus, the court concluded, "the specified level of benefit is * * * a narrowly bounded range, within which the EPA may permissibly choose between two (or more) technologies that produce essen-

tially the same benefits but have markedly different costs." *Id.* at 25a.

The court of appeals then remanded to EPA because, in the court's view, "it is unclear whether the Agency improperly weighed the benefits and the costs of requiring closed-cycle cooling." 07-589 Pet. App. 29a. Based in part on its cost-benefit holding, the court also invalidated the provision of the Phase II rule that authorized site-specific variances based on a comparison of costs and benefits at particular sites. *Id.* at 52a.

b. The court of appeals went on to hold that Section 316(b) unambiguously precludes EPA from considering restoration measures, such as restocking of fish and improvement of surrounding habitat, in determining the BTA for a facility. 07-589 Pet. App. 40a-45a. In limited circumstances, EPA had allowed facilities to use such measures to offset the adverse environmental impacts that would otherwise be caused by the operation of an intake structure. 40 C.F.R. 125.94(c). In the court of appeals' view, however, such mitigation measures do not "minimize" adverse environmental impacts within the meaning of Section 316(b), but instead "substitute after-the-fact compensation for adverse environmental impacts that have already occurred." 07-589 Pet. App. 44a.

c. The court of appeals also upheld EPA's determination that Section 316(b) applies to existing as well as new facilities. 07-589 Pet. App. 65a-70a. The court explained that "[S]ection 316(b), on its face, applies to existing facilities" because it cross-references Section 301, which applies to existing facilities. *Id.* at 68a. "At the very least," the court concluded, "EPA's view that section 316(b) applies to existing facilities is a reasonable interpretation of the statute." *Ibid.*

In so holding, the court of appeals rejected the contention that EPA could not use the NPDES permitting process to enforce Section 316(b)'s requirements against existing facilities. 07-589 Pet. App. 68a-70a. The court noted that EPA must enforce Section 316(b) against existing facilities through "some permit process," and NPDES permits are "used to enforce the effluent limitations of sections 301 and 306." *Id.* at 69a. Thus, the court held, "EPA's decision to use the NPDES process to enforce section 316(b) is not unreasonable." *Ibid.*

ARGUMENT

1. Petitioners contend (*e.g.*, 07-589 Pet. 17-27) that the court of appeals erred in holding that, in determining the BTA, EPA may not consider the relationship between a technology's costs and benefits. The government agrees. The court of appeals' holding to that effect is wrong, and is in tension with *Seacoast Anti-Pollution League* v. *Costle*, 597 F.2d 306 (1st Cir. 1979). There is, however, no square circuit conflict on that question. And, while the question presented has great significance, it is not yet clear whether the decision is sufficiently important to merit the Court's review.

To be sure, the uncertainty created by the erroneous decision below may have significant repercussions for facilities that undergo permitting decisions before the remand proceedings are completed. In the government's view, however, the full impact of the decision will not be clear until EPA completes proceedings on remand. For that reason, the government decided not to file a petition for a writ of certiorari in this case. If this Court were to grant the petitions, however, the government would support the position of the petitioners on this issue.

a. The court of appeals' holding that Section 316(b) unambiguously precludes comparison of a technology's costs and benefits is incorrect. Section 316(b) requires EPA to select the "best technology available for minimizing adverse environmental impact." 33 U.S.C. 1326(b). As the court of appeals recognized, "Section 316(b) does not itself set forth * * * the specific factors that the EPA must consider in determining BTA." 07-589 Pet. App. 18a.

Nor does anything in the general statutory phrase preclude EPA's conclusion that the statute permits consideration of cost-benefit analysis in determining the BTA. The "best" technology for minimizing adverse impacts is not necessarily the one that provides the greatest reduction of such impacts, without regard to any other considerations. Section 316(b) cross-references Sections 301 and 306 of the Act, which direct EPA to adopt various other "best" standards: the "best practicable control technology currently available" (BPT); the "best available technology economically achievable" (BAT); and the "best available demonstrated control technology" (BADT). See 33 U.S.C. 1311(b)(1)(A) and (2)(A), 1316(a)(1), 1326(b). Congress specified that, in establishing BPT, EPA must consider, among other factors, "the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application * * * and such other factors as the Administrator deems appropriate." 33 U.S.C. 1314(b)(1)(B). In determining BAT, EPA is not *required* to consider the relationship between costs and benefits, but Congress expressly provided that the agency may consider "the cost of achieving such effluent reduction * * * and such other factors as the Administrator deems appropriate." 33 U.S.C. 1314(b)(2)(B).

Those statutory provisions confirm that "the CWA's requirement that EPA choose the 'best' technology does not mean that the chosen technology must be the best [at] pollutant removal." *Citizens Coal Council* v. *United States EPA*, 447 F.3d 879, 903 (6th Cir. 2006) (en banc) (quoting *BP Exploration & Oil, Inc.* v. *United States EPA*, 66 F.3d 784, 796 (6th Cir. 1995)).[1]

The court of appeals asserted that, if Congress had intended to permit consideration of the relationship between costs and benefits, it would have clearly said so. 07-589 Pet. App. 22a-23a. By treating statutory silence as an unambiguous prohibition, the court turned normal rules of statutory construction and *Chevron* deference on their head. "[S]uch silence, after all, normally creates ambiguity. It does not resolve it." *Barnhart* v. *Walton*, 535 U.S. 212, 218 (2002); see *Chevron U.S.A. Inc.* v. *NRDC*, 467 U.S. 837, 843-844 (1984). Moreover, the court of appeals erred in construing *American Textile Manufacturers Institute* v. *Donovan*, 452 U.S. 490, 510 (1981), to erect a presumption against consideration of the relationship between costs and benefits. See 07-589 Pet. App. 22a-23a. *Donovan* upheld an agency's determination that it was not *required* to undertake cost-benefit analysis under a different statute. *Donovan*, 452 U.S. at 506. Thus, *Donovan*—which predated

[1] The court of appeals asserted that BTA is more akin to BAT than BPT, and construed BAT (unlike BPT) to preclude cost-benefit analysis. 07-589 Pet. App. 18a-20a. All three standards, however, include the terms "best," "technology," and "available," and neither the BAT nor the BPT standard goes on to consider minimizing adverse environmental impacts. See 33 U.S.C. 1311(b)(1)(A) and (2)(A), 1326(b). As such, the court of appeals erred in concluding that the Act unambiguously treats BTA like BAT (but not BPT) for this purpose.

Chevron in any event—did not hold that silence unambiguously *precludes* consideration of costs and benefits.

More recent decisions applying *Chevron* principles of statutory construction have construed congressional silence as permitting cost-benefit analysis. See, *e.g.*, *Sierra Club* v. *United States EPA*, 314 F.3d 735, 744 (5th Cir. 2002); *Michigan* v. *United States EPA*, 213 F.3d 663, 678-679 (D.C. Cir. 2000), cert. denied, 532 U.S. 903, and 532 U.S. 904 (2001). The District of Columbia Circuit, for example, has explained that "[i]t is only where there is clear congressional intent to preclude consideration of cost that we find agencies barred from considering costs." *Id.* at 678 (internal quotation marks and citation omitted). The court of appeals erred by relying on the opposite presumption in this case.

The court of appeals confirmed its error by purporting to micro-manage the agency's decisionmaking by establishing rules that cannot be found anywhere in the Act. The court concluded, for example, that EPA may consider costs as part of cost-effectiveness but not cost-benefit analysis—terms that appear nowhere in the statute. After consulting the definition of "cost-effectiveness" found in an OMB circular that does not purport to interpret Section 316(b), the court proclaimed that EPA could adopt a significantly cheaper technology that would save 99-101 fish instead of 100-103 fish. 07-589 Pet. App. 20a & n.10, 24a. While it is not clear what result the court of appeals would reach if five or ten fish were potentially affected instead of one or two, the point for present purposes is that the court of appeals' freelancing violates *Chevron* by usurping the agency's role of construing and filling in an ambiguous statute.

Indeed, the court of appeals also agreed to let EPA consider other practical factors, such as energy effi-

ciency and countervailing environmental effects. 07-589 Pet. App. 24a n.12. While those factors are very important considerations, the lines drawn by the court of appeals between what it will and will not permit the agency to consider are by no means required by the statute; instead, they are simply the court of appeals' preferences imposed on the agency, in violation of *Chevron*.

b. The court of appeals' decision is also in tension with the First Circuit's decision in *Seacoast*, *supra*. In determining the BTA in that case under Section 316(b), EPA rejected an alternative that would have further minimized entrainment "only slightly," and would have cost an additional $20 million. *Seacoast*, 597 F.2d at 311. EPA rejected that alternative because "the costs would be 'wholly disproportionate to any environmental benefit.'" *Ibid.* (quoting EPA's opinion). After resolving a factual dispute concerning the magnitude of the costs, the First Circuit stated that "[p]etitioners, wisely, do not argue that the cost may not be considered." *Ibid.* Rather, "[t]he legislative history clearly makes cost an acceptable consideration in determining whether the intake design 'reflect[s] the best technology available.'" *Ibid.* (quoting Staff of the Senate Comm. on Public Works, 93d Cong., 1st Sess., *A Legislative History of the Water Pollution Control Act Amendments of 1972*, at 264 (Comm. Print 1973)).

Seacoast does not present a square conflict for two reasons. First, it appears from the court of appeals' brief discussion that the permissibility of considering costs was not in dispute in that case. 597 F.2d at 311. Second, while the First Circuit clearly stated that EPA may consider costs, the court did not explicitly discuss the *extent* to which costs may be considered. See *ibid.*

Nonetheless, *Seacoast* upheld EPA's rejection of an alternative on the ground that its costs were wholly disproportionate to its benefits—a legal standard that cannot be squared with the court of appeals' decision below. Indeed, the court of appeals below faulted EPA for applying a standard that, in the court of appeals' view, resembled one that looks to whether costs are "wholly out of proportion" to benefits. 07-589 Pet. App. 19a (quoting *EPA* v. *National Crushed Stone Ass'n*, 449 U.S. 64, 71 n.10 (1980)). In this case, therefore, the court of appeals rejected essentially the same legal standard that EPA had applied in *Seacoast*.

c. While the court of appeals' decision is undoubtedly important, and it unjustifiably constrains EPA's consideration of costs and benefits, it is unclear how significant the decision ultimately will prove to be. The court of appeals did not determine that EPA had considered costs in an unlawful fashion; instead, it found EPA's rationale "unclear" and remanded for further proceedings. 07-589 Pet. App. 26a. In doing so, the court of appeals noted that EPA could permissibly consider the energy impacts, countervailing environmental effects, and cost-effectiveness of alternatives. *Id.* at 24a n.12.

Nonetheless, it is clear that the court of appeals' decision will be disruptive. The Phase II rule affects approximately 550 facilities that account for approximately 40% of our Nation's energy production. See 69 Fed. Reg. at 41,608; Office of Water, EPA, *Economic and Benefits Analysis for the Final Section 316(b) Phase II Existing Facilities Rule* A3-6, A3-13 (2004). Because those facilities' NPDES permits expire every five years, see 33 U.S.C. 1342(a)(3) and (b)(1)(B), many affected permitting decisions may be made before EPA com-

pletes the remand proceedings and an appellate court reviews those proceedings. Until EPA completes the remand proceedings, permitting authorities will issue permits on a case-by-case basis based on their best professional judgment. At least in the Second Circuit, however, they will no longer be able to consider the relationship between costs and benefits. That will mark a sharp break from past practice, because EPA and other permitting authorities have understood for at least 30 years that cost-benefit analysis is an appropriate consideration. See, *e.g.*, *Central Hudson*, Op. EPA Gen. Counsel, NPDES No. 63, 1977 WL 28250, at *8 (explaining that it would be "unreasonable to interpret Section 316(b) as requiring use of technology whose cost is wholly disproportionate to the environmental benefit to be gained") (citation omitted). The short-term consequences of the resulting uncertainty will be magnified by the fact that existing facilities have made enormous investments based, in part, on their reliance on past permitting decisions made under a different legal standard.

As EPA determined in the Phase II rulemaking, any requirement that existing facilities must adopt closed-cycle cooling technology would have dramatic effects. Nationwide, the cost would exceed $3.5 billion annually, and possibly be much more than that. 69 Fed. Reg. at 41,605. Such controls would also impose a significant "energy penalty" by reducing the amount of energy created by affected plants while forcing others to remain idle during extensive retrofits (or to close their doors forever). See *ibid.* At this time, however, any assessment of the likely consequences is speculative, as explained above.

It is also unclear whether the court of appeals' decision will have practical consequences beyond the

Phase II rule. EPA's Phase III rule expressly relies on cost-benefit considerations. *E.g.*, 71 Fed. Reg. at 35,015. Challenges to that rule are currently pending before the Fifth Circuit, and the United States is defending EPA's consideration of the relationship between costs and benefits in that rulemaking. See U.S. Br. at 54-73, *ConocoPhillips*, *supra* (No. 06-60662). If the Fifth Circuit were to agree with the Second Circuit, the practical importance of the question would be magnified. If the Fifth Circuit were to disagree with the Second Circuit, the resulting circuit conflict would also weigh in favor of this Court's review. At this juncture, however, it is not clear that the consequences of the court of appeals' ruling below are sufficiently important to satisfy this Court's certiorari criteria.

2. In addition to challenging the court of appeals' erroneous cost-benefit holding, petitioners argue (*e.g.*, 07-589 Pet. 28-31) that the court of appeals erred in holding that the CWA precludes the use of restoration measures to minimize the adverse environmental impacts of cooling water intake structures. While the court of appeals' holding on that issue is wrong as well, it does not warrant further review at this time.

As discussed, the statute requires that "the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact." 33 U.S.C. 1326(b). EPA's regulations permit the use of restoration measures (instead of, for example, improvements to the equipment used in intake structures) when, among other things, "the impacts to fish and shellfish * * * within the watershed [through the use of restoration measures] will be comparable to those which would result" from other compliance methods. 40 C.F.R. 125.84(d)(1). That

is a reasonable interpretation of the statutory text, because it provides a common sense way of minimizing environmental impacts in a cost-effective manner.

The court of appeals construed Section 316(b) to require that BTA be implemented through "the location, design, construction, or capacity of cooling water intake structures." 07-589 Pet. App. 44a. Restoration measures are, however, part of the overall "design" of such structures. In any event, the statute requires only that the design "reflect[]" BTA, and the design does so when restoration measures help the facility achieve that level of protection. The court of appeals also thought that "minimizing adverse environmental impact" under the statute unambiguously requires minimizing that impact before any consequence occurs, as opposed to using restoration measures to replace, for example, entrained organisms with new organisms. 07-589 Pet. App. 44a. But nothing in the statute requires minimization to take either form, so long as the end result is comparable. Thus, if the Court were to grant the petitions, the government would support the position of the petitioners on this issue as well.

The restoration-measures question does not, however, warrant further review at this time. No other court of appeals has held that restoration measures are a permissible means of compliance under Section 316(b). While the court of appeals' decision has the potential to be disruptive and to require inefficient and wasteful results at existing facilities that had intended to rely upon restoration measures, the issue is not so exceptionally important as to warrant review in the absence of a circuit conflict. The court of appeals' holding is limited to Section 316(b), and does not extend to the use of restoration measures under other provisions of the CWA or

other environmental statutes. Moreover, the permissibility of restoration measures lacks the far-reaching significance of the more fundamental cost-benefit question described above, because such measures are simply one means of complying with BTA once BTA is established.

3. Alone among the petitioners, Entergy also argues (07-588 Pet. 15-25) that the court of appeals erred in upholding EPA's determination that Section 316(b) applies to existing facilities. The court of appeals' holding on that point is correct and does not warrant further review.

a. As noted, Section 316(b) requires that "[a]ny standard established pursuant to section [301] of [the CWA] or section [306] of [the CWA] and applicable to a point source shall require that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact." 33 U.S.C. 1326(b). The opening phrase establishes the scope of Section 316(b)'s applicability—*i.e.*, standards developed pursuant to Sections 301 and 306 and applicable to point sources—while the closing phrase establishes its substantive requirement—*i.e.*, that the location, design, construction, and capacity of intake structures reflect BTA. Significantly, while Section 306 addresses only new sources, 33 U.S.C. 1316(b), Section 301 provides for limitations on existing sources, as Entergy concedes (07-588 Pet. 5). See 33 U.S.C. 1311(b). Thus, by mandating that "*[a]ny* standard established pursuant" to Sections 301 or 306 reflect BTA for intake structures, Section 316(b) unambiguously imposes its requirements on both new and existing facilities. 33 U.S.C. 1326(b) (emphasis added).

Entergy argues (07-588 Pet. 15-16) that Section 316(b) is limited to new sources because it imposes requirements on "the location, design, construction, and capacity of cooling water intake structures." 33 U.S.C. 1326(b). As discussed, however, Section 316(b) separately defines its scope by stating that it applies to "[a]ny standard established pursuant to" Sections 301 and 306. *Ibid.*

Even if Section 316(b) does not unambiguously apply to existing facilities, EPA's interpretation is certainly reasonable and entitled to deference. Applying Section 316(b) to existing facilities furthers the CWA's general objective "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. 1251(a). It also fulfills Section 316(b)'s particular objective of minimizing adverse environmental impacts at facilities that are subject to Section 301 standards. Moreover, EPA has a longstanding and consistent practice of applying Section 316(b) to existing facilities, dating back to its 1977 regulations and a general counsel opinion that same year. See 71 Fed. Reg. at 35,011; *Central Hudson*, Op. EPA Gen. Counsel, NPDES No. 63, 1977 WL 28250, at *6.

b. Entergy nonetheless argues (07-588 Pet. 17-19) that its position is "confirmed by the absence of any CWA mechanism for imposing new requirements relating to the intake of water on existing facilities." As the court of appeals determined, however, EPA may implement Section 316(b) through the NPDES permitting process. 07-589 Pet. App. 68a-70a.

As discussed, Section 316(b) requires that standards established under Sections 301 and 306 must comply with Section 316(b)'s requirements. Section 301 and 306 standards are, in turn, implemented through NPDES

permits. See 33 U.S.C. 1342(a)(1). Indeed, the Act authorizes EPA to "issue [an NPDES] permit for the discharge of any pollutant * * * upon condition that such discharge will meet * * * *all applicable requirements* under sections [301 and 306]." *Ibid.* (emphasis added). Because the Act ties Section 316(b)'s requirements to standards established under Section 301, and the Act further directs that NPDES permits contain all applicable Section 301 requirements, the Act "implicitly requires the Administrator to insure compliance with § 316(b) as one of the permit conditions." *United States Steel Corp.* v. *Train*, 556 F.2d 822, 850 (7th Cir. 1977).

Entergy argues (07-588 Pet. 17-18) that Section 402(a)(1), 33 U.S.C. 1342(a)(1), which authorizes the issuance of NPDES permits, *requires* only that such permits mandate that the "discharge" of a pollutant comply with Section 301 requirements, whereas Section 316(b) governs the intake, as opposed to discharge, of water. But the intake and discharge of water are closely associated with one another, and there is no reason to read Section 402(a)(1) as *precluding* NPDES permits from including all Section 301 requirements. As the court of appeals observed, Entergy's reading cannot be squared with Section 316(b)'s clear application to existing sources. 07-589 Pet. App. 69a-70a. At a bare minimum, EPA's interpretation is reasonable.

c. There is no division among the circuits on the question presented here. Indeed, Entergy does not assert a circuit conflict on the question whether Section 316(b) applies to existing sources; instead, it asserts (07-588 Pet. 18-19) only a circuit conflict on the subsidiary question whether Section 316(b) may be enforced through NPDES permits. There is no such conflict. The District of Columbia Circuit's decision in *NRDC* v. *Uni-*

ted States EPA, 859 F.2d 156 (1988) (cited at 07-588 Pet. 19) does not even involve Section 316(b); instead, it addresses the question whether EPA may include conditions in NPDES permits based on the requirements of an entirely different statute, the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. 4321 *et seq.* See *NRDC*, 859 F.2d at 168-170. As the District of Columbia Circuit explained, NEPA—unlike Section 316(b)—is a "procedural" statute that "does not expand the agency's substantive powers." *Id.* at 169, 170.

Nor is there a conflict with *Virginia Electric & Power Co.* v. *EPA*, 566 F.2d 446 (4th Cir. 1977) (*VEPCO*) (cited at 07-588 Pet. 18-19). *VEPCO* did not involve NPDES permits. Instead, the "sole question" there was whether the district court or the court of appeals had original jurisdiction to review regulations implementing Section 316(b). *VEPCO*, 566 F.2d at 447. That question turned on "whether the regulations constitute 'effluent limitation[s] or other limitation[s]' within the meaning of [33 U.S.C. 1369(b)(1)(E)]." 566 F.2d at 449. It was undisputed that the regulations were not effluent limitations. *Ibid.* The court of appeals held that the regulations were other limitations for purposes of the jurisdictional provision, primarily because "§ 316(b) itself seems to indicate its limitations are to be adopted under §§ 301 and 306." *Id.* at 450. Nothing in *VEPCO*'s analysis, much less its jurisdictional holding, conflicts with the court of appeals' decision in this case; if anything, *VEPCO* supports the court of appeals' determination that Section 316(b)'s requirements are requirements under Sections 301 and 306.

d. Entergy argues (07-588 Pet. 22-25) that the court of appeals' decision implicates a circuit conflict on whether courts must defer to an agency's reasonable inter-

pretation of its own statutory jurisdiction. That question is not properly presented here, for at least two reasons. First, it was not timely raised or considered below. Entergy raised that contention for the first time in its reply brief in the court of appeals, and therefore has forfeited it. See, *e.g.*, *United States* v. *Gabriel*, 125 F.3d 89, 100 n.6 (2d Cir. 1997). Nor did the court of appeals address the question. Thus, the question is not properly presented here. See, *e.g.*, *Travelers Cas. & Sur. Co. of Am.* v. *Pacific Gas & Elec. Co.*, 127 S. Ct. 1199, 1208 (2007).[2]

Moreover, the court of appeals had an even more fundamental reason for not addressing the question: the court held that Section 316(b) "plainly applies" "on its face * * * to existing facilities." 07-589 Pet. App. 68a, 70a; see *id.* at 69a (emphasizing the "clear textual basis" for that conclusion). Because the court of appeals held that the statute is unambiguous, it had no occasion to analyze the deference that would be due to EPA's reasonable construction of an ambiguous statute. To be sure, the court of appeals stated, apparently as an alternative holding, that "at the very least, the EPA permissibly interpreted the statute to cover existing facilities." *Id.* at 65a; see *id.* at 68a. But the court's analysis rested on the plain language of the statute, see *id.* at 67a-68a, and, as discussed above, the court concluded that the text is "clear" and "plain[]." *Id.* at 69a, 70a. Thus, the court's holding does not appear to rely on deference.

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[2] In a string-cite for the general proposition that agencies' interpretations must be reasonable, Entergy's opening brief in the court of appeals included a parenthetical that said, "discretion inappropriate regarding matters of agency authority." Entergy C.A. Br. 33. That brief statement in a parenthetical to a case cited for a different proposition did not adequately raise the issue.

Even if the basis for the court's holding were unclear, that lack of clarity would make this case a poor vehicle for considering the deference question.

In any event, under *Chevron*, EPA's reasonable interpretation of the statutes it administers is entitled to deference, even if those statutes are considered jurisdictional. Indeed, an agency's construction of statutory provisions it is charged with administering normally affects the scope of the agency's regulatory authority and responsibilities. As a result, Entergy's position would all but eviscerate *Chevron*. In *Chevron* itself, this Court deferred to EPA's interpretation of the Clean Air Act's statutory term "stationary source"—an interpretation that determined the scope of EPA's regulatory responsibilities and authority. See *Chevron*, 467 U.S. at 839-840. Entergy makes no attempt to explain how its position can be squared with *Chevron*, and it cannot. Indeed, just three months before this Court decided *Chevron*, it held that an agency was entitled to deference on the scope of its jurisdiction and authority. *NLRB* v. *City Disposal Sys., Inc.*, 465 U.S. 822, 830 n.7 (1984). Since then, this Court has never held otherwise.

Entergy argues (07-588 Pet. 24-25) that two courts of appeals have nonetheless held that an agency's view of its own jurisdiction is not entitled to deference. Those cases are distinguishable. *Holderfield* v. *MSPB*, 326 F.3d 1207, 1208 (Fed. Cir. 2003), involved the Merit Systems Protection Board's (MSPB's) interpretation of the statutes that, quite literally, determine the scope of its adjudicatory jurisdiction. *Holderfeld* is distinguishable not only because it involves adjudicatory jurisdiction as opposed to regulatory authority, but also because the Federal Circuit reviews most of the MSPB's legal determinations *de novo*, not only its jurisdictional ones. See,

e.g., *King* v. *Department of the Navy*, 130 F.3d 1031, 1033 (Fed. Cir. 1997). Moreover, the Federal Circuit *does* defer to MSPB regulatory (as opposed to adjudicatory) interpretations of its jurisdiction. See *Garcia* v. *DHS*, 437 F.3d 1322, 1338 (2006) (en banc).

Petitioner is correct (07-588 Pet. 24-25) that, in the context of a different statute, the Seventh Circuit has declined to defer to an agency's interpretation of the scope of its regulatory authority. *Northern Ill. Steel Supply Co.* v. *Secretary of Labor*, 294 F.3d 844, 846-847 (2002). That case did not, however, involve Section 316(b) (or the CWA more generally). In any event, as discussed above, this case does not properly present the question, and the Seventh Circuit's decision is clearly wrong.

e. Finally, Entergy's prediction (07-588 Pet. 20-21) that the court of appeals' decision will have calamitous consequences is premature and is not supported by the record. Indeed, Entergy points (*id.* at 20) only to the cost of retrofitting nuclear facilities—which comprise a small percentage of the relevant facilities—with closed-cycle cooling towers. As discussed, however, the court of appeals' decision does not necessarily require that result on remand. Thus, while Entergy's arguments underscore the importance of the cost-benefit issue, they do not justify further review of the court of appeals' holding that Section 316(b)'s requirements apply to both new and existing facilities.

CONCLUSION

Although the decision below is incorrect in important respects, and has great potential practical importance, and the government would support reversal in the event that certiorari were granted, the petitions for a writ of certiorari should be denied.

Respectfully submitted.

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United States Court of Appeals for the Second Circuit

RIVERKEEPER, INC., NATURAL RESOURCES DEFENSE COUNCIL, WATERKEEPER ALLIANCE, SOUNDKEEPER, INC., SCENIC HUDSON, INC., SAVE THE BAY—PEOPLE FOR NARRAGANSETT BAY, FRIENDS OF CASCO BAY, AMERICAN LITTORAL SOCIETY, DELAWARE RIVERKEEPER NETWORK, HACKENSACK RIVERKEEPER, INC., NEW YORK/NEW JERSEY BAYKEEPER, SANTA MONICA BAYKEEPER, SAN DIEGO BAYKEEPER, CALIFORNIA COASTKEEPER, COLUMBIA RIVERKEEPER, CONSERVATION LAW FOUNDATION, SURFRIDER FOUNDATION, STATE OF RHODE ISLAND, STATE OF CONNECTICUT, STATE OF DELAWARE, COMMONWEALTH OF MASSACHUSETTS, STATE OF NEW JERSEY, STATE OF NEW YORK, APPALACHIAN POWER COMPANY, ILLINOIS ENERGY ASSOCIATION, UTILITY WATER ACT GROUP, PSEG FOSSIL LLC, PSEG NUCLEAR LLC, ENTERGY CORPORATION

Petitioners,

-against-

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, STEPHEN L. JOHNSON, IN HIS OFFICIAL CAPACITY AS ADMINISTRATOR OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Respondents

ON PETITION FOR REVIEW OF FINAL ACTION OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

[Final Form]

SUPPLEMENTAL BRIEF OF THE ENVIRONMENTAL PETITIONERS

(Riverkeeper, Inc., Natural Resources Defense Council, Waterkeeper Alliance, Soundkeeper, Inc., Scenic Hudson, Inc., Save The Bay—People For Narragansett Bay, Friends of Casco Bay, American Littoral Society, Delaware Riverkeeper Network, Hackensack Riverkeeper, Inc., New York/New Jersey Baykeeper, Santa Monica Baykeeper, San Diego Baykeeper, California Coastkeeper, Columbia Riverkeeper, Conservation Law Foundation, and Surfrider Foundation)

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TABLE OF CONTENTS

TABLE OF AUTHORITIES iv

ISSUES PRESENTED 1

SUMMARY OF ARGUMENT 2

STANDARD OF REVIEW 7

ARGUMENT 8

I. SECTION 316(b) PLAINLY APPLIES TO EXISTING FACILITIES. 8

A. Congress's Intent to Regulate Existing Facilities Under Section 316(b) Is Clear from the Statutory Text. 9

1. Entergy Ignores and Distorts the Statutory Text. 11

B. The Structure and Purpose of the CWA Confirms Section 316(b)'s Application to Existing Facilities. 12

C. Legislative History Confirms Congress's Intent to Regulate Existing Plants Under Section 316(b). 16

II. SECTION 316(b) REQUIRES MINIMIZATION OF ALL ADVERSE ENVIRONMENTAL IMPACTS, PARTICULARLY IMPINGEMENT AND ENTRAINMENT. 19

A. In Section 316(b), Congress Required Minimization of Any Adverse Environmental Impact, Not Just Protection of Fish Populations. 21

1. The Statute's Plain Language Unambiguously Expresses Congress's Intent. 21

2. The CWA's Structure and Purpose Evinces Congress's Intent to Prohibit Assessments of Fish Population Effects. 23

B. Minimizing Adverse Environmental Impact by Minimizing Impingement and Entrainment is Permissible. 26

1. Intake Structures at Existing Power Plants Cause Enormous Adverse Environmental Impacts. 26

2. EPA Found Studies of Population Dynamics Virtually Impossible in Permit Proceedings. 31

C. PSEG Mischaracterizes EPA's 1977 Draft Guidance and the Proposed Phase II Rule. 33

III. EPA'S CONCLUSION THAT ALL ENTRAINMENT IS ADVERSE IS CORRECT AND SUPPORTED BY THE EVIDENCE; THE CWA PROHIBITS ENTRAINMENT SURVIVAL STUDIES IN PERMITTING PROCEEDINGS. 35

A. Entrainment Survival Is Virtually Impossible to Quantify. 36

B. Congress Prohibited Complex Assessments of Harm in NPDES Permit Proceedings. 4 2

IV. CONGRESS PROHIBITED THE USE OF MONETIZED COST-BENEFIT ANALYSIS TO DETERMINE BTA STANDARDS. 44

A. Section 316(b) Prohibits Both EPA and Permit Writers From Basing BTA Requirements Solely on Monetized Use Benefits. 45

1. The Plain Language Expresses Congress's Intent to Minimize Adverse Environmental Impact, Not to Produce Net Economic Benefits. 45

2. Legislative History Reveals Congress's Clearly-Expressed Intent Not to Base NPDES Permitting Solely or Primarily on Economic Considerations. 51

V. THE "DISPROPORTIONATE BURDEN" ENTERGY ALLEGES IS BOTH IRRELEVANT AND NON-EXISTENT. 52

A. Entergy Misstates the Law on Available Technologies and Disproportionate Impacts. 53

1. "Best Available Technology" Standards Can Be Based on a Single Pilot Plant or Evidence of Future Availability. 53

2. The CWA Requires EPA to Promulgate Uniform Technology Standards that Are Economically Achievable for the Industry as a Whole. 55

B. Technologies to Meet the Rule's Performance Standards are Available to, and Economically Achievable for, the Electric Power Industry. 59

CONCLUSION 64

TABLE OF AUTHORITIES

Federal Cases

Am. Iron & Steel Inst. v. EPA, 526 F.2d 1027 (3d Cir. 1975) 50

Am. Textile Mfrs. Inst. v. Donovan, 452 U.S. 490 (1981) 46, 47, 49, 51

American Iron and Steel Institute v. EPA, 526 F.2d 1027 (3rd Cir. 1975) 55

Appalachian Power Co. v. EPA, 671 F.2d. 801 (4th Cir. 1982)..... 48, 53, 56

APWU v. Potter, 343 F.3d 619 (2d Cir. 2003)..... 11, 16

Bates v. U.S., 522 U.S. 23 (1997) 22

Bethlehem Steel Corp. v. EPA, 538 F.2d 513 (2d Cir. 1976) 24, 43

Cal. & Hawaiian Sugar Co. v. EPA, 553 F.2d 280 (2d Cir. 1977) 50

Carr v. Alta Verde Industries, Inc., 931 F.2d 1055 (5th Cir. 1992) 9

Chemical Mfrs. Ass'n v. EPA, 870 F.2d 177 (5th Cir. 1989) 49, 56

Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837 (1984)..... *passim*

City of West Chicago v. Nuclear Regulatory Comm'n, 701 F.2d 632 (7th Cir. 1983).....15

Cronin v. Browner, 898 F.Supp. 1052 (S.D.N.Y. 1995) ..... *passim*

E. I. du Pont de Nemours & Co. v. Train, 430 U.S. 112 (1977) 9

EPA v. California ex rel. State Water Resources Control Board, 426 U.S. 200 (1976)..... 12, 24

EPA v. National Crushed Stone, 449 U.S. 64 (1980) 52

Harris v. Sullivan, 968 F.2d 263 (2d Cir. 1992)..... 11

Hooker Chems. & Plastics Corp. v. Train, 537 F.2d 620 (2d Cir. 1976) 24, 43

Kennecott Copper Corporation v. EPA, 780 F.2d 445 (4th Cir. 1985).....54

Petroleum Common v. FCC, 22 F.3d 1164 (D.C. Cir. 1994) 55

PPG Industries v. EPA, 495 U.S. 910 (1990).....49

Riverkeeper, Inc. v. EPA, 358 F.3d 174 (2d Cir. 2004)..... 3

Robinson v. Shell Oil Co., 519 U.S. 337 (1997) 7, 23

Texas Oil & Gas Ass'n v. EPA, 161 F.3d 923 (5th Cir. 1998) 39, 40, 50, 56

U.S. Steel Corp. v. Train, 556 F.2d 822 (7th Cir. 1977).....15

Virginia Electric and Power Co. v. Costle, 566 F.2d 466 (4th Cir. 1977) 15

Waterkeeper Alliance, Inc. v. EPA, 399 F.3d 486 (2d Cir. 2005) 9

Weyerhaeuser Co. v. Costle, 590 F.2d 1011 (D.C. Cir. 1978) ..... *passim*

Federal Statutes

33 U.S.C. § 701a 46

42 U.S.C. § 300g-1(b)(3)(C)(i)(IV) 46

42 U.S.C. § 7412(a)(7).....23

42 U.S.C. § 7545(c)(2)(B) 46

43 U.S.C. § 1347(b) 46

49 U.S.C. § 60103(c) 11

Clean Water Act, 33 U.S.C. §§ 1251-1387 1

CWA § 101(a), 33 U.S.C. § 1251(a) 12

CWA § 301(b)(1)(A), 33 U.S.C. § 1311(b)(1)(A) 3, 13, 49

CWA § 301(b)(2)(A), 33 U.S.C. § 1311(b)(2)(A) 13, 49

CWA § 301(b)(2)(E), 33 U.S.C. § 1311(b)(1)(A) 13

CWA § 301(d), 33 U.S.C. § 1311(d) 12

CWA § 301(n), 33 U.S.C. § 1311(n) 56

CWA § 301, 33 U.S.C. § 1311 9

CWA § 302(b)(2), 33 U.S.C. § 1312(b)(2)..... 48

CWA § 304(a), 33 U.S.C. § 1314(a) 47

CWA § 304(b)(1)(B), 33 U.S.C. § 1314(b)(1)(B) 48, 50

CWA § 304(b)(2)(B), 33 U.S.C. § 1314(b)(2)(B) 50

CWA § 304(b)(4)(B), 33 U.S.C. § 1314(b)(4)(B) 47

CWA § 306(a)(1), 33 U.S.C. § 1316(a)(1) 13

CWA § 306(b)(1)(B), 33 U.S.C. § 1316(b)(1)(B) 50

CWA § 316(a), 33 U.S.C. § 1326(a) 22

CWA § 316(b) 33 U.S.C. § 1326(b) 13

CWA § 402(b)(1)(B), 33 U.S.C. § 1342(b)(1)(B) 12

CWA § 502(19), 33 U.S.C. § 1362(19) 30

CWA § 505(a)(1), 33 U.S.C. §§ 1365(a)(1) 14

CWA § 505(f), 33 U.S.C. §§ 1365(f) 14

CWA § 510, 33 U.S.C. § 1370 63

Federal Regulations

40 C.F.R. § 125.30(b) 56

40 C.F.R. § 125.81 60

40 C.F.R. § 125.90(d) 63

40 C.F.R. § 125.93 62

40 C.F.R. § 125.94 61

40 C.F.R. § 125.94(a)(5)(i) 57

40 C.F.R. § 125.94(b)(2) 61

40 C.F.R. § 125.94(f) 52

40 C.F.R. § 125.95(b)(4)(i) 62

40 C.F.R. § 125.95(b)(6)(ii)(B) 44

40 C.F.R. § 401.14 8

40 C.F.R. § 423 *et. seq.* 10

40 C.F.R. §§ 125.84(b)(4), (5) 41

40 C.F.R. §§ 125.94(b)(1), (2) 19, 41

Federal Register

47 Fed. Reg. 52,304 (Nov. 19, 1982) 10

66 Fed. Reg. 65,256 (December 18, 2001) 2, 27

67 Fed. Reg. 17,121 (April 9, 2002) 35

69 Fed. Reg. 41,576 (July 9, 2004) ..... *passim*

Legislative History

House Consideration of S. Rep. 92-1236 (1972) reprinted in Senate Com. on Public Works *A Legislative History of the Water Pollution Control Act Amendments of 1972,* 93d Cong., 1st Session at 264 21

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Karl S. Coplan, *Of Zombie Permits and Greenwash Renewal Strategies: Ten Years of New York's So-Called 'Environmental Benefit Permitting Strategy'*, 22 Pace Envtl. L. Rev. 1 (2005) 12

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Environmental Petitioners[1] submit this Supplemental Brief in opposition to certain issues raised by petitioners UWAG,[2] PSEG,[3] and Entergy[4] (collectively, "Industry Petitioners") in these consolidated actions.

ISSUES PRESENTED

1. Whether Clean Water Act section 316(b)[5] applies to existing facilities. (Responding to Entergy's Issue 1.)

2. Whether section 316(b) regulations could lawfully ignore massive aquatic mortality and instead focus solely on harm to wildlife population levels, as determined on a case-by-case, site-specific basis. (Responding to PSEG's Issue 1.)

3. Whether the U.S. Environmental Protection Agency ("EPA") reasonably concluded that all entrainment is adverse, and whether section 316(b) regulations could lawfully base permitting on case-by-case, site-specific assessments of entrainment survival. (Responding to UWAG's Issue 1, PSEG's Issue 3.)

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[1] The Environmental Petitioners are listed on the cover hereto and in their opening brief.

[2] "UWAG" refers to the Utility Water Act Group, Appalachian Power Company, and Illinois Energy Association, collectively.

[3] "PSEG" refers to PSEG Fossil LLC and PSEG Nuclear LLC.

[4] Entergy Corporation.

[5] 33 U.S.C. §§ 1251-1387, 1326(b) ("CWA" or "Act"). Citations are to CWA sections, with parallel U.S.C. citations given for the initial reference.

4. Whether Congress prohibited a monetized cost-benefit analysis as the decision-making criterion for "Best Technology Available" (BTA) standards under section 316(b). (Responding to Energy's Issue 3, PSEG's Issue 2.)

5. Whether the Phase II Rule[6] disproportionately impacts nuclear plants, and, if so, whether such impact has any legal significance given that EPA: (a) based the Rule on technologies "available" to the industry as a whole; (b) determined that the Rule's performance standards are "economically achievable" for the industry as a whole; and (c) included an economic variance. (Responding to Entergy's Issue 2.)

SUMMARY OF ARGUMENT

Each year, power plants withdraw more than 78 trillion gallons from U.S. waters, impinging and entraining "vast quantities" of aquatic organisms.[7] Their cooling systems harm and kill fish, crustaceans, and shellfish at all life stages (*i.e.*, eggs, larvae, juveniles and adults), as well as reptiles, marine mammals, plants, and virtually every other form of aquatic life.[8] "The environmental impact of these

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[6] *Final Regulations to Establish Requirements for Cooling Water Intake Structures at Phase II Existing Facilities,* 69 Fed. Reg. 41,576 (July 9, 2004) ("Phase II Rule" or "Rule").

[7] 69 Fed. Reg. at 41,586/1; 66 Fed. Reg. 65,256, 65,262/3 (Dec. 18, 2001) (SPA 185, 837).

[8] 66 Fed. Reg. at 65,262-3 (SPA 837-38).

systems is staggering: A single power plant might impinge a million adult fish in just a three-week period, or entrain some 3 to 4 billion smaller fish and shellfish in a year, destabilizing wildlife populations in the surrounding ecosystem."[9] Impingement and entrainment damage the ecological integrity of the nation's waters by, among other things, decreasing the numbers of aquatic organisms; taking endangered or otherwise protected animals; destroying important elements of the food chain; reducing indigenous species populations and fishery stocks; altering overall levels of biodiversity; and causing other changes in ecosystem structure and function.[10]

In 1972, Congress, "cognizant" of these harms to aquatic life,[11] required EPA to promulgate national technology-based standards "for minimizing the adverse environmental impact" of cooling water intake structures "not later than July 1, 1977."[12] After a first failed attempt, extensive delays, and three decades of

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[9] *Riverkeeper, Inc. v. EPA*, 358 F.3d 174, 181 (2d Cir. 2004).

[10] 69 Fed. Reg. at 41,586/1-3 (SPA 185).

[11] *Riverkeeper*, 358 F.3d at 181; *see also* Senate Com. on Public Works, *A Legislative History of the Water Pollution Control Act Amendments of 1972 ("Legislative History")*, 93d Cong., 1st Session, at 196-97 (JA 1381).

[12] CWA § 316(b), incorporating CWA § 301(b)(1)(A), 33 U.S.C. § 1311(b)(1)(A) ("Timetable for achievement of objectives"); *Cronin v. Browner*, 898 F.Supp. 1052, 1064 (S.D.N.Y. 1995) ("time limits in sections 301 and 306 govern EPA's duty to take action under section 316(b).").

case-by-case regulation under section 316(b),[13] EPA finally issued its Phase II Rule in 2004, as required by a consent decree.[14]

Despite having avoided a national BTA rule for three decades, and despite the enormous flexibility built into the Rule at their request,[15] Industry Petitioners seek to eviscerate the ability of EPA or states to compel any meaningful reductions in the massive aquatic mortality their facilities cause. To avoid regulation, Industry Petitioners ask this Court to radically rewrite section 316(b) and 30 years of precedent regarding the CWA's technology-based National Pollutant Discharge Elimination System (NPDES) program.

Their patently frivolous claims, typically set forth with little or no supporting authority, include, *inter alia*, that section 316(b), enacted in 1972, does not apply to existing facilities; that power plants should be allowed to kill an unlimited number of organisms unless and until they are proven to have depressed local wildlife populations; and that EPA is powerless to adopt environmental

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[13] *Riverkeeper*, 358 F.3d at 181-82.

[14] *See id.* at 181.

[15] The Rule incorporates a laundry list of features sought by the power industry: rejection of closed-cycle cooling as the national minimum technology; "standards" expressed as ranges rather than precise limitations; immunity from enforcement if performance falls below the ranges; a compliance option based on restoration measures; and site-specific variances based on cost-benefit or cost-cost tests. *See, e.g.*, Industry Petitioners' comments on proposed Rule: 029.024, 075.044, 029.040, 041.013, 075.064 (JA 3222, 3349, 3225, 3250a, 3358).

regulations (and states are powerless to issue permits) unless the monetary benefits exceed the monetary costs.

Industry Petitioners are demonstrably incorrect because, as discussed herein, their view of the statute contradicts its plain language and Congress's clearly-expressed intent in several respects. First, section 316(b) applies to existing facilities. As the statutory text makes clear, EPA is required to include BTA requirements in the effluent limitations it promulgates for existing facilities under CWA section 301. (*See* Section I, *infra*.)

Second, section 316(b) mandates minimization of any and all adverse environmental impact caused by cooling water intake structures, including impingement and entrainment. Congress's intent in this regard is manifest in comparison with section 316(a), which explicitly focuses on fish population levels. Congress also prohibited case-by-case, site-specific population studies as a condition precedent to permitting. (*See* Section II, *infra*.)

Third, based on evidence in the record, EPA properly determined that all entrainment is adverse. Further, Congress prohibited the site-specific, case-by-case assessments of entrainment survival that industry seeks to establish "credit" that would allow them to entrain more organisms. (*See* Section III, *infra*.)

Fourth, Congress prohibited either EPA or a state permit writer from basing CWA regulations or NPDES permits on a formal monetized cost-benefit analysis.

When Congress does intend regulations to be based on a cost-benefit analysis, it clearly indicates such intent and the parameters of such analysis on the face of the statute, which it has not done here. (*See* Section IV, *infra.*)

Fifth, nuclear power plants received favored treatment under the Rule, not a disproportionate burden. Moreover, Congress explicitly sanctioned CWA regulations that impose higher costs on some plants, so long as the regulation: (i) is "economically achievable" for the industry as a whole; (ii) is based on technologies that are "available" to the industry as a whole; and (iii) includes a "fundamentally different factors" variance to alleviate hardship where appropriate. All of three requirements were satisfied here. (*See* Section V, *infra.*)

In defending the Rule, EPA generally argues that it acted reasonably and deserves deference. However, many of Industry Petitioners' claims can and should be rejected for reasons different from those asserted by EPA. Applying step one of the two-step test set forth in *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 842-43 (1984), reveals that Congress has directly and unambiguously spoken to many of the precise questions at issue, and that such Congressional intent is dispositive.

STANDARD OF REVIEW

Under the Supreme Court's decision in *Chevron*, this Court's first step is to determine "whether Congress has directly spoken to the precise question at issue."[16] In considering whether Congress has directly spoken to an issue, courts "determine whether the language at issue has a plain and unambiguous meaning with regard to the particular dispute in the case."[17] Further, "[t]he plainness or ambiguity of statutory language is determined by [1] reference to the language itself, [2] the specific context in which that language is used, and [3] the broader context of the statute as a whole."[18] Only where "the statute is silent or ambiguous with respect to the specific issue" and "the precise issue [is] not squarely addressed in the legislative history"[19] does the court move to the second step of *Chevron* and determine "whether the agency's answer is based on a permissible construction of the statute."[20]

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[16] *Chevron*, 467 U.S. at 842-43.

[17] *Robinson v. Shell Oil Co.*, 519 U.S. 337, 340 (1997).

[18] *Id.* at 341.

[19] *Chevron*, 467 U.S. at 841 (internal quotation omitted).

[20] *Id.* at 843.

ARGUMENT

I. SECTION 316(b) PLAINLY APPLIES TO EXISTING FACILITIES.

Entergy launches a broadside attack on the industry-favorable Phase II Rule by arguing, astoundingly, that section 316(b) does not apply to existing facilities. Entergy Br. at 14-35. Entergy's claim comes 33 years after Congress's mandate that EPA issue section 316(b) regulations for existing facilities by 1977.[21] It comes 29 years after EPA first issued such regulations (which, except for a placeholder, were withdrawn due to a procedural defect in 1978),[22] and ten years after the 1995 consent decree required EPA to promulgate valid regulations for both new and existing facilities.[23] During those three decades, cooling water intake structures at existing power plants, including those owned by Entergy, have been permitted on a case-by-case basis under section 316(b) through the NPDES permit program.[24]

Because Entergy's bizarre and dilatory construction of section 316(b)

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[21] CWA § 301(b)(1)(A).

[22] 40 C.F.R. § 401.14 (1976).

[23] *Cronin*, 898 F.Supp. at 1064.

[24] *See Riverkeeper,* 358 F.3d at 181-82; *see also Cronin v. Browner*, 90 F.Supp.2d 364, 376 (S.D.N.Y. 2000) ("EPA has been focusing for several years on the application of section 316(b) to existing facilities, not only for the 1976 proposed regulation but also in permit proceedings.").

contradicts the statute's text, structure and purpose, and legislative history, it should be summarily rejected by this Court under step one of *Chevron*.

A. Congress's Intent to Regulate Existing Facilities Under Section 316(b) Is Clear from the Statutory Text.

The text of section 316(b) is plain and unequivocal: the standards EPA promulgates for point sources under either section 301 or section 306 of the Act must require the best technology available for their cooling water intake structures.[25] Equally clear is that section 301 requires EPA to promulgate effluent limitations for existing point sources.[26] As Representative Clark explained during House debate, "section 316 must be read with other sections in the bill including section 301 effluent limitations ... and section 306, new sources."[27] Section 316(b) thus compels EPA to include cooling water intake requirements in its section 301 and 306 effluent limitation guidelines.

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[25] CWA § 316(b).

[26] CWA § 301, 33 U.S.C. § 1311. *See, e.g.*, *E. I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112, 121 (1977) ("Section 301(b) defines the effluent limitations that shall be achieved by existing point sources."); *Waterkeeper Alliance, Inc. v. EPA*, 399 F.3d 486, 491-92 (2d Cir. 2005) ("[T]he technology standards for already existing point sources include… the best available technology economically achievable, *see* 33 U.S.C. § 1311(b)(2)(A)."); *Carr v. Alta Verde Industries, Inc.*, 931 F.2d 1055, 1059 (5th Cir. 1992) ("Section 1311(b)(2)(A) requires the EPA to establish effluent limitations guidelines for existing point sources.").

[27] *Riverkeeper,* 358 F.3d at 186, quoting 118 Cong. Rec. 33,765 (1972) (statement of Rep. Clark) reprinted in *Legislative History* at 273 (SPA 1372).

EPA is not only *authorized* to regulate existing intake structures, it is *obligated* to do so. In approving the 1995 consent decree, the district court explained that "section 316(b), as enacted, created a mandatory duty… because the time limits in sections 301 and 306 govern EPA's duty to take action under section 316(b)."[28] In *Riverkeeper*, this Court explained Congress's timeline for implementation of section 301: "Beginning in 1977, the EPA was to set 'effluent limitations' for existing sources based on 'the best practicable control technology currently available.' By 1989, existing source effluent limitations were to be based on the 'best available technology economically achievable.'"[29]

As this Court observed, "[w]hen the EPA 'established' new source performance discharge 'standard[s]' 'pursuant to section ... 306,' it ought *then* to have regulated new intake structures, because, by virtue of section 316(b), section 306's standards 'shall require that ... cooling water intake structures reflect the best technology available.'"[30] Likewise, when EPA first promulgated effluent limitation guidelines for the steam electric power generating point source category

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[28] *Cronin*, 898 F.Supp. at 1059.

[29] *Riverkeeper,* 358 F.3d at 186 (internal citations omitted).

[30] *Id.* at 185-86, citing *Cronin*, 898 F.Supp. at 1059 (emphasis in original).

in 1982,[31] pursuant to 301, it was *then* required to concurrently regulate intake structures at existing facilities.

1. Entergy Ignores and Distorts the Statutory Text.

As discussed, *supra* at 8, Section 316(b)'s scope should come as no surprise to Entergy and the electric power industry. In asking this Court to exempt it from a 1972 mandate, Entergy violates two fundamental canons of statutory construction by first ignoring section 316(b)'s reference to section 301,[32] and then offering a tortured reading of the remaining text.[33] Contrary to Entergy's claim, the terms "location, design, construction, and capacity" do not signal any intention to limit 316(b) to new facilities. Indeed, Entergy's string cite of statutes and regulations using similar terms, Entergy Br. at 19 n.10, proves just the opposite: to the extent any of these regulations are limited to new facilities, it is because the text includes other language explicitly saying so. For example, 49 U.S.C. § 60103(c), cited by Entergy, provides that any "design, location, installation, construction, initial inspection, or initial testing standard prescribed … *does not apply to an existing* …

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[31] 40 C.F.R. § 423 *et. seq.*; 47 Fed. Reg. 52,304 (Nov. 19, 1982) (SPA 685).

[32] "[A] basic tenet of statutory construction … [is] that [a text] should be construed … so that no part will be inoperative or superfluous, void or insignificant." *APWU v. Potter*, 343 F.3d 619, 626 (2d Cir. 2003)

[33] Statutory words should be "interpreted as taking their ordinary, contemporary, common meaning." *Harris v. Sullivan*, 968 F.2d 263, 265 (2d Cir. 1992).

facility." (emphasis added). If, as Entergy claims, the use of the words "design" and "construction" automatically limited the scope to new facilities, Congress would not have needed to add that the standard "does not apply to an existing … facility." In stark contrast, section 316(b) lacks any such limiting language, and also explicitly includes existing facilities by cross-referenc ing section 301.

B. The Structure and Purpose of the CWA Confirms Section 316(b)'s Application to Existing Facilities.

The purpose of the CWA, which this Court may also consider under *Chevron* step one, is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[34] The Act achieves this purpose primarily through the NPDES program. EPA promulgates a series of increasingly stringent technology standards, which are included in NPDES permits by states and EPA regional administrators. The "NPDES permit serves to transform generally applicable effluent limitations and other standards … into the obligations … of the individual discharger."[35] "A key element of the Act's scheme is periodic review of both permits and the underlying … technology standards."[36]

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[34] CWA § 101(a), 33 U.S.C. § 1251(a).

[35] *EPA v. California ex rel. State Water Resources Control Board*, 426 U.S. 200, 205 (1976).

[36] Karl S. Coplan, *Of Zombie Permits and Greenwash Renewal Strategies: Ten Years of New York's So-Called 'Environmental Benefit Permitting Strategy'*,

Section 316(b) requirements are, and have always been, implemented and enforced through NPDES permits, along with the CWA's other technology standards, for both new and existing facilities. The structure of the Act confirms Congress's intent in this regard. First, as discussed, *supra* at 9, section 316(b) operates through sections 301 and 306, which it cross-references. In addition, Congress's use of the phrase "best technology available" (BTA) in section 316(b) brings it squarely within the CWA's "alphabet soup" of technology standards, including BAT,[37] BTA,[38] BPT,[39] BCT,[40] and BADCT,[41] all of which are implemented through NPDES permits. NPDES permits are the vehicle through which "EPA and State permitting authorities have been implementing CWA

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22 Pace Envtl. L. Rev. 1, 6-7 (2005) (Supp 755-756); *see also* CWA § 402(b)(1)(B), 33 U.S.C. § 1342(b)(1)(B) (NPDES "permits are for fixed terms not exceeding five years"); CWA § 301(d), 33 U.S.C. § 1311(d) (effluent limitations reviewed every five years).

[37] "Best Available Technology Economically Achievable," CWA § 301(b)(2)(A), 33 U.S.C. § 1311(b)(2)(A).

[38] "Best Technology Available," CWA § 316(b).

[39] "Best Practicable Control Technology Currently Available," CWA § 301(b)(1)(A), 33 U.S.C. § 1311(b)(1)(A).

[40] "Best Conventional Pollutant Control Technology," CWA § 301(b)(2)(E), 33 U.S.C. § 1311(b)(2)(E).

[41] "Best Available Demonstrated Control Technology," CWA § 306(a)(1), 33 U.S.C. § 1316(a)(1).

section 316(b) on a case by case basis for over 25 years." [42]

Entergy offers four meritless arguments, each largely irrelevant to the issue of existing facilities. Entergy's principal contentions are that "NPDES permits are expressly and exclusively limited to 'discharges,'" Entergy Br. at 23, and that EPA never "asserted that § 316(b) is a § 402 NPDES-permit requirement." *Id.* at 25. But these are both plainly wrong. As the Supreme Court stated nearly thirty years ago, the NPDES program implements "applicable effluent limitations *and other standards*."[43] EPA and states have been implementing section 316(b) in NPDES permits since the 1970's, and, in 2001, EPA's Phase I Rule likewise used NPDES permits to implement BTA, as this Court observed: "[r]egardless of whether a point source obtains its NPDES permit from a state permitting authority or from the EPA, it must first demonstrate compliance with the cooling water intake structures Rule as part of its application for the permit."[44]

Entergy's claim that section 316(b) has no enforcement mechanism, Entergy Br. at 27-28, is also patently false, given that CWA section 505 authorizes citizen suits to enforce "other limitation[s] under section 1311," which include section

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[42] 69 Fed. Reg. at 41,626/2 (SPA 225); *see also Cronin*, 90 F. Supp. 2d at 376, *supra*, n. 24.

[43] *EPA v. California*, 426 U.S. at 205 (emphasis added).

[44] *Riverkeeper*, 358 F.3d at 200.

316(b) requirements.[45] Entergy blatantly misrepresents *Hudson Riverkeeper Fund, Inc. v. Orange & Rockland Utilities, Inc.*, which held that violations of a NPDES permit condition based on section 316(b) were enforceable under the CWA's citizen suit provision.[46] Entergy's citation of this case for the opposite conclusion is an unvarnished attempt to mislead this Court. Likewise, Entergy's reference to the *U.S. Steel Corp. v. Train* decision as "abandoned" and "in error," Entergy Br. at 24, is similarly disingenuous. In *Train*, which was abandoned on *other* grounds, the Seventh Circuit upheld section 316(b) cooling water intake standards that were implemented through a NPDES permit and imposed on U.S. Steel's *existing* facility.[47]

Entergy next argues, citing only on "an 11-year-old, preliminary background

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[45] 33 U.S.C. §§ 1365(a)(1) (authorizing suits to enforce "an effluent limitation or other limitation under this chapter"), 1365(f) (defining "effluent standard or limitation under this chapter" as "an effluent limitation or other limitation under [section 301]."). Section 316(b) was also recognized as an "other limitation" in *Riverkeeper*, 358 F.3d at 183; *Cronin*, 898 F.Supp. at 1059; and *Virginia Electric and Power Co. v. Costle*, 566 F.2d 466, 450 (4th Cir. 1977).

[46] 835 F.Supp. 160, 166 (S.D.N.Y. 1993) ("[T]he Permit Writer in effect issued an open invitation to a lawsuit, which invitation Riverkeeper accepted.")

[47] *U.S. Steel Corp. v. Train*, 556 F.2d 822, 849-50 (7th Cir. 1977), *overruled on other grounds*, *City of West Chicago v. Nuclear Regulatory Comm'n*, 701 F.2d 632, 644 (7th Cir. 1983) ("we … abandon our position in [Steel Corp.] insofar as we relied on APA Section 558(c) to order a formal hearing").

paper prepared by an EPA contractor,"[48] that the Rule is somehow invalid because, it claims, many states have not adopted their own cooling water intake rules. Entergy Br. at 25-26. Whether or not states have passed laws or regulations to implement section 316(b), their permitting authorities have implemented section 316(b) through NPDES permits on a "best professional judgment" basis for decades.[49] Furthermore, the historical lack of consistency in implementing section 316(b) on a case-by-case basis is precisely why national standards are needed.

Finally, Entergy's attempt to subsume section 316(b) within section 316(a), Entergy Br. at 28-30, should be rejected because statutes must be construed "so that one section will not destroy another."[50] Whether or not a facility has complied with section 316(a) has no bearing on the applicability of the very different requirement in section 316(b).

C. Legislative History Confirms Congress's Intent to Regulate Existing Plants Under Section 316(b).

Congress has also "spoken to the precise question at issue"[51] in legislative

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[48] *See* EPA Br. at 225 n.85; s*ee also* EPA Br. at 211 n.77; Entergy Br. at 26, citing "EPA's § 316(b) Legislative History, p. 5-8."

[49] 69 Fed. Reg. at 41,626/2 (SPA 225).

[50] *APWU v. Potter*, 343 F.3d 619, 626 (2d Cir. 2003).

[51] *Chevron*, 467 U.S. at 842.

history. During the 1972 Senate consideration of the conference committee report, Congress discussed and confirmed the applicability of section 316(b) to existing facilities. In fact, Senators Muskie and Buckley cited a power plant now owned by Entergy as an example of an existing facility for which technological upgrades were needed.[52] In 1976, EPA's general counsel described the exchange on the floor of the Senate as follows:

> Senator Buckley cited – with approval – two newspaper articles which reported a decision of the Atomic Energy Commission (AEC) to require Consolidated Edison Company to install a closed cycle cooling system at its nuclear power plants at Indian Point on the Hudson River. The … plants withdrew massive amounts of water from the River and … also withdrew thousands of aquatic organisms each minute. In order to minimize this adverse environmental impact, … the AEC had ordered Consolidated Edison Company to stop removing such large volumes of water from the River and to install cooling towers in order to do so.
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> In response to concerns … that the Act would prevent the effective regulation of this problem, Senator Muskie, the Chairman of the Senate Conference Committee, stated that EPA had authority under the Act to regulate the withdrawal of cooling water so as to minimize adverse environmental aspects [sic].[53]

The senators' exchange is relevant not only because it demonstrates that "the

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[52] Senate Consideration of the Report of the Conference Committee, October 4, 1972 *reprinted in Legislative History* at 196-97 (JA 1381).

[53] *In re Brunswick Steam Electric Plant*, USEPA, Decision of the General Counsel, EPA GCO 41 at 3, n. 10 (June 1, 1976), citing *Legislative History* at 196-198 (Supp 16).

Senate was well aware of the dangers posed to aquatic life by the withdrawal of large volumes of water through cooling water intake structures,"[54] but also because the power plant discussed there, the Indian Point nuclear plant now owned by Entergy, had been in operation for ten years prior to 1972.

Entergy ignores Senator Muskie's explicit confirmation of EPA's section 316(b) authority to force technology upgrades at existing facilities, and instead cites the legislative history of other CWA provisions. Entergy offers a string cite that "Congress' single-minded mission [was] to eliminate discharges of pollution to navigable waters."[55] But discussion of Congress's prime – not exclusive[56] – focus does not, of course, negate any of the Act's other provisions. Entergy acknowledges the Act's goal of "protecting biological integrity," but defies logic to argue that this can only be accomplished by reducing discharges under section 301, and not by reducing massive fish kills under section 316(b). Entergy Br. at 32 n.18. Because Congress has directly and unambiguously applied section 316(b) to

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[54] *Id.*

[55] Entergy Br. at 31. Entergy's selective citation and misrepresentation of an exchange between Senators Mathias and Muskie, Entergy Br. at 32, which, in fact, explicitly referred to section 301(a)'s "no discharge of a pollutant provision," and not section 316(b), *see* 117 Cong. Rec. 38855 (1971), is also not pertinent.

[56] *Riverkeeper*, 358 F.3d at 184 (the 1972 amendments "focused *almost* exclusively" on point source discharges) (emphasis added).

existing facilities, Entergy's claim must be rejected.

II. SECTION 316(b) REQUIRES MINIMIZATION OF ALL ADVERSE ENVIRONMENTAL IMPACTS, PARTICULARLY IMPINGEMENT AND ENTRAINMENT.

The Phase II Rule's performance standards require reductions in impingement mortality and entrainment.[57] EPA explained in the preamble:

> As in the Phase I rule, EPA is setting performance standards for minimizing adverse environmental impact based on a *relatively easy to measure and certain metric* – reduction of impingement mortality and entrainment. Although adverse environmental impact associated with cooling water intake structures can extend beyond impingement and entrainment, EPA has chosen this approach because impingement and entrainment are *primary, harmful environmental effects* that can be reduced through the use of speci fic technologies. In addition, where other impacts at the population, community, and ecosystem levels exist, these will also be reduced by reducing impingement and mortality.[58]

In upholding the Phase I Rule's performance standards, this Court rejected UWAG's argument that "EPA should only have sought to regulate impingement and entrainment where they have deleterious effects on … overall fish and shellfish populations …, which can only be determined through a case-by-case,

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[57] 40 C.F.R. §§ 125.94(b)(1), (2).

[58] 69 Fed. Reg. at 41,600/2 (emphasis added); *see also id.* at 41,586/3, 41,598/3 (same) (SPA 199, 185, 197).

site-specific regulatory regime," and held that "EPA's focus on the number of organisms killed or injured by cooling water intake structures is eminently reasonable."[59] In this case, PSEG makes the same argument this Court rejected in *Riverkeeper* – that EPA should have defined adverse environmental impact solely with reference to population-level effects, and that facilities should be allowed to "demonstrate that they *should not be subject to § 316(b) regulation* because they do not cause" impacts defined as such.[60]

PSEG's claim must be rejected because it fails both steps of the *Chevron* analysis. First, Congress unambiguously mandated minimization of *any* adverse environmental impact and rejected a population-level-only approach. Second, EPA's focus on impingement and entrainment is amply supported – indeed, compelled – by its findings that (a) impingement and entrainment are among the multiple types of adverse environmental impacts caused by intake structures; and (b) conducting accurate population studies is virtually impossible in permitting

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[59] *Riverkeeper,* 358 F.3d at 196.

[60] PSEG Br. at 6, 21 n.12 (emphasis added). As an initial matter, PSEG's entire argument is premised on a misunderstanding of the role of the phrase "adverse environmental impact" in section 316(b). Contrary to PSEG's claim, adverse environmental impact does not "trigger[] [the] application of § 316(b)." PSEG Br. at 12. In fact, the plain language of section 316(b) makes clear: (1) that all "point source[s]" subject to "standard[s] established" under section 301 and 306 are subject to such regulation, and (2) that "minimizing adverse environmental impact" is simply the *object* of the technology, not a threshold for applicability.

proceedings.

A. In Section 316(b), Congress Required Minimization of Any Adverse Environmental Impact, Not Just Protection of Fish Populations.

1. The Statute's Plain Language Unambiguously Expresses Congress's Intent.

Section 316(b) requires "the best technology available for minimizing adverse environmental impact." This phrase speaks broadly of harms to the environment itself, which includes all forms of animal and plant life and other aspects of the interconnected web of life.[61] The plain meaning thus unambiguously includes harm or death to aquatic organisms – including plankton, fish, and other animals impinged or entrained – and not just their population levels. This interpretation is confirmed by the legislative history of section 316(b), which indicates that Congress intended section 316(b) to minimize "*any* adverse environmental impact."[62]

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[61] "Environment" is "the complex of physical, chemical, and biotic factors (as climate, soil, and living things) that act upon an organism or an ecological community and ultimately determine its form and survival.") Mirriam-Webster's Online Dictionary, http://www.m-w.com/dictionary/environment (last visited Dec. 10, 2005) (Supp 936).

[62] House Consideration of S. Rep. 92-1236 (1972) reprinted in *Legislative History* at 264 (emphasis added) (JA 1383).

Moreover, such conclusion is unimpeachable when section 316(b) is compared to its immediately proximate subsection in the Act. Section 316(a) allows a variance from heat pollution standards, provided the relaxed standards "assure the protection and propagation of a balanced, indigenous *population of shellfish, fish and wildlife* in and on the body of water."[63] That Congress made the object of section 316(a) to protect wildlife populations "but did not include that approach (or make any reference to it) in the very next subsection, counsels against" equating environmental impact in section 316(b) with population-level effects.[64] The patently different language in adjacent subsections compels the conclusion that Congress did not intend to limit adverse environmental impact in section 316(b) to fish population effects.

PSEG ignores the plain language of section 316(b), instead basing its only textual argument on the Clean Air Act ("CAA"). PSEG Br. at 23-24. But no conclusions about the CWA's cooling water provision can be drawn from the CAA's hazardous air pollutants provision because the two laws are markedly

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[63] CWA § 316(a), 33 U.S.C. § 1326(a) (emphasis added).

[64] *See Riverkeeper*, 358 F.3d at 190, quoting *Bates v. U.S.*, 522 U.S. 23, 29-30 (1997) ("Where Congress includes particular language in one section of a statute but omits it in another section of a statute, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion.").

different statutory schemes.[65] Moreover, the plain language of CAA section 112(a)(7) (which PSEG selectively quotes) demonstrates that, even in that context, Congress did not limit "adverse environmental effect" to "impacts on populations," but rather defined that term more broadly as "*any* significant and widespread effect, which may be reasonably anticipated, to wildlife, *aquatic life*, or other natural resources."[66]

2. The CWA's Structure and Purpose Evinces Congress's Intent to Prohibit Assessments of Fish Population Effects.

Considering the broader context of the CWA as a whole, which is part of the *Chevron* step-one analysis,[67] also compels rejection of PSEG's claim. Construing adverse environmental impact "with reference to population-level effects" and assessing population levels in each permit proceeding, as PSEG urges, PSEG Br. at 6, would violate "Congress's intent that the 'design' of intake structures be regulated directly, based on the best technology available, and without resort in the first instance to water quality measurements."[68] As this Court recognized in

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[65] *See* Zygmunt Plater, et al., Environmental Law and Policy: Nature, Law, and Society at 620 (3d ed. 2004) ("For the CWA, however, Congress chose a converse approach to the [harm-based] standard-setting methods of the CAA.") (Supp 719).

[66] 42 U.S.C. § 7412(a)(7) (emphasis added).

[67] *See, e.g., Robinson*, 519 U.S. at 341.

Riverkeeper, and as discussed in Env. Pets. Br. at 62-66, Congress explicitly rejected a regulatory approach that relied on assessments of consequential effects on water quality, whether measured by pollutant concentrations or wildlife levels.[69] Congress specifically intended to avoid the "virtually unbridgeable causal gap" that exists in "proving that a particular polluter had caused the water quality to dip below the standards,"[70] and required facilities to meet technology-based standards without subjecting permitting to a complex assessment of the extent of ultimate harm caused.[71] As this Court found, determining the population-level effects that will result from losses of eggs and larvae and other aquatic organisms involves the "same hurdles" as the failed system abrogated by Congress in 1972.[72]

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[68] *Riverkeeper*, 358 F.3d at 190.

[69] *Id.* at 196; *id.* at 189 ("water quality [is] here measured by wildlife levels as opposed to pollutant concentration.").

[70] *Id.* at 189-90.

[71] *Id.* at 184-85, citing *Weyerhaeuser Co. v. Costle*, 590 F.2d 1011, 1041-42 (D.C. Cir. 1978); *Bethlehem Steel Corp. v. EPA*, 538 F.2d 513, 514-15 (2d Cir. 1976); *Hooker Chems. & Plastics Corp. v. Train*, 537 F.2d 620, 623-24 (2d Cir. 1976).

[72] *Riverkeeper*, 358 F.3d at 190; *see also EPA v. California*, 426 U.S. 200, 202-203 (1976) (observing that "[t]he problems stemmed from the character of the standards themselves, which focused on the tolerable effects rather than the preventable causes of water pollution…," and noting that the Senate Committee on Public Works found the pre-1972 approach "inadequate in every vital aspect."), citing S. Rep. No. 92-414, reprinted in *Legislative History* at 1425 (SPA 1390).

Significantly, in *Riverkeeper*, this Court explained that the same Congressional intent that prohibits restoration measures as a means of complying with section 316(b) also prohibits the industry-proffered population-level, site-specific approach:

> As discussed above with respect to restoration measures, Congress rejected a regulatory approach that relies on water quality standards, which is essentially what UWAG urges here in focusing on fish populations and consequential environmental harm.[73]

PSEG refers – without any supporting citation – to "Congress's intent of avoiding expensive retrofits when the impacts from a facility's intake structure are not ecologically significant."[74] In fact, in 1972, Congress explicitly abrogated the prior, failed and unworkable harm-based approach, instead predicating CWA "limitations on what a source can put into the water, not the ultimate effect of that discharge."[75]

PSEG also argues – again without any support – that revaluating the technology requirements in a power plant's NPDES permit every five years is

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[73] *Riverkeeper*, 358 F.3d at 196.

[74] PSEG Br. at 15; *see also id.* at 23 (referring, also without support, to "Congress's intent that § 316(b) permitting be cost-effective").

[75] *Riverkeeper*, 358 F.3d at 190, citing *Weyerhaeuser*, 590 F.2d at 1043.

contrary to legislative intent or is otherwise improper.[76] To the contrary, periodic review and revision of permits and the technology standards themselves at five year intervals lies at the heart of the NPDES program and was specifically mandated by Congress.[77] In fact, industry's challenge to EPA's ability to require additional control technologies at the re-permitting stage was explicitly rejected in *Riverkeeper*.[78] PSEG's claim must fail here as well.

B. Minimizing Adverse Environmental Impact by Minimizing Impingement and Entrainment is Permissible.

Given Congress's clearly-expressed intent, PSEG's claim should be dismissed under step one of *Chevron* using traditional tools of statutory construction. Nevertheless, an examination of the record and the findings made by EPA with regard to adverse environmental impact further demonstrates that implementing section 316(b) by requiring reductions in impingement and entrainment was appropriate.

1. Intake Structures at Existing Power Plants Cause Enormous Adverse Environmental Impacts.

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[76] PSEG Br. at 23 (arguing that "permit conditions should not be perpetually subject to change").

[77] *See*, *supra,* n. 36.

[78] 358 F.3d at 204 ("nothing in the statute forbids the EPA from re-evaluating these specific [impingement and entrainment] requirements … during the re-permitting process.").

EPA found that cooling water intake structures at power plants cause "multiple types of undesirable and unacceptable adverse environmental impacts," including:

- entrainment and impingement;
- reductions of threatened, endangered or other protected species;
- damage to critical aquatic organisms, including important elements of the food chain;
- diminishment of a population's compensatory reserve;
- losses to populations including reductions of indigenous species populations, commercial fisheries stocks, and recreational fisheries;
- and stresses to overall communities and ecosystems as evidenced by reductions in diversity or other changes in system structure and function.[79]

In particular, EPA recognized that "the loss of large numbers of aquatic organisms" may affect not only "stocks of various species" and their compensatory reserve, but also "the overall health of ecosystems."[80] EPA illustrated these ecosystem effects with an example drawn from the re-permitting of three Hudson River power plants. New York State found that entrainment not only reduces adult

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[79] 66 Fed. Reg. at 65,292/2; 69 Fed. Reg. at 41,586/1 (SPA 867, 185).

[80] 66 Fed. Reg. at 65,292/2 (SPA 867).

populations of the species whose eggs and larvae are entrained, but also depletes the species' ability to survive unfavorable environmental conditions, and, perhaps most significantly, diminishes the forage base, which disrupts the food chain, transferring energy from higher to lower trophic[81] levels and compromising the health of the entire aquatic community.[82]

EPA explained, using a simplified example, that if an individual bay anchovy is killed via entrainment and disintegrated upon passage through an intake structure it is no longer available as food to striped bass and other top predators, and is instead consumed only by lower trophic level organisms, such as detritivores (organisms that feed on dead organic material), thus transferring energy from the top of the ecosystem to the bottom and affecting the integrity and proper functioning of the system. Likewise, the entrained bay anchovy would no longer be available to consume phytoplankton, which upsets the distribution of nutrients in the ecosystem.[83]

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[81] The term "trophic" refers to the feeding habits or food relationship of different organisms in a food chain.

[82] 69 Fed. Reg. at 41,587-88, citing NYS DEC, 2003, Final Environmental Impact Statement: Concerning the Applications to Renew NY SPDES Permits for the Roseton 1 & 2, Bowline 1 & 2 and Indian Point 2 & 3 Steam Electric Generating Stations (SPA 186-87, JA 2847).

[83] *Id.*

Although PSEG has not asserted (as UWAG did in Phase I) that the destruction of aquatic organisms by power plants may be beneficial,[84] it exhibits a similar opaqueness with its statement that entrainment causes no impact because "[t]he vast majority of entrained larvae and eggs would have otherwise died of *natural causes*."[85] As the bay anchovy example above demonstrates, when eggs and larvae die of "natural causes," they are prey for larger organisms, and, before succumbing to predation, they consume smaller organisms. Whether or not particular eggs would survive to adulthood, the power plants' "disruption of the food chain compromises the health of the entire aquatic community."[86]

Minimizing adverse environmental impact is not limited to protecting adult populations of the entrained and impinged species, but requires protection of the ecosystem as a whole, which includes those species' prey and predators in the highly complex web of aquatic life. By looking only to adult, species-specific population levels, PSEG's approach – which is based on fisheries management rather than ecological principles[87] – would fail to minimize critical adverse

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[84] *See Riverkeeper*, 358 F.3d at 196 ("After all, the industry group argues, many species are 'nuisance[s]' that we are better off 'eradicating.'")

[85] PSEG Br. at 15 (emphasis added).

[86] 69 Fed. Reg. at 41,587/3 (SPA 186).

[87] *See* 66 Fed. Reg. at 65,292/3 ("Because the [fisheries management] concept of MSY [maximum sustainable yield] is based on harvesting *adult* fish,

environmental impacts in contravention of section 316(b) and the CWA's fundamental purpose to protect the "biological integrity of the Nation's waters."[88]

Moreover, contrary to PSEG's claims, PSEG Br. at 19, empirical evidence in the record demonstrates that power plant intakes do indeed depress adult fish stocks. For example, EPA cited the Hudson River ("long-term decline in both species richness and diversity with the resident fish community" and "declining abundance of 5 to 8 % per annum");[89] Mount Hope Bay ("EPA determined that … the facility's cooling system had contributed to the collapse of the fishery");[90] and the Atlantic Coast ("serious reductions in forage species and recreational and commercial landings").[91]

EPA generally questions whether this approach is directly relevant to egg, larvae, and juvenile losses associated with intakes."); *see also id.* at 65,293/3 ("[I]t remains unclear whether it is possible or sufficient to use *single species* population assessment models to assess impacts on multiple species, as is often necessary in evaluating impingement and entrainment by cooling water intake structures."); *see also id.* ("EPA believes it is unlikely that most existing *single species* population models can accurately account for multiple-species interactions.") (all emphases added). (SPA 867, 868).

[88] CWA § 101(a); *see also* CWA § 502(19), 33 U.S.C. § 1362(19) (defining pollution as "the man-made or man-induced alteration of the … biological … integrity of water").

[89] 69 Fed. Reg. at 41,587/3 (SPA 186).

[90] *Id.* at 41,588/1 (SPA 187).

[91] 66 Fed. Reg. at 65, 264/1 (SPA 839).

EPA properly determined that minimization of adverse environmental impact requires minimizing impingement mortality and entrainment. In fact, any other conclusion would have plainly contradicted the record evidence.

2. EPA Found Studies of Population Dynamics Virtually Impossible in Permit Proceedings.

PSEG's companion claim – that permitting should be based on a demonstration of each facility's harm to local populations – is also untenable given EPA's findings and extensive evidentiary record. PSEG Br. at 6. "EPA rejected proposals based on community- or population-level effects because such effects are … too difficult to quantify, and too difficult to attribute to a particular cooling water intake structure in view of the myriad environmental and anthropogenic factors that can impact a fishery at the community level." EPA Br. at 235. As EPA repeatedly found:

> Damage on the community or population level is *extremely difficult to quantify and attribute to a particular cooling water intake structure* given the vast number of environmental factors and anthropogenic factors which work concurrently on fisheries at that organizational level.[92]
>
> Because of the complexity of biological studies, it is *very difficult to assess the cause and effect of cooling water intake structures on ecosystems or on important species within an ecosystem*.[93]

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[92] Phase II Response to Comment ("RTC") 011.004 (emphasis added) (JA 3208).

[93] 66 Fed. Reg. at 65,285/2 (emphasis added) (SPA 860).

> [T]he limitations of existing population models, including models used to manage fisheries, may be related to our overall limited understanding of the complexity of aquatic ecosystems and the long-term effects of anthropogenic activities.[94]
>
> [P]recise quantification of the nature and extent of impacts to populations and ecosystems is difficult. Population dynamics and the physical, chemical, and biological processes of ecosystems are extremely complex.[95]

Consequently, PSEG's claim that "significant numbers of eggs and larvae may be entrained without affecting adult populations," PSEG Br. at 15, is both incorrect (because ecological science cannot reliably make that correlation) and irrelevant (because population level impacts are only one of several that must be minimized). Finally, contrary to PSEG's claim, PSEG Br. at 20-21, the Rule's exemption of certain facilities located on freshwater from the entrainment reduction standard is not inconsistent with EPA's interpretation of adverse environmental impact. Rather, EPA based those exemptions on readily-verifiable plant characteristics (*i.e.*, location, capacity, and flow) not "the complex analysis of population dynamics that PSEG would have EPA require as a prerequisite to

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[94] 66 Fed. Reg. at 65,293/2 (footnotes omitted) (SPA 868).

[95] 69 Fed. Reg. at 41,586/3 (SPA 195).

regulation."[96]

C. PSEG Mischaracterizes EPA's 1977 Draft Guidance and the Proposed Phase II Rule.

PSEG also incorrectly contends that the Phase II Rule's interpretation of adverse environmental impact is "radically different" than the definition used in EPA's May 1, 1977 draft guidance and the proposed Phase II Rule. PSEG Br. at 12. PSEG is wrong for four reasons.

First, it has mischaracterized the 1977 guidance document. In fact, the draft guidance (which was never finalized) did not define adverse environmental impact solely at the population level. To the contrary, it explicitly defined "adverse aquatic environmental impact" as any impingement and entrainment damage:

> Adverse aquatic environmental impacts occur whenever there will be entrainment or impingement damage as a result of a specific cooling water intake structure.[97]

Additionally, the 1977 draft guidance instructed that the magnitude of impact

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[96] EPA Br. at 238. In contrast, and to guide this Court's consideration of conceptually-related issues, it should be noted that Environmental Petitioners contend that the Rule's restoration measures provision and the site-specific cost-benefit option do involve the same complex analysis of population dynamics as a prerequisite to regulation that PSEG seeks in its Issue No. 1. *See* Env. Pets. Br. at 62-66, 74-76 (Points III, IV).

[97] 1977 Draft Guidance for Evaluating the Adverse Impact of Cooling Water Intake Structures on the Aquatic Environment ("draft guidance") (May 1977) (DCN 6-0005) at 15 (JA 297).

should be estimated first according to "[a]bsolute damage (# of fish impinged or percentage of larvae entrained on a monthly or yearly basis)."[98] While the 1977 document also stated that long term impacts on populations were to be considered in determining the *magnitude* of impact, such factor was neither exclusive, nor determinative.[99]

Second, PSEG is wrong that EPA has followed its 1977 draft guidance until now. PSEG Br. at 15-16. In fact, EPA's Phase II approach to interpreting adverse environmental impact is identical to the approach it adopted in 2001 in the Phase I Rule.[100]

Third, the extent to which the Phase I and Phase II Rules depart from the 1977 draft guidance is amply justified by twenty-four years of futility in population modeling during case-by-case permitting under section 316(b). The inability to specifically correlate a power plant's aquatic mortality with fish population levels in the surrounding waters, as discussed, *supra* at 31, warrants complete abandonment of the 1977 draft guidance's ancillary population-level factor.

Finally, PSEG blatantly mischaracterizes the proposed Rule. In fact, the

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[98] *Id.*

[99] *Id.*

[100] 69 Fed. Reg. at 41,613/2 ("As in the Phase I rule, EPA is setting performance standards for minimizing adverse environmental impact based on … impingement mortality and entrainment.") (SPA 212).

proposed Phase II Rule was identical to the final Phase II Rule with regard to interpreting adverse environmental impact. The alternative definitions of adverse environmental impact to which PSEG refers[101] – *i.e.,* based on the 1977 guidance or focused on population-level effects – were not contained in the regulatory text proposed by EPA, but were instead proposed by PSEG and UWAG, and set forth by EPA in the preamble for the purpose of soliciting comment.[102] PSEG's mischaracterization of the proposal flips reality on its head: in fact, had EPA decided to adopt either PSEG's or UWAG's proposed definitions in the final Phase II Rule, *that* would have constituted a radical departure from both the Phase I Rule and the Phase II proposal.

III. EPA'S CONCLUSION THAT ALL ENTRAINMENT IS ADVERSE IS CORRECT AND SUPPORTED BY THE EVIDENCE; THE CWA PROHIBITS ENTRAINMENT SURVIVAL STUDIES IN PERMITTING PROCEEDINGS.

UWAG, PSEG, and Entergy, argue that (a) not all entrainment is adverse, and (b) each Phase II facility should be allowed to undertake a site-specific study during permitting to estimate what percentage of its entrained aquatic organisms

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[101] PSEG Br. at 12; *see also id.* at 16-17 ("EPA proposed a definition of AEI in the Phase II Proposed Rule that focused on population-level effects").

[102] 67 Fed. Reg. 17,121, 17,162-63 (April 9, 2002) (SPA 43-44).

survive entrainment unharmed.[103] Industry Petitioners thus seek "credit" for the percentage of entrained organisms that survive unharmed, so as to allow them to entrain an even greater number of organisms while still being deemed in compliance with the performance standards.[104]

As explained below, their claim must be rejected for two reasons. First, EPA's conclusion regarding the current state of scientific knowledge on entrainment survival is amply supported by the evidence. Second, site-specific entrainment survival studies would violate Congress's prohibition (discussed above in Section II, *supra* at 23) against complex assessments of harm as a basis for determining NPDES permit limitations.

A. Entrainment Survival Is Virtually Impossible to Quantify.

EPA has explained what happens when tiny, fragile aquatic life (*e.g.*, early stages of fish and other "benthic," "planktonic," and "nektonic"[105] organisms) are drawn in by a cooling water intake structure, passed through an industrial facility, and ultimately discharged back to the waterbody:

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[103] UWAG Br. at 8-17; PSEG Br. at 31; Entergy Br. at 49.

[104] *See* Industry Comments on Phase II Proposal: 041.070 (requesting "credit for an egg or larvae that pulls through the cooling system unharmed") (JA 3257).

[105] These three terms are defined at 66 Fed. Reg. 65,263/1 (SPA 838).

> As entrained organisms pass through a plant's cooling system they are subject to mechanical, thermal, and/or toxic stress. Sources of such stress include physical impacts in the pumps and condenser tubing, pressure changes caused by diversi on of the cooling water into the plant or by the hydraulic effects of the condensers, sheer stress, thermal shock in the condenser and discharge tunnel, and chemical toxemia induced by antifouling agents such as chlorine.[106]

Even if any appreciable number of the delicate organisms could survive these physical, thermal and chemical insults, they may nevertheless be harmed and die later from the effects. As a result, and because delicate organisms rarely survive the experiments, research has shown that reliably quantifying the percentages of initial mortality, latent mortality, and other harm is virtually impossible.[107]

Based on its extensive review of the evidence, EPA determined that the current state of scientific knowledge did not support a reliable estimate of the

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[106] *Id; see also* 69 Fed. Reg. 41,586/2 (same) (SPA 185).

[107] *See, e.g., Technical Evaluation of US Environmental Protection Agency's Proposed Phase II Cooling Water Intake Regulation for Existing Facilities (Including Comments on NODA)*, Pisces Conservation, Ltd., August 6, 2002 ("*Pisces Comments*") (DCN PublicComment3.030) at 22 ("Performing these experiments is difficult and has many problems, not least because larval fish are extremely delicate.") (JA 4123); *see also* EPA Br. at 243, citing record evidence ("entrainment mortality is extremely challenging to evaluate, even when proper procedures are followed. The small fragile organisms affected by entrainment are prone to disintegrate during entrainment as well as during collection for sampling.").

number of organisms, if any, that survive entrainment unharmed.[108] Indeed, the record evidence demonstrated that there is no sound basis on which EPA could have used an entrainment survival assumption greater than zero.[109]

EPA's rationale for assuming that all entrainment is adverse is thoroughly set forth in its *Regional Analysis*, which demonstrates that EPA carefully considered evidence of nontrivial entrainment survival at power plants.[110] As EPA explains, "studies did not support predictions of entrainment survival … the proportion of organisms shown to survive entrainment would most likely be indistinguishable from zero."[111] Latent mortality was also a critical factor preventing EPA's quantification of entrainment survival. EPA recognized that entrained organisms may be harmed by, and perish as a result of, entrainment several days subsequent to both their discharge and the completion of the

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[108] RTC 506.506 (JA 3483).

[109] *See e.g. Pisces Comments* at 25 ("[T]he only path the EPA can follow with any degree of certainty is to assume 100% mortality for any entrained fish.") (JA 4126).

[110] Feb. 2004 (DCN 6-0003) at Chapter A7: Entrainment Survival (JA 1869).

[111] RTC 506.506 (JA 3483).

entrainment study.[112]

Moreover, the entrainment survival studies cited by UWAG, UWAG Br. at 9 n.1, to argue for an entrainment survival assumption greater than zero were so thoroughly flawed that reliance on them for that conclusion would have invalidated the regulation.[113] The 37 entrainment survival studies EPA reviewed contained "frequent and serious deficiencies … (e.g., high control mortalities, omission of fragmented or unidentifiable organisms, and uncertainty regarding post-discharge survival) [which] compromise the accuracy and precision of the survival estimates."[114] Among many other systemic biases in studies was the "significant mortality, even in the control populations … [which] can lead to a masking of any

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[112] *Regional Analysis* at A7-4 (explaining the importance of accounting for "delayed mortality of organisms that were lethally injured or stressed during entrainment but were not killed immediately"); *see also Pisces Comments* at 24 ("thermal shock can disrupt development of eggs and larvae in fish even if they survive entrainment [citation omitted]. Long term sub-lethal damage is *difficult to observe* in larval fish.") (emphasis added); NJ Department of Environmental Protection Comments on Phase II Proposal, 202.020 (stressing the need to reliably determine "how many fish suffer from mortality after being released to the receiving water") (JA 1872, 4125, 3410).

[113] *Texas Oil & Gas Ass'n v. EPA*, 161 F.3d 923, 935 (5th Cir. 1998) ("A regulation cannot stand if it is based on a flawed, inaccurate, or misapplied study.").

[114] *Regional Analysis* at A7-14; *see generally* Chapter A7 for a full assessment of the 37 studies. *See also* RTC 506.506 (the 37 studies suffered from "high variability and unpredictability") (JA 1882, 3484).

entrainment effects."[115] EPA determined that "[i]f the factors addressed in this review were taken into account in an entrainment survival study … the estimates of survival that would result would not be substantially different from zero."[116] EPA's determination of this complex scientific issue must be upheld.[117]

Furthermore, even if entrainment survival could be quantified, that would not necessarily entitle industry to the "credit" it seeks. "Had EPA been able to assess their efficacy in reducing entrainment mortality, there is no guarantee that it would have adopted the same performance standard (*i.e.*, 60 to 90% reduction)." EPA Br. at 252. Because BTA regulations must minimize adverse impact by requiring the greatest reduction economically achievable for the industry,[118] regulated facilities do not automatically get "credit" if some entrained organisms survive. Instead, any credit given for "unharmed entrained organisms" might have to be offset with a corresponding increase in the performance standards. Congress intended such benefit to accrue to the environment, not the corporate bottom line.

In stark contrast to entrainment mortality, "studies have repeatedly shown

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[115] *Pisces Comments* at 22 (JA 4123).

[116] *Regional Analysis* at A7-14; *see also* RTC 506.506 (JA 1882, 3484).

[117] *See Texas Oil & Gas Ass'n*, 161 F.3d at 934 (applying extreme deference "where – as here – the agency's decision rests on an evaluation of complex scientific data within the agency's technical expertise.").

[118] *Riverkeeper*, 358 F.3d at 185.

that impingement mortality can be quantified readily."[119] Among other differences, impinged fish are larger adults that, depending on species, are less fragile,[120] and therefore can be less susceptible to dying as a result of impingement.[121] Moreover, unlike entrained organisms, impinged fish do not pass through the plants' intake pumps, condenser, tubing, and discharge tunnel. As a result, the Phase II Rule does not consider all impingement adverse, and allows facilities to meet the standards by employing technologies that will reduce EPA "impingement mortality" even though they do not reduce impingement itself.[122]

In the Phase I Rule, EPA followed the same approach of requiring technology to minimize "impingement mortality" and "entrainment."[123] UWAG's

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[119] EPA Br. at 243, citing RTC 018.003 (JA 3211).

[120] *See e.g.* 69 Fed. Reg. 41,586/2 (as opposed to impinged organisms, entrained organisms are "typically relatively small … including early life stages of fish and shellfish"); *see also Regional Analysis* at A7-1 (organisms are "most commonly entrained during their early life stages … these early life stages are very fragile") (SPA 185, JA 1869).

[121] *See e.g. Technical Development Document*, Feb. 2004 (DCN 6-0004) at 4-4 (explaining that technology "can be modified so that fish impinged on the screens can be removed with minimal stress and mortality") and 4-5 ("smaller fish typically have a higher mortality rate … than larger fish") (JA 2247, 2248).

[122] *See* 40 C.F.R. §§ 125.94(b)(1), (2) (requiring reductions in "impingement mortality" and "entrainment").

[123] See 40 C.F.R. §§ 125.84(b)(4), (5) (requiring minimizing of "impingement mortality" and "entrainment").

challenge to the Phase I Rule's entrainment mortality assumption[124] was rejected by this Court in *Riverkeeper*, which used the phrase "impingement mortality and entrainment" five times in its decision[125] and found that "EPA's focus on the number of organisms killed *or injured* by cooling water intake structures is eminently reasonable."[126]

B. Congress Prohibited Complex Assessments of Harm in NPDES Permit Proceedings.

As explained above in Section II, *supra* at 23, as well as in Environmental Petitioners' opening brief in Points III and IV, Env. Pets. Br. at 49-95, Congress required facilities to meet technology-based standards without subjecting permitting to a complex assessment of the extent of ultimate harm caused.[127] As this Court held in *Riverkeeper*: "Congress rejected a regulatory approach that relies on water quality standards, which is essentially what UWAG urges here in focusing on fish populations and consequential environmental harm."[128] The D.C.

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[124] *Riverkeeper*, 358 F.3d at 196 ("UWAG first argues that the 'EPA arbitrarily assumed that all impingement and entrainment are 'adverse.' After all, the industry group argues … some organisms survive entrainment.")

[125] 358 F.3d at 182, 183, 187, 189, and 204.

[126] *Id.* at 196 (emphasis added).

[127] *See, supra*, n.71.

[128] 358 F.3d at 196.

Circuit in *Weyerhaeuser* explained that "[t]his new [technology-based] approach reflected developing views on practicality and rights. Congress concluded that water pollution seriously harmed the environment … [and] scientific uncertainties made it difficult to assess the benefits to particular bodies of receiving water."[129]

Given the enormous scientific challenges involved, site-specific studies to quantify entrainment survival and harm (as well as latent mortality) involve the same hurdles as the failed system abrogated by Congress in 1972. As EPA found, "[i]t is complex, difficult, and costly to evaluate entrainment survival reliably, even at a single facility." EPA Br. at 252, citing record. Moreover, such studies would confound permitting, which is intended to be "streamlined and to simplify permitting both for the point source and for the permitting authority." *Id.* This critical point was also explained in *Weyerhaeuser*:

> We have wrestled with the problems of weighing technological imponderables and can understand the greater difficulties that would have arisen if the receiving water issues involving even greater imponderables had also been involved. ... Under the new statutory scheme, Congress clearly intended us to avoid such problems of proof so that a set of regulations with enforceable impact is possible.[130]

Because Congress enacted the CWA to end such *ad hoc* determinations of

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[129] 590 F.2d at 1042.

[130] *Id.* at 1044.

ecological effects in the setting of individual permit limits,[131] UWAG's claim must be dismissed.[132]

IV. CONGRESS PROHIBITED THE USE OF MONETIZED COST-BENEFIT ANALYSIS TO DETERMINE BTA STANDARDS.

Consistent with the organization of EPA's brief, EPA Br. at 262-81, we address here in one section Industry Petitioners' separate, but conceptually related, issues concerning monetized cost-benefit analysis. Entergy argues that EPA is powerless to adopt a section 316(b) rule unless it can first demonstrate that the national economic benefits exceed the national economic costs, apart from any ecological benefits. Entergy Br. at 47-52. Similarly, PSEG argues that the Rule's site-specific cost-benefit option should be based solely on "calculation of costs and benefits in monetary units," and not qualitative environmental benefits. PSEG Br. at 26.

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[131] *Bethlehem Steel,* 538 F.2d at 515; *Hooker*, 537 F.2d at 623 ("It was too difficult to establish the necessary correlation between effluent discharges by particular sources and the quality of the body of water into which effluent flowed").

[132] UWAG argues that EPA's prohibition of entrainment survival studies in permitting proceedings is inconsistent with the Rule's provision allowing such studies as part of the site-specific cost-benefit determination. *See* 40 C.F.R. § 125.95(b)(6)(ii)(B). UWAG Br. at 8-17. UWAG is correct that these two provisions are inconsistent, but incorrect about the implication to be drawn therefrom. The extreme difficulty in quantifying entrainment survival, even at a single site, further illustrates that the cost-benefit variance involves complex assessments of consequential harm. *See* Env. Pets. Br. at 73-95 (Point IV).

EPA defends both the national Rule and its site-specific option on dual grounds: first, that section 316(b) does not require a formal cost-benefit analysis (monetized, quantitative, or qualitative) as a basis for rulemaking, EPA Br. at 263-67, and, second, that EPA reasonably evaluated the national Rule's economic practicability and reasonably allowed consideration of qualitative benefits in the site-specific option. *Id.* at 267-81.

As explained below, Industry Petitioners' challenges must be denied, but for different reasons than those asserted by EPA. In particular, Congress prohibited use of formal cost-benefit analysis as the decision making criterion for BTA, at both the rulemaking and permitting stages.

A. Section 316(b) Prohibits Both EPA and Permit Writers From Basing BTA Requirements Solely on Monetized Use Benefits.

As EPA explains, the CWA does not *require* a formal cost-benefit analysis. EPA Br. at 263-67. This is undoubtedly true, but, more importantly, Congress *prohibited* use of cost-benefit analysis as the decision making criterion for section 316(b)'s BTA standards, as is evident from the statute's plain language, as compared to other sections, and legislative history.

1. The Plain Language Expresses Congress's Intent to Minimize Adverse Environmental Impact, Not to Produce Net Economic Benefits.

The plain language of section 316(b) does not authorize cost-benefit analysis. To the contrary, its explicit purpose, as articulated by Congress, is to

"minimize adverse environmental impact." Nor can cost-benefit analysis be read into the phrase "best technology available" because, as the Supreme Court has held, "[w]here Congress has intended that an agency engage in cost-benefit analysis, it has clearly indicated such intent on the face of the statute."[133]

Section 316(b) includes none of the explicit language Congress used in other environmental or heath and safety laws where it did intend regulation to be driven by cost-benefit analysis. For example, in regulating offshore drilling operations, Congress required:

> The *best available* and safest *technologies* which the Secretary determines to be economically feasible, … *except where the Secretary determines that the incremental benefits are clearly insufficient to justify the incremental costs of utilizing such technologies*."[134]

Similarly, Congress explicitly provided for formal cost-benefit analysis in the Flood Control Act,[135] the Clean Air Act,[136] and the Safe Drinking Water Act.[137]

Accordingly, in *American Textile Manufacturers Institution v. Donovan,* the

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[133] *Am. Textile Mfrs. Inst. v. Donovan*, 452 U.S. 490, 510 (1981).

[134] Outer Continental Shelf Lands Act Amendments of 1978, 43 U.S.C. § 1347(b) (emphasis added).

[135] Flood Control Act of 1936, 33 U.S.C. § 701a (requiring "benefits … in excess of the estimated costs").

[136] 42 U.S.C. § 7545(c)(2)(B) (mandating "a cost benefit analysis").

[137] 42 U.S.C. § 300g-1(b)(3)(C)(i)(IV) ("incremental costs and benefits").

Supreme Court found that, in contrast to the explicit Congressional grants of cost-benefit authority in other such statutes, the phrase "to the extent feasible" in section 6(b)(5) of the Occupational Safety and Health Act (OSHA) did not authorize cost-benefit analysis:

> Congress itself defined the basic relationship between costs and benefits, by placing the "benefit" of worker health above all other considerations save those making attainment of this "benefit" unachievable. Any standard based on a balancing of costs and benefits by the Secretary that strikes a different balance than that struck by Congress would be inconsistent with the statutory command set forth in § 6(b)(5).[138]

Likewise, in section 316(b), Congress defined the basic relationship between costs and benefits by placing minimization of adverse environmental impacts above all other considerations except for those related to whether the technology is available.

The limited instances in the CWA where Congress directed EPA to consider costs in relation to benefits are not applicable here. First, section 304(b)(4)(B) provides that "[f]actors relating to the assessment of best conventional pollutant control technology ["BCT"] … shall include consideration of the *reasonableness of the relationship between the costs of attaining a reduction in effluents and the effluent reduction benefits derived.*"[139] However, section 304(b)(4)(B)'s test

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[138] *Am. Textile*, 452 U.S. at 509.

[139] 33 U.S.C. § 1314(b)(4)(B) (emphasis added).

applies only to "conventional pollutants" covered by the BCT standard.[140]

Second, section 302(b)(2) provides that "[t]he Administrator, … may issue a permit … if the applicant demonstrates … [that] *there is no reasonable relationship between the economic and social costs and the benefits to be obtained.*"[141] But section 302 only applies to "water quality related effluent limitations," not technology-based standards under sections 301 and 316(b).[142]

Finally, in establishing BPT standards, EPA may consider "the total cost of application of technology in relation to the *effluent reduction benefits* to be achieved."[143] Importantly, section 304(b)(1)'s BPT provision (which was intended only as an interim standard) has never authorized a formal cost-benefit analysis, an economic benefit analysis, monetization, or even an assessment of consequential water quality benefits. As one case quoted in EPA's brief explains:

> the "benefits" that are to be related to costs under § 304(b)(1)(B) are simply the benefits that are *assumed to result* ... from any reduction in the level of effluents being discharged. …. The power companies simply misread this language when they argue as a matter of statutory

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[140] *See* CWA § 304(a), 33 U.S.C. § 1314(a) (listing conventional pollutants).

[141] 33 U.S.C. § 1312(b)(2) (emphasis added).

[142] Neither Entergy, nor PSEG, has cited these CWA provisions, presumably because, even if they did apply, they provide no authority for the *formal, monetized* cost-benefit analysis they seek.

[143] CWA § 304(b)(1)(B), 33 U.S.C. § 1314(b)(1)(B) (emphasis added).

interpretation that the "benefits" referred to in "effluent reduction benefits" necessarily relate to improved receiving water quality.[144]

Consequently, even in this rare instance in the Act where Congress called for a "limited cost-benefit analysis,"[145] it directed EPA only to consider the level of pollution reduction "in relation" to costs. The best, therefore, that Entergy and PSEG could hope for under section 316(b) would be for EPA to consider impingement and entrainment reductions in relation to the compliance costs to achieve those reductions. But the formal monetized cost-benefit analysis they seek, *i.e.*, one that excludes non-monetized and qualitative environmental benefits, is prohibited as Congress has not "clearly indicate[d] such intent on the face of the statute."[146]

Moreover, as this Court noted in *Riverkeeper*, Congress intended BPT to expire and be replaced with BAT in 1989.[147] Therefore, EPA's authority

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[144] *Appalachian Power Co. v. EPA*, 671 F.2d. 801, 809 n.3 (4th Cir. 1982) , *quoted* at EPA Br. at 265.

[145] *Chemical Mfrs. Ass'n v. EPA*, 870 F.2d 177, 204 (5th Cir. 1989) (quoting Senator Muskie), *cert. denied PPG Industries v. EPA*, 495 U.S. 910 (1990).

[146] *Am. Textile*, 452 U.S. at 510.

[147] 358 F.3d at 185 (Beginning in 1977, the EPA was to set "effluent limitations" for existing sources based on "the best practicable control technology currently available [BPT]." CWA § 301(b)(1)(A), *33* U.S.C. § 1311(b)(1)(A). *By 1989, [] existing source effluent limitations were to be based on the "best available technology economically achievable [BAT],"* CWA § 301(b)(2)(A), 33

to employ the BPT test of section 304(b)(1) expired long before the Rule was issued in 2004.[148]

That is, of course, not to say that EPA may not consider costs at all. As this Court found in *Riverkeeper*, EPA's authority for considering compliance costs as one factor in determining which technology is the "best available" comes from the cross-reference in section 316(b) to sections 301 and 306.[149] But this Court also recognized that EPA "should give decreasing weight to expense as facilities have time to plan ahead to meet tougher restrictions."[150] Specifically, as the Supreme Court observed in *American Textile*, now that BAT has replaced BPT, EPA is

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U.S.C. § 1311(b)(2)(A), which is a "stiffer restriction[]" than "best practicable . . . technology.") (emphasis added; citations omitted).

[148] EPA cites the 1972 statement of Representative Clausen that BTA means "best technology available commercially at an economically practicable cost." EPA Br. at 52. Even if this lone reference to the term "practicable" was intended as an allusion to BPT, it must be read in the context of when it was made. In the Act's early years, BPT was the governing standard for existing facility regulations. But the statement has lost its relevance after 1989 and certainly cannot be read to indefinitely extend the interim BPT standard 15 years past the statute's explicit deadline for BAT.

[149] 358 F.3d at 196.

[150] *Id.* at 185, citing *Tex. Oil & Gas Assoc. v. EPA,* 161 F.3d 923, 936 (5th Cir. 1998); *Cal. & Hawaiian Sugar Co. v. EPA*, 553 F.2d 280, 283 (2d Cir. 1977); *Am. Iron & Steel Inst. v. EPA*, 526 F.2d 1027, 1058-59 (3d Cir. 1975), and comparing CWA § 304(b)(1)(B), 33 U.S.C. § 1314(b)(1)(B) with CWA § 304(b)(2)(B), 33 U.S.C. § 1314(b)(2)(B) and CWA § 306(b)(1)(B), 33 U.S.C. § 1316(b)(1)(B).

"directed to consider total cost, *but not in comparison with effluent reduction benefits*."[151]

Most importantly, because every section of the CWA has always, since its enactment in 1972, prohibited the formal, monetized cost-benefit analysis championed by Entergy and PSEG, their claims must be rejected. Allowing a monetized cost-benefit analysis to dictate the content of EPA's technology standards would shift the CWA's fundamental purpose from environmental protection to economic development by prohibiting all regulation that does not produce net benefits to the economy.

2. Legislative History Reveals Congress's Clearly-Expressed Intent Not to Base NPDES Permitting Solely or Primarily on Economic Considerations.

In *American Textile*, the Supreme Court examined OSHA's legislative history, and found that "Congress was fully aware that the Act would impose real and substantial costs of compliance on industry, and believed that such costs were part of the cost of doing business."[152] Likewise, Congress had a similar perspective in enacting the CWA: "Comments in the Senate debate were explicit: 'There is no doubt that we will suffer some disruptions in our economy because of

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[151] *Am. Textile*, 452 U.S. at 512, n. 30 (emphasis added).

[152] *Id.* at 514; *see also id.* at 519-20.

our efforts; many marginal plants may be forced to close.'"[153]

In the absence of an explicit Congressional directive for cost-benefit analysis, and in light of this legislative history, as well as the three decades existing facilities have had to prepare for 316(b) regulation and the fifteen years that have elapsed since BAT was to have replaced BPT, the formal monetized cost-benefit analysis sought by Entergy and PSEG would contravene clearly-expressed Congressional intent and must be rejected.

V. THE "DISPROPORTIONATE BURDEN" ENTERGY ALLEGES IS BOTH IRRELEVANT AND NON-EXISTENT.

The Rule's performance standards and compliance options are extraordinarily flexible.[154] In addition to the flexibility EPA afforded all other Phase II facilities, the Rule includes a special provision for nuclear power plants, 40 C.F.R. § 125.94(f), entitling them to site-specific determination if compliance with the Rule would conflict with a safety requirement established by the Nuclear Regulatory Commission (NRC). Despite this special allowance, and despite that

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[153] *EPA v. National Crushed Stone*, 449 U.S. 64, 80 (1980).

[154] The Rule allows facilities to choose among five compliance alternatives, including a site-specific variance in cases where compliance costs are disproportionately high. Although some flexibility under section 316(b) is warranted and congressionally-sanctioned, Environmental Petitioners have contended that EPA included several congressionally-prohibited excursions from the statutory mandate. *See, generally,* Env. Pets. Br.

nuclear plants' cooling water intake structures are no different than those of other power plants, Entergy argues that the Rule is illegal in that it places a disproportionate burden on nuclear plants. Entergy Br. at 35-47. Entergy's unsupported challenge must be denied because it wrong on both counts. First, there is no disproportionate burden on nuclear plants. Second, even if there were such an impact, it would not be a basis for invalidating the Rule given the availability of technologies to meet the Rule's performance standards, which are "economically achievable" for the industry as a whole, and the availability of an economic variance.

A. Entergy Misstates the Law on Available Technologies and Disproportionate Impacts.

In arguing that the Rule will have "disproportionate impacts" due to an alleged unavailability of technologies to certain plants, Entergy ignores a substantial body of relevant, governing CWA precedent regarding both the meaning of "available technology" and the economic effects of technology-based standards on facilities.

1. "Best Available Technology" Standards Can Be Based on a Single Pilot Plant or Evidence of Future Availability.

Citing only a CAA case,[155] Entergy incorrectly asserts that, to be properly

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[155] *Appalachian Power Co. v. EPA*, 135 F.3d 791, 801 (D.C. Cir. 1998). Contrary to Entergy's suggestion, *Appalachian Power* affirms that "EPA was

considered "available," the technologies EPA identifies as BTA under section 316(b) must be "demonstrably feasible in practice [ ] through actual experience at a representative number of comparable facilities." Entergy Br. at 36-37. However, the CWA's "BAT standard reflects the intention of Congress to use the latest scientific research and technology in setting effluent limits."[156] Consequently, EPA is *not* required to show that the technologies it identifies as "best available" are widely or even currently in use. "In setting BAT, EPA uses not the average plant, but the optimally operating plant, the pilot plant which acts as a beacon to show what is possible."[157]

Indeed, technology may properly be considered "available" for purposes of BAT standards even if it is not yet employed at a pilot plant. In *Tanners' Council of America v. Train*, the Fourth Circuit rejected industry's construction of "available" as "technology presently in use" and found that Congress's forward-looking intent for technology-based standards allows EPA to mandate the use of technologies it reasonably expects will be available:

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justified in determining what technology would be considered 'available' based on *predicted improvements* in existing technology." (emphasis added).

[156] *Kennecott Copper Corporation v. EPA*, 780 F.2d 445, 448 (4th Cir. 1985).

[157] *Id.*

> The legislative history … does not bear out petitioner's position that the Administrator is confined to treatment technology presently in use … [I]in establishing … [BAT] standards, the Agency may look to the best performer in the industry and *even assess technologies that have not been applied as long as the record demonstrates that there is a reasonable basis to believe that the technology will be available* by [the regulatory deadline].[158]

Thus, Entergy's unsupported characterization of the CWA's "available" standard, Entergy Br. at 36, is plainly wrong.

2. The CWA Requires EPA to Promulgate Uniform Technology Standards that Are Economically Achievable for the Industry as a Whole.

Entergy also mischaracterizes the law regarding differential costs under the CWA's technological standards. In support of its "disproportionate impact" claim, Entergy cites only *Petroleum Common v. FCC*, 22 F.3d 1164 (D.C. Cir. 1994), Entergy Br. at 35, a telecommunications case concerning a decision by the FCC to issue standards for radio licenses, which has no bearing on CWA jurisprudence. Contrary to Entergy's wholly unsupported suggestion, CWA technology-based regulations are not improper if they place a greater burden on some facilities than others. Congress clearly intended to achieve uniform effluent and other limitations, but the Act does not require EPA to equalize the cost of compliance

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[158] 540 F.2d 1188, 1195 (4th Cir. 1976); *Cf. American Iron and Steel Institute v. EPA*, 526 F.2d 1027, 1058 (3rd Cir. 1975) (pilot plant or "semi-work plant" sufficient justification for new facility standards).

across each category.[159] Neither must EPA adopt rules that are economically achievable for every facility subject to the regulation at issue. Rather, the test for whether BAT standards are economically achievable is whether they are affordable by an industrial "category or subcategory *as a whole.*"[160] As this Court has found, EPA determines "economic achievability . . . on an industry-by-industry basis,"[161] and must only determine that the "costs can be reasonably borne by the industry."[162] "EPA need only be concerned with the nature of the impact on the *industry as a whole*."[163]

In exceptional cases, where a facility believes itself to be miscategorized, "EPA has developed its FDF variance as a mechanism for ensuring that its necessarily rough-hewn categories do not unfairly burden atypical plants."[164] The FDF variance was intended to "allow[] individual operators to argue, that, given

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[159] *Appalachian Power*, 135 F.3d at 812-13.

[160] *Texas Oil & Gas*, 161 F.3d at 928 (emphasis added).

[161] *Waterkeeper*, 399 F.3d at 518.

[162] *Riverkeeper*, 358 F.3d at 195.

[163] *Nat'l Wildlife Fed'n*, 286 F.3d at 565 (emphasis added; citations omitted).

[164] *Chemical Mfrs.*, 470 U.S. at 120; *see also* CWA § 301(n), 33 U.S.C. § 1311(n); 40 C.F.R. § 125.30(b).

the overall impact of an effluent limitation on their operations, they are faced with [s]tricter requirements than the Act authorizes EPA to place on the industry as a whole."[165] In the Rule, EPA provided a variance in 40 C.F.R. § 125.94(a)(5)(i), allowing a facility to request a site-specific determination based on a cost-cost test. This variance is "similar" to but "more flexible" than the "fundamentally different factors" variance authorized by section § 301(n) of the Clean Water Act.[166] Because it includes a variance *at least as expansive*[167] as the FDF variance, the Rule cannot be held invalid because of alleged disproportionate costs that some facilities might incur.[168]

Furthermore, as discussed, *supra* at 51, Congress understood and accepted that there would be impacts on the economy, including some plant closures. This Court recently recognized that technology standards are economically achievable

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[165] *Weyerhaeuser*, 590 F.2d at 1035.

[166] 69 Fed. Reg. at 41,626/2 ("similar" to FDF) (SPA 225); EPA Br. at 172-74 ("slightly more flexible" than the FDF test).

[167] Whether EPA was authorized to include such an expansive economic variance is an issue raised in Environmental Petitioners' opening brief. *See* Env. Pets. Br. at 96-104.

[168] *Chemical Mfrs.*, 870 F.2d at 235 ("The EPA has provided a rational reason for the need for an industry-wide rule and has provided a flexible mechanism [*i.e.,* the FDF variance] for the mitigation of any harsh economic consequences of the rule. The rule is therefore not arbitrary.")

even if they could result in the closure of certain facilities.[169] Referring to an 11 percent industry-wide risk of closure, the Court stated that "the EPA – and courts – have treated more substantial risks of closure as nonetheless supporting a finding of economic achievability."[170] In *Chemical Manufacturers*, for example, the Fifth Circuit upheld a BAT standard where 14 percent of facilities would be forced to close.[171] In contrast, EPA anticipates only one full closure out of 539 facilities (representing 0.02 percent of existing capacity) as a result of the Rule.[172] Such economic impact is clearly consistent with Congress' expectations.

Thus, even if there were a disproportionate impact on nuclear facilities, such fact would be of no consequence given the availability and economic achievability of the technologies to the industry category as a whole, including nuclear, coal, oil and natural gas plants. Moreover, as explained immediately below, there is no such impact.

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[169] *Waterkeeper*, 399 F.3d at 518.

[170] *Id.*

[171] *Chem. Mfrs.*, 870 F.2d at 202.

[172] *Economic and Benefits Analysis for the Final Section 316(b) Phase II Existing Facilities Rule*, Feb. 2004 (DCN 4-0002) at B3-17; *see generally id.* at Chapter B3 (JA 809, 793).

B. Technologies to Meet the Rule's Performance Standards are Available to, and Economically Achievable for, the Electric Power Industry.

There is no disproportionate impact on nuclear power plants because, with respect to cooling water intake technologies and impacts, fuel type is immaterial. EPA's surveys determined that technologies to reduce impingement and entrainment are used by a wide range of facilities, with no distinction as to fuel type.[173] As EPA found, "the administrative record shows that the design and operation of cooling water intake structures currently in place at Phase II facilities – and the resulting impingement mortality and entrainment – is the same for nuclear power plants as for plants using other fuel types." EPA. Br. at 293. Because "the degree of entrainment is largely determined by the amount of water withdrawn," the critical factor in causing and minimizing impact is intake flow volume, *i.e.*, the capacity of the cooling water intake structure.[174]

The Phase I Rule likewise did not distinguish between nuclear and non-nuclear plants. Moreover, it applied the same standards across multiple industries – not only all new power plants, but also factories, and every other new facility

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[173] 69 Fed.Reg. at 41,602/1-2 (SPA 201).

[174] EPA Br. at 237-38 & n. 97, citing record.

using a cooling water intake structure, regardless of its industry classification.[175] That "overarching" approach was approved by the district court that entered the consent decree mandating these rules, and was not challenged in Phase I.[176]

Furthermore, nuclear facilities are not a discrete class disadvantaged by the Rule. *See* Entergy Br. at 35-47. Nuclear and non-nuclear plants using once-through cooling have large cooling water withdrawals. Because entrainment is roughly proportional to intake flow,[177] the facilities using more water cause greater impacts. If anything, the Rule should compel such facilities to reduce their impacts to a greater, not lesser, extent than lower flow, lower impact facilities. Indeed, that was the approach EPA considered, but withdrew, shortly before proposal.[178] In the final Rule, nearly half of existing U.S. nuclear facilities covered by the Rule (26 of 59) are exempted from its entrainment reduction requirement because they are not

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[175] 40 C.F.R. § 125.81.

[176] *Cronin*, 898 F.Supp. at 1060 ("EPA was also free to choose, as it did, to implement section 316(b) by issuing one overarching regulation that would apply to all categories of point source subject to sections 301 and 306 that utilize cooling water intake structures."); *Riverkeeper*, 358 F.3d at 187 n.14.

[177] 69 Fed.Reg. at 41,599/2 (SPA 198).

[178] *See* Env. Pets. Br. at 31-32 (discussing EPA's draft proposal to require plants withdrawing at least 500 million gallons per day from an ocean or more than one percent of the tidal excursion from an estuary to reduce intake capacity to a level commensurate with a closed-cycle recirculating cooling system).

located on oceans, estuaries, tidal rivers, or the Great Lakes.[179]

Rather than disadvantaging nuclear plants, the Rule generally treats all types of power plants alike, except that nuclear plants have two special accommodations. First, EPA included section 125.94(f) to provide a special mechanism to address any potential nuclear safety issues. Second, EPA took into account that nuclear plants' compliance costs may be higher due to heightened security and safety requirements and "developed a multiplier for capital costs and certain operation and maintenance costs applicable only to nuclear facilities." EPA Br. at 299-300.

In promulgating the Rule, EPA "conducted extensive analyses of the economic impacts of this final rule, using an integrated energy market model" and concluded that "for the category of existing facilities *as a whole*, the rule is technically achievable and economically practicable."[180] To ensure the Rule's practicability, the Rule allows facilities to choose from a suite of available technologies and operational measures.[181] The Rule allows facilities to use any technology or technologies to reduce entrainment, including but not limited to "wedgewire screens, fine mesh screens, aquatic filter barrier systems, [and] vertical

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[179] EPA Br. at 305, citing 40 C.F.R. § 125.94(b)(2).

[180] 69 Fed. Reg. at 41,603/2 (emphasis added) (SPA 202).

[181] 40 C.F.R. § 125.94.

and/or lateral relocation of the cooling water intake structure" so long as the performance standards are met.[182] If a facility's use of any of the available technologies, alone or in combination, would still fall short of the performance standards, the Rule allows the use of operational measures, such as "variable speed pumps" (which allow facilities to withdraw only the precise volume of water needed and no more) or temporary reductions in flow or outages timed to coincide with peak spawning season.[183]

Contrary to Entergy's claims, the Rule does not necessitate closed-cycle cooling for all, or necessarily any, nuclear facilities. Entergy Br. at 45. Moreover, EPA did not find closed-cycle cooling "inappropriate" for all existing facilities. *See* Entergy Br. at 45. EPA spoke directly to this issue in the preamble:

> Although EPA has rejected dry and wet cooling tower technologies [*i.e.*, closed-cycle cooling] as *a national minimum requirement*, EPA does not intend to restrict the use of these technologies or to dispute that *they may be the appropriate cooling technology for some facilities*. ... Wet cooling may be suitable where adverse effects of cooling water intakes are severe and where screening systems are

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[182] 40 C.F.R. § 125.95(b)(4)(i).

[183] 40 C.F.R. § 125.93; 69 Fed. Reg. at 41,600/3 (SPA 199). Timed outages have been employed in state-issued NPDES permits to reduce entrainment at Hudson River plants, including one owned by Entergy. *See* State of NY, Dept. of Env. Conservation, Draft Environmental Impact Statement for SPDES for Bowline Point, Indian Point 2 & 3, Roseton Steam Electric Generating Stations (DCN 2-013E) at Table IV-3 (JA 376).

impractical or pose serious environmental problems.[184] Consequently, closed-cycle cooling may be appropriate at some facilities and may also be mandated by states pursuant to their authority under CWA section 510 to impose more stringent standards than the national minimum.[185]

In sum, a potential economic burden to any particular facility associated with using particular technologies rather than others to meet the performance standards is not germane to the validity of the Rule so long as (1) the technologies are available to the industry as a whole; (2) the national standards are economically achievable by the industry as a whole; and (3) the rule contains an FDF-like economic variance. Because all three conditions have been met, Entergy's claim must be denied.

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[184] 69 Fed. Reg. at 41,609/1(emphasis added) (SPA 208).

[185] 33 U.S.C. § 1370; *see also* 40 C.F.R. § 125.90(d). Closed-cycle cooling has been required by EPA at, among other facilities, the Brayton Point plant in Massachusetts, which is a high-flow, non-nuclear facility. *See* St. Pets. Br. at 37-40. Several facilities, including at least one nuclear facility, the Palisades plant in Michigan, have been retrofitted to add this technology. Env. Pets. Phase II Comments (DCN PublicComment3.030) at 7 (JA 4104).

CONCLUSION

For the foregoing reasons, Industry Petitioners' claims should be rejected.

Dated: April 17, 2006

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CERTIFICATE OF COMPLIANCE

I, Reed W. Super, lead attorney for the Environmental Petitioners, do hereby certify, pursuant to Fed. R. App. P. 32(a)(7)(C) as follows:

1. This brief complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B), as amended by this Court's order of May 12, 2005 because it contains 13,937 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii).

2. This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type style requirements of Fed. R. App. P. 32(a)(6) because it has been prepared in a proportionally spaced typeface using Microsoft Word in 14-point Times New Roman.

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CERTIFICATE OF SERVICE

I hereby certify that on this 17th day of April, 2006, true and correct copies of the foregoing **[Final Form] SUPPLEMENTAL BRIEF OF THE ENVIRONMENTAL PETITIONERS** were served on the following counsel for the parties in the manner indicated:

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United States Court of Appeals for the Second Circuit

RIVERKEEPER, INC., NATURAL RESOURCES DEFENSE COUNCIL, WATERKEEPER ALLIANCE, SOUNDKEEPER, INC., SCENIC HUDSON, INC., SAVE THE BAY—PEOPLE FOR NARRAGANSETT BAY, FRIENDS OF CASCO BAY, AMERICAN LITTORAL SOCIETY, DELAWARE RIVERKEEPER NETWORK, HACKENSACK RIVERKEEPER, INC., NEW YORK/NEW JERSEY BAYKEEPER, SANTA MONICA BAYKEEPER, SAN DIEGO BAYKEEPER, CALIFORNIA COASTKEEPER, COLUMBIA RIVERKEEPER, CONSERVATION LAW FOUNDATION, SURFRIDER FOUNDATION, STATE OF RHODE ISLAND, STATE OF CONNECTICUT, STATE OF DELAWARE, COMMONWEALTH OF MASSACHUSETTS, STATE OF NEW JERSEY, STATE OF NEW YORK, APPALACHIAN POWER COMPANY, ILLINOIS ENERGY ASSOCIATION, UTILITY WATER ACT GROUP, PSEG FOSSIL LLC, PSEG NUCLEAR LLC, ENTERGY CORPORATION

Petitioners,

-against-

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, STEPHEN L. JOHNSON, IN HIS OFFICIAL CAPACITY AS ADMINISTRATOR OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Respondents

ON PETITION FOR REVIEW OF FINAL ACTION OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

[Final Form]

BRIEF OF THE ENVIRONMENTAL PETITIONERS

(Riverkeeper, Inc., Natural Resources Defense Council, Waterkeeper Alliance, Soundkeeper, Inc., Scenic Hudson, Inc., Save The Bay—People For Narragansett Bay, Friends of Casco Bay, American Littoral Society, Delaware Riverkeeper Network, Hackensack Riverkeeper, Inc., New York/New Jersey Baykeeper, Santa Monica Baykeeper, San Diego Baykeeper, California Coastkeeper, Columbia Riverkeeper, Conservation Law Foundation, and Surfrider Foundation)

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CORPORATE DISCLOSURE STATEMENT

Pursuant to Rule 26.1 of the Federal Rules of Appellate Procedure, Riverkeeper, Inc., Natural Resources Defense Council, Waterkeeper Alliance, Soundkeeper, Inc., Scenic Hudson, Inc., Save The Bay—People For Narragansett Bay, Friends of Casco Bay, American Littoral Society, Delaware Riverkeeper Network, Hackensack Riverkeeper, Inc., New York/New Jersey Baykeeper, Santa Monica Baykeeper, San Diego Baykeeper, California Coastkeeper, Columbia Riverkeeper, Conservation Law Foundation, and Surfrider Foundation ("Environmental Petitioners") state that they are all non-profit environmental organizations. None of the Environmental Petitioners have any parent corporations nor have they issued any stock.

TABLE OF CONTENTS

TABLE OF AUTHORITIES viii

PRELIMINARY STATEMENT 1

JURISDICTION 2

ISSUES PRESENTED 2

STATEMENT OF THE CASE 4

STATUTORY FRAMEWORK 5

A. The Clean Water Act 5

B. Section 316(b) 8

STATEMENT OF FACTS 11

A. Cooling Water Intake Structures 11

B. Case-By-Case Permitting 14

C. The Consent Decree 17

D. The Phase I Rule 18

E. OMB's Involvement in the Phase II Rulemaking Process 19

F. The Final Phase II Rule 20

SUMMARY OF ARGUMENT 22

STANDARD OF REVIEW 26

ARGUMENT 28

POINT I 28

EPA VIOLATED CWA SECTIONS 316(b) AND 301 BY REJECTING CLOSED-CYCLE COOLING AT THE DIRECTION OF OMB 28

A. The CWA Requires EPA to Mandate the Best Technology Available and the Maximum Commitment of Industry Resources Economically Achievable 28

B. EPA Violated the CWA by Proposing and Ultimately Promulgating a Rule Designed to Maximize Net Economic Benefits Instead of Minimizing Adverse Environmental Impact. 31

POINT II 37

EPA EXCEEDED ITS AUTHORITY BY SETTING PERFORMANCE STANDARDS AS RANGES THAT DO NOT REFLECT BTA 37

A. Best Technology Standards Must Be Precise, Single-Level Limitations Set With Reference to the Single Best Performing Facility 38

B. The Rule's Performance Standard Ranges are Illegal. 40

1. The Rule Fails to Require Facilities that Can Meet the Upper Bound of the BTA Ranges to Do So. 40

2. The Rule's TIOP Option Is Unauthorized. 43

a. The TIOP Is Not a Logical Outgrowth of the Proposal, and Compromises Citizen Enforcement Suits. 44

b. The TIOP Is a Second, Unauthorized Allowance for Variation and Measurement Error. 46

POINT III 49

EPA EXCEEDED ITS AUTHORITY BY ALLOWING COMPLIANCE WITH CWA SECTION 316(b) THROUGH RESTORATION MEASURES 49

A. Restoration Measures are Plainly Inconsistent with the Text of Section 316(b) 52

1. Restoration Measures are Unrelated to the Location, Design, Construction, or Capacity of Cooling Water Intake Structures 52

2. Restoration Measures Do Not Minimize Adverse Impacts. 57

a. The Plain Language of "Minimization" Does Not Include "Compensation." 57

b. EPA's Own Findings Demonstrate that Minimizing Impact Requires Minimizing Impingement and Entrainment. 60

B. Restoration Measures are Plainly Inconsistent with Congress's Intent in Passing the 1972 CWA Amendments 62

1. Restoration Measures Involve Unbridgeable Causal Gaps 63

2. EPA's Findings Reveal the Correlational Difficulties in Assessing Ecological Effects of Intakes and Restoration. 66

3. State Agencies Lack the Resources and Expertise to Assess the Biological Effects of Power Plants During Permitting. 68

C. EPA's 1982 Interpretation of its Authority was Correct, and the Agency Lacks the Reasoned Analysis Required to Change Position 70

POINT IV 73

EPA EXCEEDED ITS AUTHORITY BY ALLOWING A SITE-SPECIFIC DETERMINATION OF BTA BASED ON A COST-BENEFIT ANALYSIS 73

A. Contrary to Congress's Intent, the Cost-Benefit Variance Bases Permitting on Site-Specific Assessment of Consequential Water Quality. 74

1. Effects on Fish Populations Cannot Be Accurately Measured. 75

2. Effects on Larger Ecosystems Cannot Be Accurately Measured. 76

B. "Monetization" of Water Quality Impacts Introduces Further Insurmountable Problems of Proof, Which Are Antithetical to NPDES Permitting. 78

1. Water Quality Benefits Cannot Be Monetized, as EPA's Attempt Showed. 79

a. Effects on Fish Populations Cannot Be Accurately Monetized 81

b. Effects on Ecosystems Cannot Be Accurately Monetized 83

2. States Cannot Monetize Benefits During Permitting. 86

C. EPA Arguments in Support of its Authority are Unavailing. 89

POINT V 96

EPA EXCEEDED ITS AUTHORITY BY ALLOWING SITE-SPECIFIC DETERMINATION OF BTA BASED ON A COST-COST ANALYSIS 96

A. EPA Thwarted Public Participation by Failing to Provide Facility-Specific Cost and Technology Data Until the Final Rule. 96

B. The Cost-Cost Variance Expands the Narrow "FDF Variance" into an Exception that Swallows the Rule. 100

POINT VI 105

EPA's CLASSIFICATION OF NEW "STAND-ALONE FACILITIES" AS "EXISTING FACILITIES" IS NOT IN ACCORDANCE WITH LAW 105

A. The Phase I Rule Classified New "Stand-Alone" Facilities According to the "Substantial Independence" Test. 106

1. EPA Established the "Substantial Independence" Test in its 1984 NPDES Regulations. 106

2. The Phase I Rule Incorporated the "Substantial Independence" Test. 108

B. EPA Violated the APA Because the Phase II Rule Denied the Public a Meaningful Opportunity to Comment on EPA's Classification and Regulation of Stand-Alone Facilities. 113

1. The Phase II Proposal Failed to Address Regulation of the Deferred Facilities. 114

2. The Phase II Proposal Failed to Provide Notice that EPA Was Considering Narrowing the Class of Facilities Subject to the Phase I Rule. 116

C. EPA Violated the CWA by Allowing Stand-Alone Facilities to Evade the Phase I Rule's Requirements..... 120

1. EPA's Own Findings Indicate that New Stand-Alone Facilities Can Meet The Phase I Rule's Technology Standards Just as Easily as Any Other New Facility..... 121

2. EPA Has Not Articulated a Satisfactory Explanation for its Action..... 123

CONCLUSION 127

TABLE OF AUTHORITIES

Federal Cases

Appalachian Power Co. v. Train, 566 F.2d 451 (4th Cir. 1977) 14

Babbitt v. Sweet Home Chapter of Communities, 515 U.S. 687 (1995) 55, 111

Bates v. United States, 522 U.S. 23 (1997) 10, 55

Bethlehem Steel Corp. v. EPA, 538 F.2d 513 (2d Cir. 1976) ..... *passim*

Bowen v. Georgetown Univ. Hosp., 488 U.S. 204 (1988) 51, 59

California & Hawaiian Sugar Company v. EPA, 553 F.2d 280 (2d Cir. 1977) 39

Chemical Mfrs. Ass'n v. NRDC, 470 U.S. 116 (1985) 102

Chemical Mfrs. Ass'n v. EPA, 870 F.2d 177 (5th Cir. 1989) 38

Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837 (1984) 26, 59, 71

Conference of State Bank Supervisors v. Office of Thrift Supervision, 792 F.Supp. 837 (D.C. Cir. 1992) 113

Consolidated Edison Co. of New York v. New York State Dept. of Environmental Conservation, 726 F. Supp. 1404 (S.D.N.Y. 1989) 16

CPC Int'l v. Train, 515 F.2d 1032 (8th Cir. 1975) 6

Cronin v. Browner, 898 F. Supp. 1052 (S.D.N.Y. 1995) 9, 10

Cronin v. Browner, 90 F.Supp.2d 364 (S.D.N.Y. 2000) 11, 12, 17

E. I. duPont de Nemours & Co. v. Train, 430 U.S. 112 (1977) 101, 103

Environmental Defense Fund v. Thomas, 627 F. Supp. 566 (D.D.C. 1986) 29, 30, 31

EPA v. California, ex rel. State Water Res. Control Bd., 426 U.S. 200 (1976) 6, 89

EPA v. National Crushed Stone, 449 U.S. 64 (1980) 7, 102

Esch v. Yeutter, 876 F.2d 976 (D.C. Cir., 1989) 119

Florida Power & Light Co. v. Wisconsin Elec. Co., 846 F.2d 765 (D.C. Cir. 1988) 114

FMC Corp. v. Train, 539 F.2d 973 (4th Cir. 1976) 91

Forester v. Consumer Prod. Safety Comm'n., 559 F.2d 774 (D.C. Cir. 1977) 113

Friends of the Earth, Inc. v. Laidlaw Envtl. Servs., Inc., 528 U.S. 167 (2000) 2

Garcia v. United States, 469 U.S. 70 (1984) 56

General Electric Co. v. Gilbert, 429 U.S. 125 (1976) 53

Georgia-Pacific Corp. v. U.S.EPA, 671 F.2d 1235 (9th Cir., 1982) 103

Hooker Chems. & Plastics Corp. v. Train, 537 F.2d 620 (2d Cir. 1976) 5, 7, 39, 56

Hughes Aircraft Co. v. Jacobson, 525 U.S. 432 (1999) 59

Hunt v. Washington State Apple Advertising Commission, 432 U.S. 333 (1977) 2

I.N.S v. Cardoza-Fonseca, 480 U.S. 421 (1987) 53

Kennecott v. EPA, 780 F.2d 445 (4th Cir. 1985) 38

Lucas v. South Carolina Coastal Council, 505 U.S. 1003 (1992) 95

Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29 (1983) 27

Nat'l. Elec. Mfrs. Ass'n. v. Envtl. Prot. Agency, 99 F.3d 1170 (D.C. Cir. 1997) 114

National Black Media Coalition v. FCC, 791 F.2d 1016 (2d Cir. 1986) 45, 46, 100

National Independent Meat Packer's Ass'n v. U.S. E.P.A., 566 F.2d 41 (8th Cir. 1977) 101

NRDC v. EPA, 537 F.2d 642, 645 (2d Cir. 1976) 39, 102

NRDC v. EPA, 822 F.2d 104 (D.C. Cir. 1987) 8, 29, 38, 120

NRDC v. EPA, 863 F.2d 1420 (9th Cir. 1988) 15, 29, 38, 39

Office of Personnel Mgmt. v. Richmond, 496 U.S. 414 (1990) 72

Pub. Citizen Health Research Group v. Tyson, 796 F.2d 1479 (D.C. Cir. 1986) 31

Regions Hospital v. Shalala, 522 U.S. 448 (1998) 59

Riverkeeper, Inc. v. EPA, 358 F.3d 174 (2d Cir. 2004) ..... *passim*

Riverkeeper, Inc. v. Leavitt, 93 Civ. 0314 (S.D.N.Y.) 4, 17

Student PIRG, Inc. v. AT & T Bell Laboratories, 617 F. Supp. 1190 (D.N.J., 1985) 101

Tenaska Washington Partners II, L.P. v. United States, 34 Fed. Cl. 434 (Ct. Cl., 1995) 72

Texas Oil & Gas Ass'n v. EPA, 161 F.3d 923 (5th Cir. 1998) 38, 98

Va. Elec. and Power Co. ("VEPCO") v. Costle, 566 F.2d 446 (4th Cir. 1977) 9

Walters v. Metropolitan Educ. Enterprises, Inc., 519 U.S. 202 (1997) 55, 111

Waterkeeper Alliance, Inc. v. U.S. EPA, 399 F.3d. 486 (2d Cir. 2005) ..... *passim*

Watt v. Alaska, 451 U.S. 259 (1981) 53

Weyerhaeuser Co. v. Costle, 590 F.2d 1011 (D.C. Cir. 1978) ..... *passim*

Whitman v. American Trucking Associations, 531 U.S. 457 (2001) 55

Federal Statutes

5 U.S.C. § 553 1

5 U.S.C. § 706(2) 4

5 U.S.C. §§ 553(b), (c) 4, 44, 96

5 U.S.C. §§ 701-706 1

42 U.S.C. § 300g-1(b)(3)(C)(iii) 93

Federal Water Pollution Control Act, 33 U.S.C. §§ 1251-1387 1

CWA § 101(a), 33 U.S.C. § 1251(a) 5

CWA § 101(d), 33 U.S.C. § 1251(d) 29

CWA § 101(e), 33 U.S.C. § 1251(e) 96, 97

CWA § 301(b)(1)(A), 33 U.S.C. § 1311(b)(1)(A) 11

CWA § 301(b)(2)(A), 33 U.S.C. § 1311 (b)(2)(A) 28

CWA § 301(b)(2), 33 U.S.C. § 1311(b)(2) 9

CWA § 301(d), 33 U.S.C. § 1311(d) 16

CWA § 301(g), 33 U.S.C. § 1311(g) 101

CWA § 301(h), 33 U.S.C. § 1311(h) 101

CWA § 301(m), 33 U.S.C. § 1311(m) 101

CWA § 301(n), 33 U.S.C. § 1311(n) 101

CWA § 301, 33 U.S.C. § 1311 .... 5, 8, 9

CWA § 306(a)(1), 33 U.S.C. § 1316(a)(1) 9

CWA § 306(b)(1)(A), 33 U.S.C. § 1316(b)(1)(A) 11

CWA § 306(b)(1)(B), 33 U.S.C. § 1316(b)(1)(B) 11

CWA § 306, 33 U.S.C. § 1316 .... *passim*

CWA § 402(a)(1)(B), 33 U.S.C. § 1342(a)(1)(B) 15

CWA § 402(a), 33 U.S.C. § 1342(a) 97

CWA § 402(b)(1)(B), 33 U.S.C. § 1342(b)(1)(B) 15

CWA § 402(b)(3), 33 U.S.C. § 1342(b)(3) 97

CWA § 402, 33 U.S.C. § 1342 5

CWA § 502(19), 33 U.S.C. § 1362(19) 5

CWA § 505, 33 U.S.C. § 1365 .... 45, 97

CWA § 509(b)(1)(E), 33 U.S.C. § 1369(b)(1)(E) 2

CWA § 509(b)(1), 33 U.S.C. § 1369(b)(1) 2

Federal Regulations

40 C.F.R. § 122.29 ..... 109, 116

40 C.F.R. § 122.29(b) 106, 108, 109, 125

40 C.F.R. § 122.29(b)(1)(iii) 106, 108, 109

40 C.F.R. § 122.29(b)(3) 111

40 C.F.R. § 125.30(b) 103

40 C.F.R. § 125.80 *et seq* 19

40 C.F.R. § 125.83 ..... 57, 108, 111

40 C.F.R. § 125.85 124

40 C.F.R. § 125.86(c)(2)(ii) 50

40 C.F.R. § 125.93 ..... 56, 115, 117, 119

40 C.F.R. § 125.94 ..... 32, 42, 49

40 C.F.R. § 125.94(a)(5) 21

40 C.F.R. § 125.94(a)(5)(i) 96

40 C.F.R. § 125.94(a)(5)(ii) 73, 76, 94

40 C.F.R. § 125.94(b) 20, 21

40 C.F.R. § 125.94(b)(1) 37

40 C.F.R. § 125.94(b)(2) 37

40 C.F.R. § 125.94(c) 21, 49

40 C.F.R. § 125.94(c)(2) 50, 63

40 C.F.R. § 125.95(b)(4)(ii) 21, 43

40 C.F.R. § 125.95(b)(6)(ii) 74

40 C.F.R. § 125.95(b)(6)(ii)(A) 74

40 C.F.R. § 230.10(a) 60

40 C.F.R. § 230.75 59

40 C.F.R. § 1508.20 60

Federal Register

41 Fed. Reg. 17,387 (April 26, 1976) 52

45 Fed. Reg. 59,343 (Sept. 9, 1980) 106, 126

49 Fed. Reg. 37,998 (Sept. 26, 1984) 105, 106, 122, 126

65 Fed. Reg. 49,059 (Aug. 10, 2000) 15

66 Fed. Reg. 28,853 (May 25, 2001) 14, 15, 121

66 Fed. Reg. 65,256 (December 18, 2001) ..... *passim*

67 Fed. Reg. 17,121 (April 9, 2002) ..... *passim*

68 Fed. Reg. 13,522 (March 19, 2003) 76, 79, 81, 84

69 Fed. Reg. 41,576 (July 9, 2004) ..... *passim*

Legislative History

Clean Water Act Amendments of 1982: Hearings on S. 777 & S. 2652 Before the Subcomm. on Envtl. Pollution of the Comm. on Env't and Pub. Works, U.S. Senate, 97th Cong., 2d Sess. (1982) 70, 71

S. Rep. No. 92-414 (1971) 90, 120

S.Rep. No. 370, 95th Cong., 1st Sess. 8, Reprinted in (1977) U.S. Code Cong. & Admin. News 93

Senate Com. on Public Works *A Legislative History of the Water Pollution Control Act Amendments of 1972*, 93d Cong., 1st Session, at 196-197 8

Executive Orders

Executive Order 12291 (Feb. 17, 1981) 30

Executive Order 12866, 58 Fed. Reg. 51,735 (Oct. 4, 1993) .... *passim*

Other Authorities

Federal Rule of Appellate Procedure 15(a) 4

In re Brunswick Steam Electric Plant, USEPA, Decision of the General Counsel, EPA GCO 41 (June 1, 1976) 8

In Re Public Service Co. of New Hampshire, 1 EAD 455, 1978 WL 21140 at 21 (Decision of the EPA Administrator) (Aug. 4, 1978) 95

James R. May & Maya K. van Rossum, *The Quick and the Dead: Fish Entrainment, Entrapment, and the Implementation and Application of Section 316(b) of the Clean Water Act*, 20 Vt. L. Rev. 373 (1995) 12

Karl R. Rabago, *What Comes Out Must Go In: Cooling Water Intakes and the Clean Water Act*, 16 Harv. Envtl. L. Rev. 429 (1992) 8

MOA Between the Department of the Army and the Environmental Protection Agency: The Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines (Feb. 6, 1990) 59

Phillip M. Kannan, *The Logical Outgrowth Doctrine in Rulemaking, 48 Admin. L. Rev. 213 (1996)* 114

PRELIMINARY STATEMENT

Seventeen environmental groups[1] ("Environmental Petitioners") seek *vacatur* and remand of final regulations[2] ("Phase II Rule" or "Rule") adopted by the U.S. Environmental Protection Agency ("EPA" or "Agency") pursuant to section 316(b) of the federal Clean Water Act ("CWA" or "Act")[3] because the Rule is plainly inconsistent with the statute's text and Congress's intent in passing the 1972 CWA amendments, and because, in promulgating the Rule, EPA failed to fully comply with the Administrative Procedure Act ("APA").[4]

As explained below, EPA exceeded and abused its authority by issuing a Rule with indeterminate standards and multiple site-specific compliance options that will perpetuate regulatory paralysis, ineffectual permitting, and massive mortality of fish and wildlife at large existing power plants that withdraw cooling water from the nation's waterbodies.

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[1] The Environmental Petitioners are listed on the cover and in the corporate disclosure statement.

[2] *Final Regulations to Establish Requirements for Cooling Water Intake Structures at Phase II Existing Facilities,* 69 Fed. Reg. 41,576 (July 9, 2004).

[3] Federal Water Pollution Control Act, 33 U.S.C. §§ 1251-1387, 1326(b). Unless otherwise stated, statutory references are to the Act. Parallel citations to the United States Code are given with each first reference.

[4] 5 U.S.C. §§ 553 (rulemaking); 701-706 (judicial review).

JURISDICTION

This Court has jurisdiction pursuant to CWA section 509(b)(1)(E) to review the Rule as a final action promulgating an "other limitation" under CWA section 301.[5] Environmental Petitioners timely filed[6] their petitions for review on July 26, 2004 (no. 04-6699) and July 30, 2004 (no. 04-6692), and are "interested persons" within the meaning of section 509(b)(1).[7]

ISSUES PRESENTED

1. Whether EPA violated CWA sections 316(b) and 301 when, shortly before proposal and at the direction of OMB, it retracted a requirement mandating "closed-cycle cooling" for 10 percent of the most harmful plants in order to maximize economic benefit rather than minimize environmental impact.

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[5] 33 U.S.C. §§ 1369(b)(1)(E), 1311; *Riverkeeper, Inc. v. EPA*, 358 F.3d 174, 183-84 (2d Cir. 2004).

[6] *See* 33 U.S.C. § 1369(b)(1) (authorizing petitions up to 120 days after issuance). The final Rule was issued for purposes of judicial review on July 23, 2004. 69 Fed. Reg. at 41,576/2 (SPA 175).

[7] Environmental Petitioners' declarations (JA 33-137) demonstrate that their members have standing to challenge EPA's action because they have suffered injury-in-fact, which is fairly traceable to EPA's illegal conduct, and can be redressed by a favorable decision. *See Friends of the Earth, Inc. v. Laidlaw Envtl. Servs., Inc.*, 528 U.S. 167, 180-81 (2000). Further, Environmental Petitioners have representational standing on their members' behalf because direct participation by the members is unnecessary and the interests the organizations seek to protect are germane to their purposes. *See Hunt v. Washington State Apple Advertising Commission*, 432 U.S. 333, 343 (1977).

2. Whether the Rule's national performance standards are not in accordance with sections 316(b) and 301 because they are expressed as ranges that do not require facilities to maximize performance within those ranges, and the final Rule allows a second margin of error below the ranges' lower bounds.

3. Whether EPA lacks authority to allow compliance with CWA section 316(b) through "restoration measures."

4. Whether the Rule's "cost-benefit variance" is inconsistent with Congress's intent in adopting the 1972 CWA amendments because it bases permitting on: (a) a site-specific assessment of each facility's consequential impact on fish populations and aquatic ecosystems; and (b) "monetization" of the goods and services that accrue from avoiding aquatic mortality.

5. Whether the Rule's "cost-cost variance" destroys the national uniformity of regulations mandated by Congress and prevented public participation in the rulemaking because it: (a) is far more expansive than the narrow, statutorily-authorized "fundamentally different factors" (FDF) variance; and (b) establishes in the final Rule a ceiling on each identified existing facility's compliance costs that was not disclosed at proposal.

6. Whether EPA exceeded its authority by allowing new, substantially independent power plants built at the site of an existing facility to be considered "existing facilities" for purposes of regulation under section 316(b), thus allowing

them to evade the regulations applicable to new facilities.

STATEMENT OF THE CASE

This is an original proceeding to review final action of the Administrator of EPA pursuant to CWA section 509(b)(1)(E), APA section 10,[8] and Federal Rule of Appellate Procedure 15(a). The Rule, which EPA proposed on April 9, 2002 and promulgated on July 9, 2004, constitutes the second phase of a three-phase rulemaking to implement CWA section 316(b) pursuant to a consent decree in *Riverkeeper, Inc. v. Leavitt,* 93 Civ. 0314 (S.D.N.Y.). This Court reviewed and partially remanded EPA's "Phase I Rule"[9] in *Riverkeeper, Inc. v. EPA*, 358 F.3d 174 (2d Cir. 2004). Environmental Petitioners seek *vacatur* and remand of the Phase II Rule because it fails to meet statutory requirements and because EPA, in promulgating the Rule, failed to fully comply with the APA's notice-and-comment procedures.[10]

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[8] 5 U.S.C. § 706(2).

[9] *See Regulations Addressing Cooling Water Intake Structures for New Facilities*, 66 Fed. Reg. 65,256 (December 18, 2001) (SPA 831).

[10] 5 U.S.C. §§ 553(b), (c).

STATUTORY FRAMEWORK

A. The Clean Water Act

The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[11] To effectuate this goal, in 1972, Congress fundamentally reformed the Act in what this Court has described as a "sea change" in this country's water pollution control strategy.[12] As amended, the Act prohibits all discharges of pollutants to waters of the United States, except as permitted in a National Pollutant Discharge Elimination System (NPDES) permit.[13] To govern the setting of NPDES permit limitations, the Act requires EPA to establish uniform national standards for classes or categories of facilities, based on the leading technology available to the industry as a whole regardless of receiving water quality.[14] NPDES permits, issued by State agencies or EPA's regional

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[11] CWA § 101(a), 33 U.S.C. § 1251(a).

[12] *Riverkeeper*, 358 F.3d at 184. The Act defines "pollution" broadly to include aquatic mortality caused by power plants: "The term 'pollution' means the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water." CWA § 502(19), 33 U.S.C. § 1362(19).

[13] CWA §§ 301, 402, 33 U.S.C. §§ 1311, 1342.

[14] *Riverkeeper*, 358 F.3d at 184-85, *citing Weyerhaeuser Co. v. Costle*, 590 F.2d 1011, 1041-42 (D.C. Cir. 1978); *Bethlehem Steel Corp. v. EPA*, 538 F.2d 513, 514-15 (2d Cir. 1976); *Hooker Chems. & Plastics Corp. v. Train*, 537 F.2d 620, 623-24 (2d Cir. 1976).

offices, transform the generally applicable effluent limitations and other standards into obligations borne by the individual discharger.[15]

Congress's focus on uniform technology standards in the 1972 amendments was an explicit repudiation of unsuccessful predecessor statutes that relied on "water quality standards" as the primary method of pollution control.[16] Prior to 1972, sources were regulated "based on their effect on the surrounding water" and discharges were limited only if they caused water quality to drop below an acceptable level.[17] But that approach created a "virtually unbridgeable causal gap" because "proving that a particular polluter had caused the water quality to dip below the standards was all but impossible to satisfy."[18] Thus, "Congress realized not only that its [pre-1972] water pollution efforts … had failed, but also that reliance on receiving water capacity as a crucial test for pollution levels had

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[15] *EPA v. California, ex rel. State Water Res. Control Bd.*, 426 U.S. 200, 205 (1976).

[16] *Riverkeeper*, 358 F.3d at 196 ("Congress rejected a regulatory approach that relies on water quality standards.").

[17] *Id.* at 189, citing *CPC Int'l v. Train*, 515 F.2d 1032, 1034-35 (8th Cir. 1975).

[18] *Id.* at 189-90, quoting *CPC*, 515 F.2d at 1035 and *Bethlehem*, 538 F.2d at 515.

contributed greatly to that failure."[19] Accordingly, in place of the ineffective and anarchical water quality standards approach, Congress "predicated pollution control on the application of control technology on the plants themselves rather than on the measurement of water quality."[20]

In addition to eliminating reliance on water quality, another significant objective of Congress was to standardize permitting and avoid the "race to the bottom," which commonly occurred before 1972, when States competed to attract industries by relaxing control requirements. "Congress considered uniformity vital to free the states from the temptation of relaxing local limitations in order to woo or keep industrial facilities."[21]

The national technology standards are to become more stringent over time. As the Supreme Court has recognized, the potential for economic consequences does not dampen this mandate.[22] Indeed, with the passage of time and the

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[19] *Weyerhaeuser*, 590 F.2d at 1042.

[20] *Hooker Chemicals,* 537 F.2d at 623. Water quality standards were retained in the 1972 Act as a supplementary mechanism that can be used to set limitations stricter, but not more lenient, than technology-based limitations. *Riverkeeper*, 358 F.3d at 184 n.10.

[21] *Weyerhaeuser,* 590 F.2d at 1042.

[22] *EPA v. National Crushed Stone*, 449 U.S. 64, 80 (1980) ("Comments in the Senate debate were explicit: 'There is no doubt that we will suffer some

tightening of the standards, cost considerations were to be relegated to a more peripheral role in the selection of best technology.[23]

B. Section 316(b)

"[W]ell aware of the dangers posed to aquatic life by the withdrawal of large volumes of water through cooling water intake structures"[24] and of the availability of closed-cycle cooling, Congress included section 316(b) in the 1972 Act as part of its technology-based framework. Section 316(b) provides:

> Any standard established pursuant to [CWA §§ 301 or 306] and applicable to a point source shall require that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact.[25]

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disruptions in our economy because of our efforts; many marginal plants may be forced to close.'").

[23] *NRDC v. EPA*, 822 F.2d 104, 110 (D.C. Cir. 1987); *see also Riverkeeper*, 358 F.3d at 185, citing cases (EPA "should give decreasing weight to expense as facilities have time to plan ahead to meet tougher restrictions.").

[24] *In re Brunswick Steam Electric Plant*, USEPA, Decision of the General Counsel, EPA GCO 41 at 3 (June 1, 1976) (Supp 16). During CWA debate, Senator Buckley cited with approval newspaper articles reporting a decision to require closed-cycle cooling at Hudson River power plants to abate massive fish kills caused by their cooling water intake structures. *Id.* at n.10, citing Senate Com. on Public Works *A Legislative History of the Water Pollution Control Act Amendments of 1972*, 93d Cong., 1st Session, at 196-197(SPA 1381).

[25] For a comprehensive discussion of section 316(b)'s legislative history, *see* Karl R. Rabago, *What Comes Out Must Go In: Cooling Water Intakes and the Clean Water Act*, 16 Harv. Envtl. L. Rev. 429, 445-455 (1992) (JA 1339-49).

Although they govern withdrawals rather than discharges, section 316(b) limitations are "technology-based performance requirements analogous to those derived for point sources under sections 301 (existing sources) and section 306 (new sources)."[26] Congress's use of "best technology available" (BTA) language in section 316(b) – which is textually similar to "best available technology" (BAT)[27] and "best available demonstrated control technology" (BADCT)[28] – and its explicit cross-reference to sections 301 and 306, illustrates its intent to incorporate cooling water standards as an integral component of the NPDES program. In fact, regulations issued under section 316(b) are also promulgated under section 301 and 306.[29] As the Fourth Circuit explained in *VEPCO*, section 316(b) "requires § 301 and § 306 standards to deal with cooling water intake structures."[30] *VEPCO* cited this Court's opinion in *Bethlehem Steel* to bolster its conclusion that section 316(b) regulations are "closely related to the effluent

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[26] 66 Fed. Reg. at 65,285 (SPA 850).

[27] *See* CWA § 301(b)(2), 33 U.S.C. § 1311(b)(2).

[28] *See* CWA § 306(a)(1), 33 U.S.C. § 1316(a)(1).

[29] *Riverkeeper*, 358 F.3d at 185, citing *Va. Elec. and Power Co. ("VEPCO") v. Costle*, 566 F.2d 446, 449-50 (4th Cir. 1977); *Cronin v. Browner,* 898 F. Supp. 1052, 1059 (S.D.N.Y. 1995).

[30] 566 F.2d at 450.

limitations and new source standards of performance of §§ 301 and 306" and distinguishable from "state-imposed water quality standards under § 303."[31]

Section 316(b) can also be contrasted with section 316(a), 33 U.S.C. § 1326(a), which is a limited instance in the Act where receiving water quality may be considered in relaxing standards; otherwise water quality may only be considered in setting more stringent standards.[32] In *Riverkeeper*, this Court found significant "[t]hat Congress provided for a water quality standards approach to thermal discharges but did not include that approach (or make any reference to it) in the very next subsection."[33] Such drafting, which is presumed to be "intentional[] and purposeful[,]"[34] "counsels against including … within the best technology available" any measures that "resemble the pre-1972 approach to water pollution."[35]

Section 316(b) creates a mandatory duty for EPA to promulgate standards

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[31] *Id.* at 450-51 & n.17.

[32] *Weyerhaeuser*, 590 F.2d at 1043 (section 316(a) drafted as a clear exception).

[33] 358 F.3d at 190.

[34] *Id.* at 190, citing *Bates v. United States*, 522 U.S. 23, 29-30 (1997).

[35] *Id.* at 189.

for cooling water intake structures within the time limits of sections 301 and 306.[36] Thus, EPA was required to promulgate section 316(b) regulations for new facilities by January 18, 1974,[37] and for existing facilities by July 1, 1977.[38]

STATEMENT OF FACTS

A. Cooling Water Intake Structures

Cooling water intake structures have enormous environmental impacts: the withdrawal of large volumes of water to cool power plant turbines kills billions of fish and destabilizes wildlife populations.[39] Intake structures kill aquatic organisms by "entraining" them through plants' heat exchangers[40] and "impinging"

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[36] *Cronin,* 898 F.Supp. at 1059.

[37] *See* CWA §§ 306(b)(1)(A), (B) (requiring new source performance standards no later than one year and ninety days after October 18, 1972); *see also Riverkeeper*, 358 F.3d at 185-86 ("When the EPA 'established' new source performance discharge 'standard[s]' 'pursuant to section . . . 306,' it ought *then* to have regulated new intake structures because, by virtue of section 316(b), section 306's standards 'shall require that . . . cooling water intake structures reflect the best technology available.") (emphasis in original).

[38] See CWA §§ 301(b)(1)(A), (B) (effluent limitations for existing sources no later than July 1, 1977).

[39] *Riverkeeper,* 358 F.3d at 181; *see also Cronin v. Browner*, 90 F.Supp.2d 364, 366 (S.D.N.Y. 2000) ("[C]ooling water systems 'may interfere with the maintenance or establishment of optimum yields of sport or commercial fish and shellfish, decrease populations of endangered organisms, and seriously disrupt sensitive ecosystems.'")

[40] Fish and shellfish, eggs, larvae, and other organisms too small to be screened out are drawn through a cooling water intake structure into a plant's

them on intake screens,[41] and the discharge of heated water from cooling systems may also harm wildlife.[42] They affect the full spectrum of organisms in the aquatic ecosystem at all life stages (*e.g.*, eggs, larvae, juvenile, adult) from tiny photosynthetic organisms (phytoplankton) to fish, shrimp, crabs, birds, and marine mammals, including threatened and endangered species.[43]

Power plants are by far the greatest culprit, withdrawing more than 78 trillion gallons per year from U.S. waters for cooling.[44] Approximately 543 U.S. power plants each withdraw at least 50 million (and often more than a billion) gallons of cooling water per day using the most antiquated and destructive type of cooling system, known as "once-through" cooling. Once-through cooling systems draw water from a source waterbody to absorb heat and then discharge it at an

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cooling system, where they are subjected to mechanical stress, thermal shock, and chemical exposure that few, if any, survive. 69 Fed. Reg. at 41,586/2 (SPA 185).

[41] The force of water passing through the intake structure traps larger organisms on intake screens, resulting in harm or death through starvation, exhaustion, asphyxiation, or descaling. *Id.*

[42] *Cronin*, 90 F. Supp. at 366, citing James R. May & Maya K. van Rossum, *The Quick and the Dead: Fish Entrainment, Entrapment, and the Implementation and Application of Section 316(b) of the Clean Water Act*, 20 Vt. L. Rev. 373, 382 (1995) (Supp 198).

[43] 69 Fed. Reg. at 41,586/2; 66 Fed. Reg. at 65,262-263 (SPA 185, 837-38).

[44] 69 Fed. Reg. at 41,586/1 (214 billion gallons per day, which accounts for nearly half of all fresh and saline water withdrawals from U.S. waters) (SPA 185).

elevated temperature. None of this cooling water is recycled.

Even though it understates impacts,[45] available data on mortality at power plant intake structures are staggering. As just a few of many examples:

- Five Hudson River power plants collectively entrain 20 percent of the "year-class" (*i.e.*, annual spawn) of striped bass, 25 percent of bay anchovy, 43 percent of Atlantic tomcod, and 79 percent of other species;[46]

- The Brayton Point plant has been associated with an 87 percent reduction in finfish abundance in Mt. Hope Bay, Rhode Island;[47]

- The San Onofre nuclear plant in California kills 57 tons of fish annually, causing a 50-70 percent decline in midwater fish populations within three kilometers;[48]

- Two San Francisco Bay plants impinge and entrain more than 36,000 endangered Chinook salmon each year, as well as other threatened and endangered species;[49] and

- Approximately 3,200 threatened or endangered sea turtles entered the intake structure at Florida's St. Lucie nuclear plant from 1976 to 1994, resulting in mortality of 160 turtles.[50]

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[45] Existing studies on impingement and entrainment "provide only a partial picture of the severity of environmental impact associated with cooling water intake structures." 66 Fed. Reg. at 65,265/1 (SPA 840).

[46] 69 Fed. Reg. at 41,587/2 (SPA 186).

[47] *Id.* at 41,588/2 (SPA 187).

[48] *Id.*

[49] 66 Fed. Reg. at 65,264-265 (SPA 839-40).

[50] *Id.* at 65,263/3 (SPA 840).

Fortunately, the environmental damage caused by intake structures can be dramatically reduced – by approximately 98 percent – by recycling cooling water. Closed-cycle systems "reduce the amount of cooling water needed and in turn … directly reduce the number of aquatic organisms entrained in the cooling water intake structure"[51] as well as impingement and other stresses on the ecosystem.[52] Virtually all of the gas-fired power plants and 73 percent of the coal-fired plants built in the last 20 years have closed-cycle cooling.[53]

B. Case-By-Case Permitting

In 1977, EPA's first attempt at section 316(b) regulations was remanded by the Fourth Circuit due to procedural defects.[54] EPA subsequently withdrew the regulation, and for more than two decades failed to propose any new cooling water intake regulations.

In the absence of national regulations, cooling water standards have been relegated to *ad hoc* determination by individual permit writers, typically State

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[51] 66 Fed. Reg. at 65,273/2-3 (SPA 848).

[52] Impingement is related to both intake capacity and velocity. *Id.* at 65,274/1, 65,300/2-3 (SPA 849, 875).

[53] 66 Fed. Reg. 28,853, 28,855-856 (May 25, 2001) (SPA 810, 812-13).

[54] *Appalachian Power Co. v. Train,* 566 F.2d 451, 458-59 (4th Cir. 1977).

agencies, exercising "best professional judgment."[55] These site-specific proceedings, which typically involve a complex assessment of the local marine ecosystem and fishery population dynamics to determine technology requirements, impose a significant burden on permitting agencies, as EPA found:

> The historical case-by-case approach requires significant resources on the part of the regulatory authorities [to]... characterize[e] the environmental impact occurring at each facility and evaluat[e] those data to determine what constitutes BTA for each specific facility.[56]

Permit proceedings typically extend over many years – in some cases, more than a decade[57] – despite the CWA's requirements that NPDES permits be limited to five years duration[58] and that BAT regulations be reviewed and, if appropriate, revised every five years.[59] Industry, which has a critical strategic advantage in these

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[55] *See* CWA § 402(a)(1)(B), 33 U.S.C. § 1342(a)(1)(B) (prior to national regulations, permits are case-by-case); *NRDC v. EPA*, 863 F.2d 1420, 1424 (9th Cir. 1988).

[56] 65 Fed. Reg. 49,059, 49,079 (Aug. 10, 2000); *see also* 66 Fed. Reg. at 65,262/1-2 (EPA noting that site-specific determinations impose "significant resource demands on permitting agencies"); 66 Fed. Reg. at 28,865 (in some States' view, site-specific approach requires "burdensome expenditure of resources to develop Section 316(b) requirements for each new facility") (SPA 767, 836, 822).

[57] *See* P2F Compliance Years ("Compliance Years List") (listing 57 plants with cooling water intakes operating on permits that expired in the 1990s or earlier and had not been renewed by 2003; 15 of these were more than 10 years overdue) (JA 2775-2803).

[58] CWA § 402(b)(1)(B), 33 U.S.C. § 1342(b)(1)(B).

complex proceedings because of its superior resources, has taken advantage of biological uncertainty and used delay tactics to avoid technology upgrades. For example, in the early 1970s, EPA ordered three Hudson River power plants to install closed-cycle cooling towers.[60] Thirty years later, after many studies, the plants still operate on long-expired permits,[61] without cooling towers, and the plants' once-through cooling systems continue to kill fish at levels deemed "wholly unacceptable" by the state environmental agency.[62] Similarly, in the early 1970s the Atomic Energy Commission determined that a closed-cycle cooling system would be necessary at the Brunswick power plant in North Carolina to avoid significant environmental damage.[63] After years of battling, in 1980, EPA's Region 4 relented and settled for lesser controls.[64] With only these lesser controls

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[59] CWA § 301(d), 33 U.S.C. § 1311(d).

[60] *Consolidated Edison Co. of New York v. New York State Dept. of Environmental Conservation,* 726 F. Supp. 1404, 1407 (S.D.N.Y. 1989).

[61] Compliance Years List at 12, 20, 22 (JA 2786, 2794, 2796).

[62] 66 Fed. Reg. at 65,264/2 (SPA 839).

[63] *In the Matter of: Carolina Power & Light Company (Brunswick Steam Electric Plant)*, USEPA Environmental Appeals Board, 1978 EPA App. LEXIS 4 (February 20, 1978) at 3 (Supp 61).

[64] May & van Rossum, 20 Vt. L. Rev. at 413-14 n.280 (internal EPA memoranda indicate that the decision not to require closed-cycle cooling was driven by concerns about limited agency resources and politics) (Supp 208-209).

in place, the plant currently kills three to four billion fish annually.[65]

Thus, for cooling water intake structures, unlike discharges of pollutants, the ineffectual site-specific approach has persisted for decades due to EPA's stark and stubborn defiance of Congress's best technology mandate.

C. The Consent Decree

In 1993, frustrated with EPA's inaction and the resulting regulatory vacuum, several of the Environmental Petitioners sued EPA in federal district court to compel issuance of the regulations required by section 316(b).[66] In 1995, they won a consent decree ordering EPA to take final action with respect to section 316(b) regulations by August 13, 2001. Later, after EPA reported that it was unable to meet the Court-ordered deadline, the consent decree was modified[67] to allow the Agency to implement section 316(b) in three phases: Phase I (all new facilities); Phase II (large existing power plants); Phase III (small existing power plants and all other existing facilities).[68]

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[65] 66 Fed. Reg. at 65,264/1 (SPA 839).

[66] *Riverkeeper, Inc. v. Leavitt,* 93 Civ. 0314 (S.D.N.Y.).

[67] *Cronin*, 90 F.Supp.2d at 368. Although the court found that EPA's "explanations for its previous delays do not justify modification of the Consent Decree," it extended the deadlines on the ground that "the public interest does require that the Decree be modified to enable EPA to produce a sound regulation." *Id.* at 372.

[68] 69 Fed. Reg. at 41,583/3 (SPA 182).

D. The Phase I Rule

The Phase I Rule, published in December 2001, established a two-track regulatory approach for new facilities. Track I included national intake capacity and velocity requirements based on closed-cycle cooling technology.[69] Track II allowed permit applicants two alternative compliance options, one of which involved unrelated "restoration measures" designed to "maintain the fish and shellfish in the waterbody [at] a substantially similar level" to that which would be achieved through Track I.[70] EPA deferred regulation of "stand-alone" facilities (*i.e.*, new facilities substantially independent from existing facilities on the same site) that do not increase cooling water intake capacity until the Agency had gathered additional data during later phases of the rulemaking.[71]

In *Riverkeeper*, this Court agreed that EPA's focus on reducing impingement and entrainment was proper and upheld the Phase I Rule's closed-cycle cooling requirement, as well as velocity limits and proportional flow limits.[72] This Court also found that EPA exceeded its authority by allowing compliance with section

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[69] *Riverkeeper*, 358 F.3d at 182.

[70] *Id.* at 183.

[71] 66 Fed. Reg. at 65,259/1 (SPA 834).

[72] *Id.* at 196-200.

316(b) through restoration measures, and remanded that aspect of the rule.[73] Despite this Court's partial remand, EPA has failed to revise the Code of Federal Regulations, and the Phase I Rule remains exactly in the same form as when it was issued.[74]

E. OMB's Involvement in the Phase II Rulemaking Process

On December 28, 2001, after years of research by its Office of Science and Technology, EPA submitted its draft Phase II proposal to the White House's Office of Management and Budget (OMB) for review.[75] When the proposed Rule emerged 60 days later, it included 58 "major changes" made "at the suggestion or recommendation" of OMB.[76] In particular, OMB removed the requirement that the largest power plants on the most sensitive water bodies use closed-cycle cooling.[77] OMB also added a provision allowing a site-specific determination of permit

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[73] *Id.* at 189-191.

[74] *See* 40 C.F.R. §§ 125.80 *et seq.*

[75] *See* OMB Review Draft – 28 Dec 3001 (DCN 4-4005) (Supp 214). OMB, which has no environmental expertise, reviews regulatory action pursuant to Executive Order (E.O.) 12866, 58 Fed. Reg. 51,735 (Oct. 4, 1993) (SPA 1436).

[76] *See* Section 316(b) Phase II Proposed Rule Summary of Major Changes During Interagency Review ("Proposal Changes Summary") (DCN 4-4019)(Supp 494-501).

[77] *Id.* at 2 (Supp 495).

requirements based on a cost-benefit analysis.[78]

The final Rule was even more extensively revamped by OMB, with 95 "major changes" having been made "at the suggestion or recommendation" of OMB in the final 54 days before promulgation.[79] During this period, EPA eliminated a requirement that technologies "achieve the maximum practicable performance level (within the stated range)" of the performance standards.[80] OMB also significantly transformed the methodology for site-specific determinations based on a cost-cost test.[81] Further, OMB "[b]roadened the definition of 'existing facility'" and included preamble language stating that all substantially independent new facilities built on the same site as an existing facility are themselves existing facilities for purposes of section 316(b) regulation.[82]

F. The Final Phase II Rule

EPA published the final Rule on July 9, 2004. Unlike the Phase I Rule (and

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[78] *Id.*

[79] *See* Section 316(b) Phase II Final Rule Summary of Major Changes During Interagency Review ("Final Changes Summary") at 1-13 (DCN 6-5051) (Supp 732-744).

[80] Compare 12/22/03 OMB Review Draft at 17 (Supp 136) with final Rule, 40 C.F.R. § 125.94(b).

[81] Final Changes Summary at 3 (Supp 734).

[82] *Id.* at 2, 8 (Supp 733, 739).

the proposal submitted to OMB), it does not set limitations based on closed-cycle cooling. Instead, the Rule establishes performance standards expressed as ranges, specifically, a 60-90 percent reduction in entrainment and a 80-95 percent reduction in impingement, with no requirement to maximize performance within the ranges.[83] A provision added after the public comment period allows facilities to have their compliance measured against their own technology plans, rather than against the performance standards, thus insulating them from enforcement even if they fail to meet the lower bound of the ranges.[84]

Like the Phase I Rule, and despite this Court's rejection of "restoration measures" in *Riverkeeper*, the Rule also allows facilities to undertake "restoration measures" to improve water quality or fish habitat instead of installing technologies to reduce impingement and entrainment.[85] Further, the Rule allows facilities to elect site-specific determination of reduced requirements based on a "monetized" cost-benefit analysis or by showing that their compliance costs are significantly greater than the costs EPA modeled for each of 543 facilities covered by the Rule.[86] Finally, the final Rule defines "existing facility" as any facility that

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[83] 40 C.F.R. § 125.94(b).

[84] 40 C.F.R. § 125.95(b)(4)(ii).

[85] 40 C.F.R. § 125.94(c).

[86] 40 C.F.R. § 125.94(a)(5).

is not a "new facility," but the preamble contains the language added by OMB to reinterpret and narrow the Phase I Rule's definition of new facility to exclude new, separate facilities to be built on existing sites.

SUMMARY OF ARGUMENT

More than three decades after Congress required national uniformity based on best technology, EPA has adopted a rule that masquerades as categorical, technology-based regulation, but actually perpetuates the harm-based, site-specific anarchy Congress rejected in 1972. The Rule's indeterminate performance ranges and multiple compliance options would create paralyzing uncertainty and turn permitting into an analytical quagmire, contrary to clearly-expressed Congressional intent. In the guise of providing even more flexibility, EPA eviscerated an already toothless rule during the rulemaking process by broadening its loopholes and adding new ones at the behest of the OMB, without allowing for public comment. As a result of OMB's eleventh-hour interference, EPA produced a schizophrenic rule that patently contradicts many of the Agency's own documented findings and the record it developed over many years.

First, EPA violated the CWA by retracting its own preferred regulatory proposal and replacing it with a weaker one that OMB determined would "maximize net economic benefits." After evaluating technologies for six years following entry of the consent decree, EPA's technical experts found that closed-

cycle cooling was available, affordable and most effective in reducing impact. Accordingly, it proposed to require closed-cycle cooling at the largest plants on the most sensitive waterbodies. But in the final 60 days before proposal, the Agency reversed course after conducting an OMB-imposed incremental cost-benefit analysis pursuant to Executive Order 12866. (*See* Point I.)

Second, in place of the moderate closed-cycle cooling requirement it retracted, EPA set performance standard ranges that do not reflect the best technology available. The Act requires precise, single-level limitations to be set with reference to the single best performing facility. Although EPA found that intake screening technologies were available to reduce impingement and entrainment by 99 and at least 80 percent, respectively, the Rule's performance ranges would allow facilities to *attempt* only reductions of 80 and 60 percent, respectively, even if the facility could actually achieve the higher levels of performance. This discrepancy can equate to hundreds of millions of needlessly destroyed organisms at each facility annually. EPA further violated the CWA by allowing, without notice or comment, facilities to avoid enforcement even if they fall below the lower bound of the already sub-par ranges. (*See* Point II.)

Third, the Rule includes a "restoration measures" provision, substantially identical to the one this Court rejected in *Riverkeeper*, allowing facilities to impinge and entrain an unlimited number of organisms if they undertake other

steps to improve the ecology of the surrounding waters. By the same reasoning that governed the remand in Phase I, restoration measures are plainly inconsistent with the text of section 316(b) and Congress's intent in enacting the 1972 CWA amendments. Restoration measures have nothing to do with the location, design, construction or capacity of cooling water intake structures, and they do not minimize impacts, but attempt to correct for them after the fact. They also violate Congress's intent that intake structures be permitted directly, based on the best technology, without lengthy, complex, and ultimately futile ecological assessments to determine the resulting level of fish and shellfish in the waterbody. (*See* Point III.)

Fourth, EPA included, at the direction of OMB, a site-specific compliance option based on a comparison of a facility's compliance costs to the monetized (*i.e.*, dollar value) ecological benefits of compliance. Like restoration, this cost-benefit variance violates Congress's intent for technology-based regulations because it requires permit writers to determine the consequential water quality effects of a particular facility on fish populations and the larger aquatic ecosystem. In addition, it interposes a second insurmountable obstacle to permitting by requiring monetization of ecological benefits. As EPA's own vain attempts proved, because State agencies cannot accurately quantify or monetize benefits, the variance will obstruct permitting and inevitably undervalue the resources EPA is

charged with safeguarding. (*See* Point IV.)

Fifth, EPA included another site-specific compliance option, based on a comparison of a facility's actual compliance costs to the costs EPA evaluated for each of the 543 facilities subject to the Rule. This cost-cost variance violates the APA because it is not a logical outgrowth of the proposal, which set forth cost and technology data only for model facilities, not actual identified facilities. It also violates the CWA because it transforms the Congressionally-approved "Fundamentally Different Factors" variance into a much more expansive loophole based directly on costs instead of plant factors; uses a more lenient "significantly greater" test; does not allow for more stringent requirements where costs are lower; and adjusts facility-specific, rather than industry-wide, requirements. (*See* Point V.)

Sixth, in the Phase I Rule, EPA deferred regulation of a limited class of new facilities until it had gathered additional data during the Phase II rulemaking. The facilities it deferred are so-called "stand-alone" facilities (*i.e.,* new facilities that are substantially independent from existing facilities located at the same site) that do not construct a new cooling water intake structure or modify an existing one to increase intake capacity. In the proposed Phase II Rule, even though EPA had collected the data it lacked, it provided no decision or rationale whatsoever for holding these facilities to Phase II standards, thereby violating the APA's notice-

and-comment requirements. Also without notice, EPA included new language in the final Rule's preamble that can be (and has already been) construed to reinterpret and broaden the deferred class of facilities to include stand-alone facilities that increase intake capacity. Instead of requiring the best technology available, EPA violated the CWA by allowing these new stand-alone facilities to evade the Phase I Rule's more stringent requirements and instead comply with the more lenient Phase II Rule. EPA also failed to articulate a satisfactory explanation for its decision. (*See* Point VI.)

STANDARD OF REVIEW

This Court's analysis of EPA's adherence to the CWA and APA proceeds in two steps: "If Congress has 'directly spoken to the precise question at issue' and 'the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress.' If, however, … the statute is silent or ambiguous with respect to the specific question at issue, then [the court] consider[s] 'whether the agency's answer is based on a permissible construction of the statute.'" [87]

To determine whether an aspect of the Rule is "arbitrary, capricious, an

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[87] *Waterkeeper Alliance, Inc. v. U.S. EPA*, 399 F.3d 486, 497 (2d Cir. 2005), quoting *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 842-43 (1984).

abuse of discretion, or otherwise not in accordance with law," under section 10 of the APA, courts ask whether the agency has "examine[d] the relevant data and articulate[d] a satisfactory explanation for its action including a rational connection between the facts found and the choice made." A rule is arbitrary and capricious if "the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." [88]

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[88] *Waterkeeper,* 399 F.3d at 498, citing *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 42-43 (1983).

ARGUMENT

POINT I

EPA VIOLATED CWA SECTIONS 316(b) AND 301 BY REJECTING CLOSED-CYCLE COOLING AT THE DIRECTION OF OMB

EPA's eleventh-hour rejection of closed-cycle cooling for the most damaging facilities on the most sensitive water bodies, at the "suggestion or recommendation of OMB,"[89] violates sections 316(b) and 301 and contravenes the rulemaking authority delegated by Congress.

A. The CWA Requires EPA to Mandate the Best Technology Available and the Maximum Commitment of Industry Resources Economically Achievable.

Section 316(b) requires the "best technology available to minimize adverse environmental impact." Section 301, pursuant to which the Rule was also issued, requires the "best available technology economically achievable" (BAT).[90] BAT should represent "a commitment [by an industrial category] of the maximum resources economically possible to the ultimate goal of eliminating all polluting

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[89] *See* Proposal Changes Summary at 2 ("Removed requirement that [large] facilities in estuaries and tidal rivers … and oceans … meet performance standards … based on … a closed-cycle, recirculating cooling system.") (DCN 4-4019) (Supp 495).

[90] CWA § 301(b)(2)(A), 33 U.S.C. § 1311 (b)(2)(A).

discharges."[91] The most critical aspect of BAT is that it is a "technology forcing" standard, compelling polluting industries to meet ever more stringent limitations on the path towards complete elimination of water pollution.[92] Sections 316(b) and 301 therefore require EPA to select the technology that both minimizes impact and represents the maximum commitment of industry resources economically achievable.

In addition, Congress mandated that these CWA standards be promulgated by the Administrator of EPA, not OMB.[93] Congress delegated this rulemaking authority to the Administrator because of EPA's environmental and technical expertise.[94] Pursuant to executive order, OMB reviews agency rulemaking to ensure that regulations are consistent with the President's priorities and satisfy other specified criteria.[95] But, as an office of the White House, OMB's role is

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[91] *NRDC v. EPA*, 863 F.2d 1420, 1426 (9th Cir. 1988).

[92] *NRDC v. EPA*, 822 F.2d 104, 123 (D.C. Cir. 1987).

[93] *See* CWA § 101(d), 33 U.S.C. § 1251(d) ("the Administrator of the Environmental Protection Agency . . . shall administer this chapter."); CWA § 301(b)(2)(A) ("…as determined in accordance with regulations issued by the Administrator.").

[94] *See Environmental Defense Fund v. Thomas*, 627 F. Supp. 566, 570 (D.D.C. 1986) (Congress delegates to "the expert judgment of the EPA Administrator").

[95] E.O. 12866, § 2(b) (SPA 1439).

constitutionally circumscribed. In *Environmental Defense Fund v. Thomas*, OMB delayed EPA's promulgation of regulations "by insisting on certain substantive changes."[96] In particular, OMB sought to "shift the goal of the regulations away from EPA's philosophy of containing all leaks of waste disposals to OMB's philosophy of … risk analysis."[97] Because OMB's substantive interference was affecting EPA's ability to meet rulemaking deadlines, the Court determined that OMB lacks authority to use its regulatory review to interfere with a statutory or judicial mandate (in that case a deadline for issuing regulations).[98]

More pertinent, the Court also found that OMB's use of executive order "to impose substantive changes [in EPA regulations] raises some constitutional concerns" because it would usurp the Legislature's prerogative:

> Congress enacts environmental legislation after years of study and deliberation, and then delegates to the expert judgment of the EPA Administrator the authority to issue regulations carrying out the aims of the law. Under EO 12291 [the predecessor to EO 12866], if used improperly, OMB could *withhold approval until the acceptance of certain content* in the promulgation of any new EPA regulation,

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[96] 627 F. Supp. 566, 570 (D.D.C. 1986).

[97] *Id.* at 569.

[98] *See id.* at 571-72, citing Executive Order (E.O.) 12291, § 8 (OMB review "may continue absent a 'conflict with deadlines imposed by statute or judicial order.'")

thereby encroaching upon the independence and expertise of EPA.[99]

B. EPA Violated the CWA by Proposing and Ultimately Promulgating a Rule Designed to Maximize Net Economic Benefits Instead of Minimizing Adverse Environmental Impact.

In the case at bar, OMB did exactly what Judge Flannery feared in *Environmental Defense Fund* – it used its regulatory review under executive order to trump the environmental and technical judgments made by EPA pursuant to its delegated authority from Congress. OMB did so by imposing on EPA the regulatory philosophy of "maximizing net monetary benefits" in place of the statutorily-mandated regulatory approach of the CWA.

On December 28, 2001, after more than six years of researching cooling water intake structure impacts and technologies, EPA submitted its draft proposed Phase II Rule to OMB.[100] In the draft proposal, EPA identified closed-cycle cooling as the best technology available for "the facilities withdrawing the most significant amounts of cooling water" from the water bodies that "have the highest potential for adverse impact because they contain essential habitat and nursery

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[99] *Id.* at 569 (emphasis added); *see also Pub. Citizen Health Research Group v. Tyson*, 796 F.2d 1479, 1507 (D.C. Cir. 1986) ("OMB's participation in … rulemaking presents difficult constitutional questions concerning the executive's proper role in administrative proceedings and the appropriate scope of delegated power from Congress to certain executive agencies.")

[100] *See* OMB Review Draft – 28 Dec 3001 (DCN 4-4005) (Supp 214).

areas for many species."[101] In particular, any facility withdrawing more than 500 million gallons per day from an ocean, or more than one percent of the tidal excursion from an tidal river or estuary, "would be required to reduce its intake capacity to a level commensurate with a closed-cycle recirculating cooling system."[102] EPA estimated that approximately 59 of the 539 existing facilities covered by the proposed Rule (about 10 percent) would be subject to this closed-cycle cooling requirement.[103]

EPA based its draft proposed requirements on several key findings: first, that closed-cycle cooling "is the most effective technology for reducing both entrainment and impingement;"[104] second, that closed-cycle cooling is "commercially available and economically achievable" and already in use at 21 percent of existing facilities;[105] and, third, that "facilities can and have installed these technologies [*i.e.*, cooling towers] years after the facility began operation. Of particular significance, is that it is demonstrated that existing facilities can [be]

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[101] *Id.* at 71 (Supp 286).

[102] *Id.* at 72 (Supp 287); *see also* 40 C.F.R. § 125.94 in OMB Review Draft – 28 Dec 3001 (Supp 214).

[103] *Id.* at 72 (Supp 287).

[104] *Id.* at 75 (Supp 290).

[105] *Id.* at 74-75 (Supp 289-290).

converted from one type of cooling system to another."[106] EPA presented several examples of plants that converted to recirculating cooling towers "after significant periods of operation utilizing the once-through system."[107]

This draft proposed requirement was less protective than the Phase I Rule, which mandated closed-cycle cooling for all new facilities. Nevertheless, it would have reduced aquatic mortality at the largest facilities on the most sensitive water bodies by 95 percent or more.[108] This moderate approach was developed by EPA's staff, which has substantial technical expertise, based on its analysis of an enormous amount of material and data – the final record consists of more than 220,000 pages – over the many years that elapsed since the consent decree was signed in 1995.

But during the *60-day review period*, OMB, which has no environmental expertise, rejected EPA's modest closed-cycle cooling requirement. The proposal signed by the EPA Administrator on February 28, 2002, like the final Rule published two years later, does not require closed-cycle cooling for any facilities. Instead, performance standards are based on intake screens and nets, which are not only less effective, but also far less certain and reliable than reducing intake flow

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[106] *Id.* at 75 (Supp 290).

[107] *Id.* at 75-77 (Supp 290-92).

[108] *Id.* at 71 (Supp 286); *see also* 67 Fed. Reg. 17,121, 17,142/2 (April 9, 2002) (98 percent) (SPA 23).

with closed-cycle cooling.[109]

In reversing course on its proposal, EPA did not claim that screening devices would be as effective as closed-cycle cooling in reducing aquatic mortality. EPA also did not find that requiring closed-cycle cooling at just the 59 most damaging facilities would be economically impracticable.[110] Rather, at the direction of OMB, EPA "monetized" the benefits of protecting aquatic biota and weighed those economic benefits against the costs of each option on an incremental basis so as to "maximize net economic benefits."[111] Significantly, EPA found that the closed-cycle cooling option OMB rejected was cost-effective. In fact, the monetized benefits of the closed-cycle cooling option would far exceed its costs, $848 million to $585 million. But EPA found "that the *incremental* costs of this option ($413 million) [as compared to the intake-screen-only option] significantly outweigh the

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[109] EPA stated: "The only technology effectiveness that is certain is reductions in impingement and entrainment with cooling towers." 67 Fed. Reg. at 17192/1-2 (SPA 73).

[110] In fact, EPA told OMB just the opposite: "EPA has found that today's proposed requirements are economically practicable and reflect best technology available for minimizing adverse impact." OMB Review Draft – 28 Dec 3001 at 74 (Supp 289).

[111] *See* 67 Fed. Reg. at 17,189-208 (economic benefits analysis) (SPA 70-89).

incremental benefits ($146 million)."[112]

This change in policy was clearly based on OMB's "regulatory philosophy," set forth in E.O. 12866, which is to "maximize net benefits."[113] OMB uses this philosophy – which is also vociferously championed by industry[114] – to oppose any regulatory alternative not demonstrated to have the highest economic efficiency.[115] Even though EPA's partial closed-cycle cooling option was more environmentally protective, yielded higher total monetized benefits, and was cost-effective on a total basis, OMB rejected it because another option appeared more economically efficient. In other words, EPA and OMB sought to maximize net economic benefits, rather than minimize environmental impact. But, E.O. 12866 explicitly states that this regulatory philosophy *does not apply if "a statute requires another regulatory approach."*[116]

Consequently, OMB's regulatory approach is inapplicable to this rulemaking

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[112] *Id.* at 17,158/3 (emphasis added) (SPA 39).

[113] E.O. 12866, § 1(a) (SPA 1437).

[114] *See, e.g.*, Industry Comments on Phase II proposal: 075.016, 041.601, 041.059, 072.029 (urging EPA to use a "maximize net benefits" approach) (JA 3347, 3274, 3256, 3331).

[115] *See* OMB Circular A-4, Regulatory Analysis (Sept. 17, 2003) at 2 (DCN 6-0069) (JA 2341).

[116] E.O. 12866, § 1(a) (emphasis added) (SPA 1437).

because, as set forth above, the CWA does indeed mandate a different approach. EPA determined (based on its 6-year review of voluminous environmental, engineering and cost data) that the "best technology available" mandate required closed-cycle cooling at about 10 percent of the most damaging facilities. By shifting its regulatory focus (at the behest of OMB during the 60 days prior to proposal), away from minimizing adverse environmental impact to maximizing the economic efficiency of the Rule, EPA violated its statutory duty under sections 316(b) and 301.

As a result, this Court should vacate the Phase II Rule and (1) remand it to EPA with directions to propose the closed-cycle option rejected by OMB; and (2) determine that E.O. 12866's "maximize net benefits" regulatory philosophy is inapplicable to regulations issued under section 316(b) because the "statute requires another regulatory approach."

POINT II

EPA EXCEEDED ITS AUTHORITY BY SETTING PERFORMANCE STANDARDS AS RANGES THAT DO NOT REFLECT BTA

The Rule's performance standards are expressed as a 60 to 90 percent reduction in entrainment and an 80 to 95 percent reduction in impingement from a calculation baseline.[117] The upper end of the ranges – if actually achieved – would approach the efficacy of closed-cycle cooling. But the devices on which EPA based these standards are far less certain and reliable than closed-cycle cooling in preventing aquatic mortality.[118] EPA claims that the performance ranges are necessary to account for the variability inherent in using intake screening devices rather than flow reduction to minimize fish kills. But the Rule allows facilities to opt for the lower bound of the ranges even if they could, in fact, achieve the upper bound. Since a single large power plant can entrain billions of young fish each year, a 30 percent disparity in entrainment performance would needlessly slaughter hundreds of millions of aquatic organisms annually at each such facility. Further, the Rule allows facilities that fail to meet even the lower end of the ranges to avoid enforcement. The Rule's wide and indeterminate ranges of performance therefore

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[117] 40 C.F.R. §§ 125.94(b)(1),(2).

[118] 67 Fed. Reg. at 17192/1-2 ("The only technology effectiveness that is certain is reductions in impingement and entrainment with cooling towers.") (SPA 73).

violate CWA sections 316(b) and 301 because they do not constitute precise single-level limitations based on the best technology available for minimizing adverse environmental impact.

A. Best Technology Standards Must Be Precise, Single-Level Limitations Set With Reference to the Single Best Performing Facility.

In setting BTA standards, EPA must require power plants to "utilize the latest technology in order to reach 'the greatest attainable level of … reduction which could be achieved.'"[119] This "reflects the intention of Congress to use the latest scientific research and technology in setting … limits, pushing industries toward the goal of zero [impact] as quickly as possible."[120] Thus, "EPA uses not the average plant, but the optimally operating plant, the pilot plant which acts as a beacon to show what is possible."[121] Indeed, "Congress intended [best available technology limitations] to be based on the performance of the single best-performing plant in an industrial field."[122]

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[119] *NRDC*, 863 F.2d at 1431, quoting *NRDC*, 822 F.2d at 115 n.12.

[120] *Kennecott v. EPA*, 780 F.2d 445, 448 (4th Cir. 1985) ("The distinction between 'best practicable' and 'best available' is intended to reflect the need to press toward increasing higher levels of control.")

[121] *Id.*

[122] *Texas Oil & Gas Ass'n v. EPA*, 161 F.3d 923, 928 (5th Cir. 1998), quoting *Chemical Mfrs. Ass'n v. EPA*, 870 F.2d 177, 226 (5th Cir. 1989); *see also Waterkeeper*, 399 F.3d at 513.

The CWA also requires EPA to set these BTA standards as precise, single-level limitations. As this Court explained in an early CWA case:

> Congress intended that the regulations establish a single discharge level for a given subcategory. This is implicit in the Congressional choice of the superlative form in the statutory language requiring achievement of the degree of effluent reduction attainable by '*best*' technology.[123]

This Court recently confirmed that principle in *Riverkeeper* where it recognized that "EPA, consistent with Congress's intention that there be a national standard governing the discharge of pollutants, must promulgate *precise* effluent limitations" and that the term "standard" in section 316(b) "appears to contemplate a *single level of performance* applicable to all facilities."[124] The Court also explained that EPA may, however, allow a reasonable margin of error in measuring compliance with the single-level standards. In the Phase I Rule, EPA set precise, single-level limitations: Track I required all new facilities to limit intake volume to a level commensurate with closed-cycle cooling and limit intake

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[123] *Hooker*, 537 F.2d at 630 (rejecting industry argument that Congress intended EPA to set ranges of performance); *see also California & Hawaiian Sugar Company v. EPA*, 553 F.2d 280, 284-85 (2d Cir. 1977) (same); *NRDC v. EPA*, 537 F.2d 642, 645 (2d Cir. 1976); *NRDC*, 863 F.2d at 1432 (noting "Act's goal of uniform standards within an industry").

[124] *Id.* at 187, 188 (emphasis added), citing *NRDC v. EPA*, 863 F.2d at 1431-32; *Cal. & Hawaiian,* 553 F.2d at 285; *Hooker,* 537 F.2d at 623-24, 630.

velocity to 0.5 feet per second.[125] Track II freed facilities from these capacity and velocity requirements if they installed technologies that would yield at least 90 percent of the impingement and entrainment reductions of Track I. This Court upheld the 90 percent option, but added a critical caveat:

> Based on the EPA's representation that "90 percent" compliance is permitted because of measuring error, … it would, of course, be inappropriate to use 90 percent as a benchmark and allow an additional margin of error in measuring compliance with that benchmark. A facility must aim for 100 percent, and if it falls short within 10 percent, that will be acceptable. It may not, however, aim for 90 percent and achieve only an 89 percent reduction in impingement and entrainment.[126]

Thus, where EPA makes clear in the regulation how much ambiguity it will tolerate in measuring compliance, it must: (1) require facilities to "aim for" the higher benchmark on which BTA was based; and (2) not allow any additional margin of error below that which is specified.

B. <u>The Rule's Performance Standard Ranges are Illegal</u>.

1. The Rule Fails to Require Facilities that Can Meet the Upper Bound of the BTA Ranges to Do So.

In the Phase I Rule, EPA found that the best technology available was closed-cycle cooling. In Phase II, EPA found again that closed-cycle cooling was

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[125] *Id.* at 182.

[126] *Id.* at 189 n.16 (citation omitted).

the most effective,[127] but claimed that facilities "can achieve *almost the same level* of impingement mortality and entrainment reductions" using the intake screens, nets and other devices on which it based its performance standards.[128] For example, EPA states that fine and wide-mesh wedgewire screens and aquatic filter systems "can reduce mortality from impingement by up to 99 percent or greater."[129] EPA also states that similar technologies "have been shown to achieve 80 to 90 percent reduction in entrainment."[130]

In light of these findings, the CWA requires EPA to set BTA standards reflecting these "single best performers," *i.e.*, a 99 percent reduction in impingement and at least an 80 percent reduction in entrainment. Indeed, EPA acknowledges that "[t]he higher end of the range is a percent reduction that available data show many facilities can and have achieved with the available technologies upon which the performance standards are based."[131] But the lower

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[127] *See, e.g.,* Response to Comment ("RTC") 404.035 ("EPA agrees with the commenter that minimizing flow will often achieve the greatest reduction of both impingement and entrainment.") (JA 3542).

[128] 69 Fed. Reg. at 41,607/2 (emphasis added) (SPA 206).

[129] *Id.* at 41,599/1 (SPA 198).

[130] *Id.*

[131] *Id.* at 41,600/2 (SPA 199).

end of the ranges falls well short.

EPA contends that it expressed the standards as ranges out of concern that "precise results may not be able to be replicated in different waterbody types in different areas of the country."[132] But the Rule contains no requirement that facilities even *attempt* to achieve performance equal to the upper bound of those ranges. EPA considered "regulatory requirements to ensure that facilities achieve the greatest possible reduction (within the proposed ranges) that can be achieved at their site using the technologies on which the performance standards are based."[133] In fact, such a requirement was in the "OMB Review Draft" of the final Rule that EPA submitted to OMB, *but was eliminated before the Administrator signed the Rule*.[134]

Thus, in stark contrast to Phase I, facilities are not required to aim for reductions in impingement and entrainment that are equal to the technologies EPA identified as best available, with an allowance for error. They are not even required to aim for the greatest practicable performance they could achieve within

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[132] *Id.* at 41,613/3 (SPA 212).

[133] 67 Fed. Reg. 17,142/1 (SPA 23).

[134] *See* 12/22/03 OMB Review Draft at 17 (Section 125.94(a): "In meeting the performance requirements below, you must … demonstrate that … you … achieve the maximum practicable performance level (within the stated range).") (Supp 711).

the ranges. Rather, the Rule allows permit writers to approve technologies that are *expected* to be only two-thirds as effective (*i.e.*, 60 percent rather than 90 percent for entrainment) as the "single best performers," regardless of whether or not the facility is one of those facilities that could, in fact, meet the higher bound of the range. Thus, facilities that can install best technology will not be required to do so.[135]

Because the performance ranges to do not require facilities to actually meet the standards established as BTA, the Rule violates the CWA's mandate that EPA establish precise, single-level limitations, based on the single best performing facility. It also violates this Court's directive in *Riverkeeper* that a facility "must aim" for the standard established as BTA, not for the lower benchmark designed to allow for variability in measuring effectiveness.[136]

2. The Rule's TIOP Option Is Unauthorized.

In addition, EPA further violated the Act by adding to the final Rule an entirely new provision, 40 C.F.R. § 125.95(b)(4)(ii), that allows compliance to be measured only against a facility's own "Technology Installation and Operation

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[135] As an example, a facility that could reduce impingement by 95 percent with "wedgewire screens" might instead install a "barrier net" that is only 80 percent effective.

[136] 358 F.3d at 189 n.16.

Plan" (TIOP), instead of the performance standards.[137] "[R]ather than having to demonstrate quantitatively that they are consistently meeting [the standards]," the TIOP requires facilities only to demonstrate that they are complying with a plan "*designed to meet* the performance standards."[138] The Rule thus allows permit writers to approve a TIOP designed to reduce entrainment by only 60 percent, and even if the facility's actual performance falls well below the 60 percent mark, it would still not have violated its permit or be subject to enforcement. The TIOP provision is illegal for two reasons: (a) EPA denied the public an opportunity to comment on that substantial change to the regulation which leaves the public without a means to enforce the performance standards; and (b) the TIOP represents a second, unauthorized margin of error in assessing compliance with the performance ranges.

a. The TIOP Is Not a Logical Outgrowth of the Proposal, and Compromises Citizen Enforcement Suits.

The APA requires EPA to provide public notice of its proposed action and a meaningful opportunity for comment.[139] While a final rule need not exactly

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[137] 69 Fed. Reg. at 41,595/3 (the TIOP "serve[s] as the primary mechanism upon which compliance with the performance standard requirements of this rule is determined.") (SPA 194).

[138] *Id.* at 41,613/3 (emphasis added) (SPA 212).

[139] 5 U.S.C. §§ 553(b), (c).

replicate the proposal, it must be a "logical outgrowth" therefrom.[140] Furthermore, the Act authorizes citizens to file suit to enforce violations of permit requirements.[141] Citizen suits are a central mechanism for ensuring compliance: "[T]he public's ability to bring citizen-suits [is] a 'proven enforcement tool' that 'Congress intended [to be used] … to both spur and supplement government actions.'"[142] But by adding the TIOP to the final Rule, EPA in one fell swoop deprived the public of its right under the APA to comment on the new provision and its right under the CWA to enforce permit conditions and prosecute violations.

Because the TIOP was added only in the final Rule, the public was never given any opportunity to comment on it.[143] This sharp deviation from the proposal is not a "logical outgrowth" because, under the proposed Rule, all facilities were required to meet at least the lower bound of the performance ranges (*i.e.*, 60 percent for entrainment and 80 percent for impingement), or be subject to enforcement. In stark contrast, the final Rule allows facilities opting to use a TIOP

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[140] *National Black Media Coalition v. FCC,* 791 F.2d 1016, 1022 (2d Cir. 1986), citing cases.

[141] CWA § 505, 33 U.S.C. § 1365.

[142] *Waterkeeper*, 399 F.3d at 503, quoting legislative history.

[143] *See* 69 Fed. Reg. at 41,595-597 (discussing TIOP as significant revision to Rule) (SPA 194).

to evade enforcement even if their actual performance is well below the bottom of the ranges. This is a critical change because the Rule now limits citizens to enforcing only a requirement to implement a plan, rather than a requirement to meet the performance standards. By including, without notice and comment, a provision that impermissibly compromises a Congressionally-authorized, "proven enforcement tool," EPA violated the APA[144] and the CWA.[145]

b. The TIOP Is a Second, Unauthorized Allowance for Variation and Measurement Error.

EPA claims it added the TIOP compliance scheme to address "the concern that natural fluctuations could impact the level of impingement mortality and entrainment at a given facility over time."[146] But by combining performance ranges with the TIOP provision, EPA has effectively reduced the performance required of a facility below the bottom of the range. The resulting drop in standards is precipitous: Despite acknowledging that closed-cycle cooling reduces entrainment by up to 98 percent, EPA based the Rule on alternate technologies that it found achieve only 80 to 90 percent reductions, then expressed the standard as a

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[144] *National Black Media,* 791 F.2d at 1024.

[145] *Waterkeeper*, 399 F.3d at 503 (finding "unacceptable" EPA rule that limits citizens to enforcing the "mere requirement to develop a nutrient management plan" rather than the terms of those plans).

[146] 69 Fed. Reg. at 41,614/1 (SPA 213).

range that requires no more than 60 percent, and allowed the facility's compliance to be measured only against a technology plan *designed* to achieve 60 percent, even if actual performance is lower.

The TIOP thus provides an unauthorized second level for margin of error in measuring compliance. As this Court explained in *Riverkeeper*, once EPA makes clear in the regulation what reasonable margin of error it is willing to tolerate, it is inappropriate to allow an additional margin of error below that benchmark.[147] The TIOP therefore further violates the CWA's requirement that EPA set precise single-level limitations based on the best technology available, and constitutes an abuse of EPA's discretion to set a given tolerance for variability and measuring error.

In reality, the performance ranges are a subterfuge through which EPA can cite the top of the ranges to tout the Rule as sufficiently protective, while simultaneously allowing permit writers to approve permits with significantly lower standards and no meaningful compliance mechanism. If, as EPA found, intake screen technologies can, in fact, achieve reductions in fish kills near the top end of the performance ranges, the Agency exceeded its authority by failing to require all facilities to maximize performance within the ranges and face penalties for falling

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[147] 358 F.3d at 189 n.16.

below them.[148]

Consequently, this Court should vacate the Phase II Rule or, in the alternative: (1) determine that section 316(b) requires facilities to achieve the greatest possible reduction within the ranges; and (2) vacate the TIOP provision.

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[148] Alternatively, if EPA considers the performance of intake screens, nets and similar devices to be so uncertain and unreliable that it cannot require compliance within a reasonable margin of error of the performance achieved by the "best performer," then its BTA decision is arbitrary and capricious because it lacks a "rational connection between the facts found and the choice made." *See State Farm*, 463 U.S. at 42.

POINT III

EPA EXCEEDED ITS AUTHORITY BY ALLOWING COMPLIANCE WITH CWA SECTION 316(b) THROUGH RESTORATION MEASURES

The Rule allows facilities to impinge and entrain an unlimited number of aquatic organisms, provided they take other steps – referred to as "restoration measures" – to restore the ecology of the surrounding waters.[149] As this Court held in *Riverkeeper*, allowing compliance with section 316(b) through restoration measures "is plainly inconsistent with the statute's text and Congress's intent passing the 1972 amendments."[150] By the same reasoning, EPA exceeded its statutory authority by allowing Phase II facilities the option of undertaking restoration instead of installing the intake structure technologies EPA itself identified as the best available for minimizing adverse environmental impact.

The Rule's restoration option is substantially identical to the one remanded in *Riverkeeper*. Both rules allow the same types of measures (*e.g.*, improving habitat, stocking fish from a hatchery, or reducing pollutants in the watershed) in full or partial satisfaction of a facility's section 316(b) obligations, provided they

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[149] 40 CFR § 125.94(c) ("With the approval of the Director, you may implement and adaptively manage restoration measures that produce and result in increases of fish and shellfish in your facility's watershed in place of or as a supplement to installing design and control technologies and/or adopting operational measures that reduce impingement mortality and entrainment.")

[150] 358 F.3d at 189.

meet the same criterion (*i.e.*, that the measures produce fish and shellfish in the waterbody at a level substantially similar to that which would be achieved by meeting the technology-based limits).[151]

In the Phase II preamble, EPA states its belief that the portion of the *Riverkeeper* decision that went against the Agency "should not apply to th[e] Phase II rulemaking."[152] This and other legal arguments in support of restoration were obviously added during the 13-day interval between this Court's February 3, 2004 issuance of the *Riverkeeper* decision and the Administrator's February 16, 2004 signing of the final Phase II Rule.[153] Attempts by EPA's counsel to develop new

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[151] Compare Phase I (66 Fed. Reg. at 65,280-81 (SPA 855-56); 40 C.F.R. § 125.86(c)(2)(ii); *Riverkeeper*, 358 F.3d at 189) with Phase II (69 Fed. Reg. at 41,609, 41,627 (SPA 208, 226); 40 C.F.R. § 125.94(c)(2)). The Phase I Rule's preamble listed water pollution control measures among the types of restoration. 66 Fed. Reg. at 65,280/3 (*e.g.*, reducing agricultural runoff) (SPA 855). The Phase II Rule's preamble, while less specific on that point, can also be construed to include such pollution control within restoration's "wide range of activities including measures to … reduce stresses on aquatic life." 69 Fed. Reg. at 41,627/2 (SPA 226).

[152] 69 Fed. Reg. at 41,628/1 (SPA 227); *see also id.* at 41,628/2 ("EPA believes the Second Circuit decision is not binding on th[e] Phase II rule.") However, EPA cited *Riverkeeper* with approval at least seven other times in the preamble, indicating its belief that the decision is binding, at least when convenient for the Agency. *See, e.g.,* 69 Fed. Reg. at 41,582, 41,583, 41,626, 41,629, 41,630. (SPA 181, 182, 225, 228, 229)

[153] *See, e.g.,* 69 Fed. Reg. at 41,627-629 ("Authority to Allow Restoration") (SPA 226-28).

rationales in response to the Phase I litigation should be summarily rejected as "nothing more than an agency's convenient litigating position."[154] This is particularly true because, as explained below, EPA's litigating position once again contradicts the Agency's own findings made during the rulemaking.[155]

EPA attempts to distinguish *Riverkeeper* on the basis that the Phase I Rule was issued pursuant to sections 306 and 316(b), while the Phase II Rule was issued pursuant to sections 301 and 316(b).[156] However, the *Riverkeeper* decision was based squarely on section 316(b)'s text and on Congressional intent in enacting the entire technology-based NPDES program, not section 306. *Riverkeeper* applies here because the Rule's restoration measures provision is equivalent to that in the Phase I Rule,[157] the statutory provision is the same,[158] and therefore, as explained

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[154] *Bowen v. Georgetown Univ. Hosp.*, 488 U.S. 204, 213 (1988) ("Deference to what appears to be nothing more than an agency's convenient litigating position would be entirely inappropriate."); *see also State Farm*, 463 U.S. at 50 ("the courts may not accept [ ] counsel's post hoc rationalizations for agency action").

[155] *See Riverkeeper*, 358 F.3d at 190 ("We think the EPA's own findings reveal that restoration measures are inconsistent with Congress's intent.")

[156] 69 Fed. Reg. at 41,628/2-3 (SPA 227).

[157] Although EPA argues that Phase II adds "additional regulatory controls," it identifies only a token threshold requirement that installing technology be "less feasible, less cost-effective, *or* less environmentally desirable" than restoration. 69 Fed. Reg. at 41,627/3 (emphasis added) (SPA 226). This so-called "regulatory control" is meaningless because technology is either feasible (capable of being

herein, the same analysis obtains.

A. Restoration Measures are Plainly Inconsistent with the Text of Section 316(b).

Section 316(b) requires EPA to regulate (1) the "location, design, construction, and capacity of cooling water intake structures" (2) to minimize their adverse environmental impact. Restoration measures contradict the statute in both respects.

1. Restoration Measures are Unrelated to the Location, Design, Construction, or Capacity of Cooling Water Intake Structures.

The Phase II Rule contravenes section 316(b) because off-site ecological improvement activities – such as enhancing fish habitat and migration, reducing pollution discharges, or creating a fish hatchery – are wholly unrelated to the "location," "design," "construction," or "capacity" of cooling water intake structures. In 1976, EPA defined "design" as "the arrangement of elements that make up the cooling water intake structure,"[159] which is a natural reading of that

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accomplished) or it is not. "Less feasible" means only that something else is more convenient for the applicant. Likewise, since businesses generally seek to minimize costs, allowing restoration when it is more "cost-effective" simply means that such measures are permitted whenever a facility chooses.

[158] While the *Riverkeeper* decision did not necessarily "predetermine the factors and standard applicable to Phases II and III of the rulemaking," it noted that "one standard is applicable to new and existing structures." 358 F.3d at 186 n.13.

[159] 41 Fed. Reg. 17,387, 17,390/1 (April 26, 1976) (SPA 726).

term. Twenty-five years later, in promulgating the Phase I Rule, EPA claimed to reinterpret the term "design" of cooling water intake structures to encompass restoration measures.[160] An "agency interpretation of a relevant provision which conflicts with the agency's earlier interpretation is 'entitled to considerably less deference' than a consistently held agency view."[161] Indeed, this Court specifically rejected EPA's irrational new construction of that term in *Riverkeeper*, finding that restoration measures are completely distinct from intake structures and the four aspects of their technology referenced in the statute:

> Reclaiming abandoned mines to reduce acid mine drainage into the waterbody, removing barriers to fish migration, and creating buffers to reduce destructive runoff from agricultural lands … *have nothing to do with the location, the design, the construction, or the capacity of cooling water intake structures, because they are unrelated to the structures themselves*.[162]

In the Phase II preamble, EPA once again posits that off-site ecological

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[160] 66 Fed. Reg. at 65,315/1 (SPA 890).

[161] *I.N.S v. Cardoza-Fonseca*, 480 U.S. 421, 446 n.30 (1987), quoting *Watt v. Alaska*, 451 U.S. 259, 273 (1981); *see also General Electric Co. v. Gilbert*, 429 U.S. 125, 143 (1976) ("We have declined to follow administrative guidelines in the past where they conflicted with earlier pronouncements of the agency.")

[162] *Riverkeeper*, 358 F.3d at 189 (emphasis added). The Court also found that "the word 'design' can reasonably be read to embrace the methods used in running a structure as well as its physical layout and technical specifications." *Id.* at 198.

restoration falls within the "design" of intake structures.[163] But simply repeating the interpretation this Court rejected does not, of course, change the plain meaning of the statute.

EPA further argues that the word "reflect" in section 316(b) indicates:

> that the choice of what actually is the best physical configuration of a particular cooling water intake structure can take into account, *i.e.*, reflect, other technologies – and their effects – that are not incorporated into the structure itself.[164]

But these semantic gymnastics would render much of the text of section 316(b) completely superfluous. If Congress meant, as EPA appears to argue, that no protective technology whatsoever is required for an intake structure in light of the success of other activities, it would not have needed to use the words "location, design, construction, and capacity of cooling water intake structures" at all. It could have simply directed EPA to ensure suitable populations of fish. Rather, consistent with the principle that technology standards regulate pollution at its source, Congress mandated best technology for four specific aspects of cooling water intake structures, and, of course, it is well-settled that "[s]tatutes must be

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[163] 69 Fed. Reg. at 41,637/3 (SPA 236).

[164] *Id.* at 41,628/3 (SPA 227). EPA's claim that this Court, in *Riverkeeper*, did not consider the meaning of the term "reflect" (*id.*) is simply wrong. In that case, industry unsuccessfully suggested the same construction of "reflect" that EPA posits now. *See* Suppl. Brf. of UWAG, May 5, 2003, case no. 02-4005, at 10. (JA/Supp 622).

interpreted, if possible, to give each word some operative effect."[165]

Congress's specification in section 316(b) of those four aspects of intake structure technology stands in stark contrast to section 316(a) in which it focused on "the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on that body water." "Where Congress includes particular language in one section of a statute but omits it in another section of the same Act, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion."[166]

In the Phase I litigation, Environmental Petitioners cited *Whitman v. American Trucking Associations*[167] to explain why courts may not construe "modest words" – like "design" – to make major policy changes in a statute: "Congress, we have held, does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions – it does not, one might say, hide

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[165] *Walters v. Metropolitan Educ. Enterprises, Inc.*, 519 U.S. 202, 209 (1997)(citations omitted); *see also Babbitt v. Sweet Home Chapter of Communities*, 515 U.S. 687, 698 (1995) ("reluctance to treat statutory terms as surplusage").

[166] *Riverkeeper*, 358 F.3d at 190, citing *Bates*, 522 U.S. at 29-30.

[167] 531 U.S. 457 (2001).

elephants in mouseholes."[168] Likewise, here, it is beyond plausibility that Congress could have intended the word "reflect" to change the fundamental nature of technology-based standards, *i.e.*, that they "predicate[] pollution control on the application of control technology on the plants themselves"[169] to directly address impacts "at their source."[170] Congress did not hide the "restoration" elephant in the "design" or "reflect" mouseholes.

Significantly, the Rule itself acknowledges the difference between restoration and the types of technologies that are expressly contemplated by section 316(b)'s use of the words "design" and "construction":

> *Design and construction technology* means any physical configuration of the cooling water intake structure, or a technology that is placed in the water body in front of the cooling water intake structure, to reduce impingement mortality and/or entrainment. … *Restoration measures are not design and construction technologies for purposes of this definition.*[171]

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[168] *Id.* at 468 (rejecting claim that the words "adequate margin" and "requisite" meant EPA was to consider compliance costs in setting national ambient air quality standards under the Clean Air Act); *see also Garcia v. United States*, 469 U.S. 70, 75 (1984) (requiring "the most extraordinary showing of contrary intentions" to disregard the plain meaning of a statutory provision).

[169] *Hooker,* 537 F.2d at 623.

[170] *Bethlehem*, 538 F.2d at 515.

[171] 40 C.F.R. § 125.93 (emphasis added); *see also* 69 Fed. Reg. at 41,629/1 ("Restoration is not included in the definition of 'design and construction technology' in today's rule so as to distinguish restoration from 'hard' technologies for purposes of the rule.") (SPA 228).

Because restoration measures are not intake structure technologies, they can not be BTA under section 316(b).

2. Restoration Measures Do Not Minimize Adverse Impacts.

Restoration measures are also inconsistent with section 316(b)'s text because they do not *minimize* the adverse environmental impacts of impingement and entrainment; rather, they allow such impacts to occur and attempt to compensate for them by facilitating the creation of biota similar to the destroyed organisms. These are distinct concepts.

a. The Plain Language of "Minimization" Does Not Include "Compensation."

In the Phase I Rule, EPA defined minimize as "to reduce to the smallest amount, extent, or degree reasonably possible,"[172] which is consistent with the common understanding of that term.[173] By contrast, "restore" means "to bring back to a previous or original condition."[174] Consequently, in *Riverkeeper*, this Court agreed that the difference between such approaches render restoration

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[172] 40 C.F.R. § 125.83.

[173] *See Webster's New World Dictionary of the American Language*, Second College Edition, p. 905 ("min•i•mize 1. to reduce to a minimum; decrease to the least possible, degree, etc.") (Supp 8).

[174] *Id.* at 1212.

measures inconsistent with the statute's "minimization" requirement:

> Restoration measures correct for the adverse environmental impacts of impingement and entrainment; they do not minimize those impacts in the first place.[175]

In an Orwellian attempt to redefine the statute's plain meaning, EPA claims in the Phase II preamble to reinterpret "minimize" to include both concepts: either "reducing" impacts or "compensating for those impacts after the fact."[176] This reinterpretation of "minimize" (which, unlike Phase I, is contained within the preamble, not the Rule itself) should be given no weight because it "conflicts with the agency's earlier interpretation" of the same term in Phase I.[177]

Moreover, changes in agency position must be supported by "reasoned analysis,"[178] which is sorely lacking here. EPA's claim that the Act does not "explicitly state *when* the adverse environmental impacts of cooling water structures must be minimized"[179] is nonsensical because the plain meaning of "minimize" (in contrast to "restore" or "compensate") requires prevention rather

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[175] 358 F.3d at 189.

[176] 69 Fed. Reg. at 41,628/2 (SPA 227).

[177] *Cardoza-Fonseca*, 480 U.S. at 446 n.30.

[178] *State Farm,* 463 U.S. at 42.

[179] 69 Fed. Reg. at 41/628/2 (emphasis added) (SPA 227).

than after-the-fact attempts at correction. EPA may not define a term in a manner contrary to its plain meaning, and because the text is unambiguous, EPA is entitled to no deference under *Chevron*.[180] Deference is especially inapposite here because EPA's new legal rationale first emerged in response to the *Riverkeeper* litigation.[181]

EPA's out-of-context quote of a single sentence from a subsection of the CWA section 404 "Guidelines"[182] to argue that EPA has, in an entirely separate regulatory program, interpreted minimize to include restoration is unpersuasive.[183] To the contrary, EPA's own Memorandum of Agreement on implementing the section 404 Guidelines demonstrates that "minimization" and "compensation" are distinct types of mitigation that must be implemented in sequence.[184]

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[180] Determining Congress' intent "begins with the statute's language ... [and] where the statutory language provides a clear answer, it ends there as well." *Hughes Aircraft Co. v. Jacobson*, 525 U.S. 432, 438 (1999) (citations omitted); *see also Regions Hospital v. Shalala*, 522 U.S. 448, 457 (1998) (if traditional tools of statutory construction reveal Congress' intent is clear, that is the end of the matter).

[181] *See Bowen*, 488 U.S. at 213 (1988).

[182] 69 Fed. Reg. at 41628/3, citing 40 C.F.R. § 230.75 (SPA 227).

[183] In the Phase I litigation, industry likewise cited section 404, unsuccessfully, in defense of restoration. *See* Suppl. Brf of UWAG at. 6-9 (Supp 618).

[184] *See* MOA Between the Department of the Army and the Environmental Protection Agency: The Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines (Feb. 6, 1990) at §§ II.A, II.C ("The Corps … first

b. EPA's Own Findings Demonstrate that Minimizing Impact Requires Minimizing Impingement and Entrainment.

EPA has interpreted the object of the minimization, *i.e.*, adverse environmental impact, "as the loss of aquatic organisms due to impingement and entrainment,"[185] and explicitly rejected proposals to define such impact at the population, community or ecosystem levels. Consequently, EPA based the Rule's requirements "on reducing the number of organisms impinged and entrained."[186] As the preamble explains:

> As in the Phase I rule, EPA is setting performance standards for minimizing adverse environmental impact based on … reduction of impingement mortality and entrainment. … EPA has chosen this approach because impingement and entrainment are *primary, harmful environmental effects that can be reduced through the use of specific technologies*. In addition, where other impacts at the population,

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makes a determination that potential impacts have been *avoided* to the maximum extent practicable; remaining unavoidable impacts will then be mitigated to the extent appropriate and practicable by requiring steps to *minimize* impacts and, finally, *compensate* for aquatic resource values.") (emphasis added) (Supp 132); *see also* 40 C.F.R. § 1508.20 (defining "minimization" and "compensation" as two different mitigation strategies); *see also* 40 C.F.R. § 230.10(a) (prohibiting wetland fills and restoration if available alternatives exist).

[185] 69 Fed. Reg. 41,612/1 (SPA 211); *id.* at 41,611-612; *see also* RTC 011.004 ("Consistent with the Phase I New Facility Rule, EPA believes that it is reasonable to interpret the minimization of adverse environmental impact as minimizing the loss of aquatic organisms due to impingement and entrainment. … EPA does not view adverse environmental impact as limited to demonstrated community or population level effects.") (JA 3208).

[186] RTC 323.002 (JA 3502).

> community, and ecosystem levels exist, these will also be reduced by reducing impingement and mortality.[187]

This Court agreed with that approach in Phase I: "We think that the EPA's focus on the number of organisms killed or injured by cooling water intake structures is eminently reasonable."[188] In contrast, "EPA [acknowledges] that restoration measures can entail a number of uncertainties"[189] and that "many of these activities do not produce measurable results for many months or years after they are implemented."[190] In fact, habitat restoration is often impermanent and prone to failure.[191] Even if successful in their limited aims, restoration techniques

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[187] 69 Fed. Reg. at 41,600/2; *see also id.* at 41,598/3 ("EPA used impingement mortality and entrainment as a metric for performance because these are primary and distinct types of harmful impacts associated with the use of cooling water intake structures.") (SPA 199, 197).

[188] *Riverkeeper,* 358 F.3d at 196.

[189] RTC 306.055 (JA 3426).

[190] 67 Fed. Reg. at 17,147/3. (SPA 68).

[191] "EPA also acknowledges that, historically, performance of restoration projects in general has been mixed." RTC 306.055 (JA 3426). The National Resource Council has found that "there is a substantial net loss in wetland area from [the] wetlands permitting program. In terms of the ecological equivalency of these wetlands, there is a low value of the wetlands actually built." *Compensating for Wetland Losses Under the Clean Water Act* (DCN 4-4020; JA 1448). The U.S. Fish and Wildlife Service has also explained that restored areas "may revert back" to their previous state, (DCN 3-3062-R5; JA 602), and another study in the record noted "various degrees of success" in creating tidal marsh (DCN 4-1377; JA 1092).

have no practical ability to replace the full range of aquatic organisms killed by cooling water intakes.[192] Moreover, releasing hatchery-reared fish into the wild threatens the health of existing fish populations,[193] and creating habitat for some species often destroys existing habitat for other species.[194]

Because restoration does nothing to reduce what EPA considers the "primary, harmful environmental effects [of intake structures],"[195] the Rule's restoration provision does not "minimize" adverse environmental impact as required by section 316(b).

B. Restoration Measures are Plainly Inconsistent with Congress's Intent in Passing the 1972 CWA Amendments.

Because restoration measures are based on an assessment and determination

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[192] Although intake structures harm the full spectrum of aquatic biota, 66 Fed. Reg. at 65,262-263, the Rule requires replacement of only fish and shellfish, and even then "measures such as stocking and fish ladders provide benefits for much more limited number of species and life stages." 67 Fed. Reg. at 17,148/2 (SPA 837-38, 29).

[193] 67 Fed. Reg. at 17,148/2 ("fish stocking programs might introduce disease or weaken the genetic diversity of an ecoystem."); 67 Fed. Reg, at 17,191 ("ecological problems associated with introducing hatchery fish into wild populations") (SPA 79, 72).

[194] *Id.* at 17,148/2 (recognizing the potential of restoration to "compromise the health of already existing aquatic organisms in order to restore [other] aquatic organisms.") (SPA 29).

[195] 69 Fed. Reg. at 41,600/2 (SPA 199).

of a particular facility's effects on fish populations and the aquatic ecosystem, they "resemble the pre-1972 approach to water pollution" and contravene Congress's clearly-expressed intent in passing the 1972 amendments to the Act.[196]

1. Restoration Measures Involve Unbridgeable Causal Gaps.

The Rule requires permit writers to conduct complex ecological fact-finding. If an applicant chooses restoration – such as removing barriers to fish migration or reducing polluted runoff – instead of installing technology to prevent fish kills, the permit writer must determine whether the measures will:

> produce ecological benefits (fish and shellfish), including maintenance or protection of community structure and function in [the] facility's waterbody or watershed, at a level that is substantially similar to the level [the facility] would achieve by meeting the applicable performance standards.[197]

Evaluating such ecological effects involves correlational difficulties similar to, and possibly more severe than, the pre-1972 approach to water pollution control. Unlike measuring impingement and entrainment, which is a "quick, certain, and consistent metric for determining performance,"[198] restoration requires (1)

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[196] *Riverkeeper*, 358 F.3d at 189-90; *see also id.* at 196 ("Congress rejected a regulatory approach that relies on water quality standards, which is essentially what … focusing on fish populations and consequential environmental harm [entails].").

[197] 40 C.F.R. § 125.94(c)(2).

[198] 69 Fed. Reg. at 41,586/1 (SPA 185).

assessing the effect of the intake structure on local ecology; (2) assessing the effect of the restoration measures; and (3) comparing those two sets of effects.

Furthermore, because the Rule allows "out-of-kind restoration" – *i.e.*, "the species makeup of the replacement fish and shellfish may not be exactly the same as that of the impingement mortality and entrainment losses"[199] – facilities may propose measures to produce different species of fish than they kill, and permit writers must make a "qualitative" determination that "these ecological benefits are substantially similar to or greater than those that would be realized through in-kind restoration, because different species are being produced that may not be directly comparable."[200] Other than saying that such determination must be "based on a watershed approach to restoration planning"[201] – which entails assessment of a vast geographical area[202] – the Rule gives no guidance on how to accomplish this monumental task.

In evaluating restoration, a short list of questions with which permit writers will have to contend include: Which species and what population levels would

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[199] *Id.* at 41,609/3 (SPA 208).

[200] *Id.* at 41,638/3 (SPA 237).

[201] *Id.* at 41,609/3 (SPA 208).

[202] *Id.* ("For example, in coastal systems that support migratory fish, a coastal waterbody that transects a number of watersheds may be the most appropriate unit for planning restoration.").

inhabit the waterbody if impingement and entrainment were controlled in accordance with the performance standards? What ecological functions do these organisms serve in the waterbody or watershed? Will proposed restoration measures be successful in their initial purpose, *i.e.,* will they effectively restore habitat or improve water quality? If successful, what population levels of which species would the improved habitat or water quality be expected to produce? How do populations of newly-generated fish and shellfish compare quantitatively and qualitatively to those destroyed by the intake structure? Will the resulting ecology of the waterbody, including "maintenance or protection of community structure and function," be substantially similar?

Given the thousands of links within the aquatic food chain, these restoration determinations will require extraordinarily burdensome and unreliable assessments of complicated biological interactions.[203] Such studies would be very difficult even if unlimited time and resources were available, but reliably conducting them in the context of an individual permitting proceeding (and there are 543 large power plants subject to the Rule) would be virtually impossible. As a result, the entrainment and impingement will continue unabated, and the true effect of

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[203] *See, e.g.*, Boreman, *Surplus Production, Compensation, and Impact Assessments of Power Plants*, Environmental Science & Policy 3 (2000) (DCN 6-1068) (depicting thousands of species links within the Atlantic food web) (JA 2391).

restoration will remain unknown.

2. EPA's Findings Reveal the Correlational Difficulties in Assessing Ecological Effects of Intakes and Restoration.

EPA acknowledges that "restoration measures … require complex and lengthy planning, implementation, and evaluation of the effects of the measures on the populations of aquatic organisms or the ecosystem as a whole."[204] It also admits the substantial imprecision involved:

> Because of the complexity of biological studies, it is *very difficult to assess the cause and effect of cooling water intake structures on ecosystems or on important species within an ecosystem*. An overwhelming majority of scientists have stated that biological studies can take multiple years because of the complex nature of biological systems. Moreover, unlike in the laboratory, where conditions are controlled, a multitude of confounding factors *make biological studies very difficult to perform and make causation, in particular, difficult to determine*.[205]

In *Riverkeeper*, this Court reviewed these findings and determined that "EPA's own findings reveal that restoration measures are inconsistent with Congress's intent that the 'design' of intake structures be regulated directly, based on the best technology available, and without resort in the first instance to water quality measurements."[206]

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[204] 66 Fed. Reg. at 65,314/3 (SPA 889).

[205] *Id.* at 65,285/2 (emphasis added)(SPA 860).

[206] 358 F.3d at 190.

In the Phase II rulemaking, EPA has reconfirmed that ecological science cannot reliably assess restoration:

> EPA recognizes that, due to data and modeling limitations as well as the uncertainty associated with restoration measures such as creation of new habitats to serve as spawning or nursery areas, it may be difficult to establish quantitatively that some measures adequately compensate for entrainment and impingement… The success of many approaches to restoration *depends on the functions, behavior, and dynamics of complex biological systems that are often not scientifically understood as well as engineered technologies*.[207]

> Damage on the community or population level is extremely difficult to quantify and attribute to a particular cooling water intake structure given the vast number of environmental factors and anthropogenic factors which work concurrently on fisheries at that organizational level. It is difficult to isolate the effect of a single factor. … Because of these simultaneously-occurring factors, *the determination of a change in a population that is directly attributable to the operation of a cooling water intake structure may prove to be very difficult*.[208]

These findings stand in stark contrast to EPA's conclusions regarding technology to reduce fish kills at their source: "EPA has selected reductions in impingement and entrainment as a quick, certain, and consistent metric for determining performance at Phase II existing facilities."[209] Thus, EPA's own

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[207] 67 Fed. Reg. at 17,147/2 (emphasis added) (SPA 28).

[208] RTC 011.004 (emphasis added) (JA 3208).

[209] 69 Fed. Reg. at 41,586/1; *see also id.* at 41,600/2 ("As in the Phase I rule, EPA is setting performance standards for minimizing adverse environmental impact based on a relatively easy to measure and certain metric – reduction of impingement mortality and entrainment.") (SPA 184, 199).

conclusions again show why restoration does not satisfy section 316(b).

3. State Agencies Lack the Resources and Expertise to Assess the Biological Effects of Power Plants During Permitting.

The history of case-by-case section 316(b) permitting demonstrates that, in practice, biological studies obstruct permitting. For example, New York State officials have informed EPA of the "potentially endless, expensive studies that usually yield ambiguous or debatable results … because it is impossible to identify, measure, and attribute the impact of each the many variables affecting populations on each of the impacted species."[210] In commenting on the Phase I Rule, New Jersey explained that:

> State agencies and permitting authorities could engage in a debate for years as to the population measure of a given fish species, let alone many fish species. The results of biological population studies and modeling can be very subjective because it is difficult to identify, measure, and attribute the impact of each of the many variables…affecting populations of the impacted species.[211]

And Michigan's "experience indicates that studies of the effects of cooling water intake structures on the receiving water fisheries are extremely difficult to do and

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[210] Statement of NYS Dept. of Env. Cons., June 29, 1998, at 1 (DCN 1-5025-PR) (JA 257).

[211] Letter of NJ Dept. of Env. Prot., Nov. 9, 2000, at 4 (DCN Comment 1.54) (JA 623).

the results are difficult to interpret." [212]

In commenting on the Phase II Rule, States again informed EPA that they lack the resources and expertise to conduct biological studies in permitting:

> The expertise to address this issue [*i.e.*, whether the restoration efforts undertaken have achieved "substantially similar performance"] may not be readily available in delegated states charged with implementing these regulations, and the breadth of information one needs to make this kind of determination could lead to widely varying decisions across the nation.[213]

In the face of these insurmountable difficulties, the Rule gives permit writers license to eschew the technology requirements for quixotic attempts at compensation. They will undoubtedly face substantial pressure to approve restoration, given industry's great enthusiasm for that approach. This will sanction substantial aquatic mortality and engender a new "race to the bottom" squarely at odds with the result intended by Congress.

In *Riverkeeper*, this Court held that allowing compliance with section 316(b) through restoration measures "is plainly inconsistent with … Congress's intent in

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[212] Email from Michigan Dept. of Env. Qual., Jan. 24, 2002 (DCN 4-0049) (JA 1068).

[213] Letter of NYS Dept. Env. Cons., Oct. 2002, at 2-3 (DCN PublicComment 2.012); *see also* Comments of Louisiana Dept. of Env. Qual., Aug. 9, 2002, ("Existing permit writers do not have the experience to evaluate and review the biological data being submitted.") (DCN PublicComment 2.001) (JA 4069).

passing the 1972 amendments" because that approach "resemble[s] the pre-1972 approach to water pollution, which regulated point sources based on their effect on the surrounding water."[214] Recognizing that section 316(a) is the lone exception to the Act's prohibition against considering water quality to relax technology standards, the Court found that Congress prohibited such an approach under section 316(b).[215] For the same reason, the Phase II Rule's restoration provision is likewise unauthorized.

C. EPA's 1982 Interpretation of its Authority was Correct, and the Agency Lacks the Reasoned Analysis Required to Change Position.

Notably, EPA itself testified before Congress that section 316(b) prohibits restoration measures.[216] In 1982, EPA unsuccessfully recommended that Congress amend section 316(b) because "[t]he existing statutory language is very restrictive in that it authorizes only one option, best technology available to mitigate such [entrainment] problems."[217] The amendment EPA proposed would have allowed

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[214] 358 F.3d at 189.

[215] *Id.* at 190-191, citing *Weyerhaeuser*, 590 F.2d at 1043.

[216] *See Clean Water Act Amendments of 1982: Hearings on S. 777 & S. 2652 Before the Subcomm. on Envtl. Pollution of the Comm. on Env't and Pub. Works, U.S. Senate*, 97th Cong., 2d Sess. (1982) (testimony of Dr. John W. Hernandez, Jr., EPA Deputy Administrator) ("*Hearings*") (SPA 1408).

[217] *Id.* at 114 (SPA 1417).

"dischargers to use measures *equal in effect* to the best technology available."[218] For example, EPA suggested that a "utility could construct and operate a fish hatchery to replace those fish lost as a result of the operation of its plant."[219]

In *Riverkeeper*, this Court found that EPA's 1982 understanding of its statutory authority was correct and since the statutory language cannot have "a different plain meaning than it once did," the Agency lacked the "reasoned analysis" necessary for a change in position.[220] Since "EPA has always favored restoration measures" the only change was its "new-found belief" in its authority to allow them as BTA.[221]

In the 13-day period following the *Riverkeeper* decision, EPA added new language to the Rule's preamble, in which it contends that this Court gave "undue weight" to the 1982 testimony because it preceded *Chevron*, which, it argues, "gave administrative agencies latitude to fill in the gaps created by ambiguities in

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[218] *Id.* at 113. (SPA 1416) The proposed amendment would have added to section 316(b) text allowing "other equally effective measures [to] be applied either alone, or in combination with best available technology to minimize adverse environmental impacts.") S. 2652, 97th Cong. § 11(b) at 318-19 (1982) (SPA 1419-20).

[219] *Hearings* at 114 (SPA 1417).

[220] 358 F.3d at 191 n.18, citing *State Farm,* 463 U.S. at 42.

[221] *Id.*

statutes."[222] But this argument ignores the fact that, in *Riverkeeper*, the Court applied the *Chevron* test and rejected restoration measures as "plainly inconsistent with the statute's text and Congress's intent passing the 1972 amendments."[223] Having failed to convince Congress or this Court, EPA is now attempting to circumvent two branches of government by authorizing restoration in the Phase II Rule.

Absent authorization from Congress, the Rule's restoration provisions must be set aside. "It goes without question that an agency of the Federal Government is only empowered to act within the statutory guidelines establishing its power and that any action exceeding its statutory authority is void."[224]

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[222] 69 Fed. Reg. at 41,629/2 (SPA 228).

[223] 358 F.3d at 184, 189.

[224] *Tenaska Washington Partners II, L.P. v. United States*, 34 Fed. Cl. 434, 440 (Ct. Cl., 1995), citing *Office of Personnel Mgmt. v. Richmond*, 496 U.S. 414, 424 (1990).

POINT IV

EPA EXCEEDED ITS AUTHORITY BY ALLOWING A SITE-SPECIFIC DETERMINATION OF BTA BASED ON A COST-BENEFIT ANALYSIS

The Rule allows any facility to elect a site-specific determination of the best technology available. Under section 125.94(a)(5)(ii), cooling water intake structure limitations are to be based on a comparison of the "monetized" ecological benefits of installing protective technology at a particular facility to the costs.[225] This Cost-Benefit Variance, which was added by OMB shortly before formal proposal,[226] may result in a permit with reduced technology requirements or none at all.[227]

In *Riverkeeper*, this Court held that, because of the "virtually unbridgeable causal gap" involved in attempting to correlate the effect of a particular facility with surrounding water quality, Congress intended intake structures to "be

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[225] 40 C.F.R. § 125.94(a)(5)(ii) ("If the Director determines that data specific to your facility demonstrate that the costs of compliance … would be significantly greater than the benefits of complying with the applicable performance standards at your facility, the Director …. must establish site-specific alternative requirements … that achieve an efficacy that … [does not result] in costs that are significantly greater than the benefits at your facility.")

[226] *See* Proposal Changes Summary (DCN 4-4019) at 2 (Supp 495).

[227] 40 C.F.R. § 125.94(a)(5)(ii) ("The Director's site-specific determination may conclude that design and construction technologies … in addition to those already in place are not justified.").

regulated directly, based on the best technology available, and without resort in the first instance to water quality measurements."[228] The Cost-Benefit Variance is plainly inconsistent with Congress's intent in enacting the 1972 CWA amendments because it bases permitting on a complex assessment and "monetization" of each facility's effect on fish populations and aquatic ecosystems, which ecological science and economics cannot reliably accomplish.

A. Contrary to Congress's Intent, the Cost-Benefit Variance Bases Permitting on Site-Specific Assessment of Consequential Water Quality.

The pivotal component – and the Achilles heel – of the Cost-Benefit Variance is the Benefits Valuation Study.[229] In the final rule, EPA identified three categories of potential benefits that must be valued to govern the setting of permit requirements: commercial, recreational and ecological.[230] But EPA's own findings demonstrate that conducting a reliable benefits valuation of the kind contemplated by the Rule would be virtually impossible within the context of a NPDES permit proceeding.

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[228] 358 F.3d at 189-90 (noting that water quality "can be measured by wildlife levels [or] pollutant concentration.").

[229] 40 C.F.R. § 125.95(b)(6)(ii); 69 Fed. Reg. at 41,647/2 (SPA 246).

[230] 40 C.F.R. § 125.95(b)(6)(ii)(A); 69 Fed. Reg. at 41,598/1 (SPA 297).

1. Effects on Fish Populations Cannot Be Accurately Measured.

The Benefits Valuation Study requires quantification of the facility's effect on commercial and recreational fisheries.[231] But correlating reductions in impingement and entrainment with regional fishing yields is highly speculative. Permit writers would have to predict, based on the quantity and life stages (*i.e.*, eggs, larvae, juvenile, adult) of each commercially- or recreationally-harvested fish or shellfish species that is impinged or entrained, the increase in "stock," *i.e.*, the total number of adult fish of each species that will be available to be caught by fishermen on the facility's waterbody, as well as the increase in "harvest," *i.e.,* the number and total pounds of such fish that will be actually landed, based on an assumed "stock-to-harvest" relationship.[232]

Such analyses would have to account for all of the interrelated factors that affect wildlife population levels, including climate, habitat, food sources, predator-prey relationships, pollution, and other human influences. As EPA found:

> Because of these simultaneously-occurring factors, the determination of a change in a population that is directly attributable to the operation

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[231] 67 Fed. Reg. at 17,149/3 (SPA 30).

[232] *See* 69 Fed. Reg at 41,659-660. A linear stock-harvest relationship assumes that, for example, a 13% increase in fish stock yields a 13% increase in fish landings, but the relationship can also be non-linear. *Id.* at 41,660/2 (SPA 258-59).

of a cooling water intake structure may prove to be very difficult.[233] Moreover, because of the great number of species involved – for example, 67 distinct fish species are known to be impinged and entrained in the North Atlantic region[234] – dozens of these difficult population assessments would have to be performed for each facility electing to proceed under section 125.94(a)(5)(ii).

As discussed above regarding restoration measures, fish population studies have hampered intake structure permitting in many States due to the "potentially endless, expensive studies that usually yield ambiguous or debatable results."[235] Moreover, commercially- and recreationally-harvested fish species comprise only 1.8 percent of the fish killed by intake structures.[236] The overwhelming majority of the mortality is to other ecological resources that are even more difficult to assess.

2. Effects on Larger Ecosystems Cannot Be Accurately Measured.

Impingement and entrainment harms many interrelated aspects of the environment, from phytoplankton to sea turtles, birds and marine mammals.[237]

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[233] RTC 011.004 (JA 3208).

[234] 68 Fed. Reg. 13,522, 13,550-551 (March 19, 2003) (SPA 136-37).

[235] See Point III, Section B.3. and footnotes 210-13, *supra*, quoting letters from NY, NJ, MI, LA.

[236] 69 Fed. Reg. at 41,660/3 (SPA 259).

[237] 66 Fed. Reg. at 65,262-263; 67 Fed. Reg. at 17,189/2 (SPA 837-38, 70).

The vast majority, 98.2 percent, of the aquatic organisms affected by intake structures are not harvested.[238] Some of these are endangered, threatened or other special species of concern. All of them contribute to the biological integrity and functioning of the intricate, diverse aquatic ecosystem.[239] Tracing the ripple effect of impinged and entrained organisms on this larger ecological community cannot be accomplished during permitting, as EPA acknowledges:

> [B]ecause of the complex nature of biological systems … a multitude of confounding factors make biological studies very difficult to perform and make causation, in particular, difficult to determine.[240]

As with restoration measures, EPA's own findings demonstrate that benefit valuation is inconsistent with the CWA's technology-based regulatory scheme. Congress's focus on technology standards in the 1972 amendments was an explicit repudiation of pre-1972 reliance on water quality measurements.[241] Congress deliberately established the NPDES program to relieve permitting agencies of the need to conduct these costly, lengthy, and indeterminate ecological studies to issue permits. As this Court explained in *Riverkeeper*, "Congress rejected a regulatory

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[238] 69 Fed. Reg. at 41,661/1 (SPA 260).

[239] *See, e.g.*, Boreman, *supra*, footnote 203, depicting species links within the aquatic food chain (JA 2391).

[240] 66 Fed. Reg. at 65,285/2 (SPA 860).

[241] *Riverkeeper,* 358 F.3d at 189, citing cases.

approach that relies on water quality standards, [such as] … focusing on fish populations and consequential environmental harm."[242] Therefore, like restoration measures, the Cost-Benefit Variance is "inconsistent with Congress's intent that the 'design' of intake structures be regulated directly, based on the best technology available, and without resort in the first instance to water quality measurements."[243] On that basis alone, the Cost-Benefit Variance should be vacated.

B. "Monetization" of Water Quality Impacts Introduces Further Insurmountable Problems of Proof, Which Are Antithetical to NPDES Permitting.

In addition, the Cost-Benefit Variance is unauthorized because it interposes a second unbridgeable causal gap on top of the water quality measurements. It requires permit writers, after quantifying commercial, recreational and ecological benefits, to "monetize" (*i.e.*, calculate the dollar value of) each benefit, to the extent feasible, using arcane natural resource economics methodologies and original "willingness-to-pay" studies.[244] But as EPA's own attempt at monetization showed, this effort will engender enormous controversy and paralyzing disputes, while yielding a flawed, biased calculation that significantly

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[242] *Id.* at 196.

[243] *Id.* at 190.

[244] 67 Fed. Reg. at 17,149-150; 69 Fed. Reg. at 41,647-648 (SPA 30-31, 246-47).

undervalues the ecology of natural waterbodies.

1. Water Quality Benefits Cannot Be Monetized, as EPA's Attempt Showed.

In the Phase II rulemaking, EPA – at the direction of OMB and E.O. 12866, rather than pursuant to any CWA mandate[245] – attempted to monetize the consequential ecological impacts of impingement and entrainment on a national level. As the record indicates, this exercise proved extraordinarily complicated, time- and resource-intensive, and controversial, and yielded drastically incomplete results.[246] Through OMB's monetization lens, EPA viewed the benefits of section 316(b) regulation as "categories of goods and services provided by the species affected by impingement and entrainment."[247] These included (1) "direct use" benefits of commercial fisheries (which are market commodities) and recreational angling ("nonmarket" goods); (2) "indirect use" benefits of forage fish that lead through the food web to enhance the biomass of species targeted for fishing; and (3) all of the ecological benefits, which EPA refers to as "non-use" values because

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[245] E.O. 12866, §1(b)(6) ("Each agency shall assess both the costs and the benefits of the intended regulation.") (SPA 1436).

[246] *See generally* EPA's extended discussions of its benefits analysis at 67 Fed. Reg. at 17,189-17,208 (proposal); 68 Fed. Reg. at 13,543-580 (NODA); 69 Fed. Reg. at 41,655-664 (final Rule) (SPA 70-89, 129-66, 254-63).

[247] 69 Fed. Reg. at 41,657/1 (SPA 256).

they are independent of human use of the resource.[248]

Despite, or perhaps because of, this clinical economic view of natural resources, EPA's benefits analysis was – by the Agency's own frequent admission – inaccurate and incomplete, and significantly undervalued the impacts of intake structures. This was particularly true with regard to ecosystem effects. In the end, despite considerable effort, EPA produced a cost-benefit analysis that compared *complete* costs to *partial* benefits.[249]

At proposal, EPA admitted that "its analysis is likely to lead to a potentially significant underestimate … of regulatory benefits" because of "considerable uncertainties" and factors left out of the analysis, such as:

- Facility-furnished biological monitoring data typically focus only a subset of the species impacted, thus underestimating total losses;
- EPA included in its estimates only the proportion of fishery losses that would have been caught by fishermen;
- EPA failed to consider the cumulative impacts of multiple facilities on the same fish population;
- Forage species, which account for the predominant share losses, are poorly documented and EPA failed to consider their "full ecological value" to the food web; and
- EPA failed to consider effects on invertebrates and fish-eating (piscivorous)

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[248] *Id.*

[249] 69 Fed. Reg. at 41,666/3 (SPA 265).

birds.[250]

EPA's proposed economic benefits analysis spurred an enormous amount of debate and controversy, both inside and outside of the Agency.[251] The Agency received many extensive, detailed, and critical comments, including letters from natural resource economists Frank Ackerman, Ph.D., of Tufts University and Robert Stavins, Ph.D., of Harvard. While they agreed on little else, both economists criticized the benefits analysis as suffering from "enormous methodological difficulties in complete valuation of the benefits of reducing cooling water intake requirements."[252] But even after substantially revising its methodology in a "Notice of Data Availability" (NODA), and then again for the final Rule, EPA was unable to accurately monetize *any* category of benefits, especially those relating to the larger ecosystem.

a. Effects on Fish Populations Cannot Be Accurately Monetized.

For commercial fishery benefits, EPA undertook a four-step valuation

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[250] 67 Fed. Reg. at 17,192-193 (including list of more than two dozen shortcomings in the benefits analysis) (SPA 73-74).

[251] *See* 68 Fed. Reg. at 13,543 (describing EPA's "numerous lengthy telephone conferences" and "series of memoranda" to respond to questions from all sides during the comment period) (SPA 129).

[252] Comment 1.104 (Ackerman) at 2; Comment 1.005 (Stavins); *see also* Comment 3.036 (further comments of Ackerman) (JA 3853, 3847, 4127).

process which involved estimating the "lost economic surplus," an economic concept that is defined as the sum of any changes in "producer surplus" and "consumer surplus" and depends on whether or not the increased fishery yields will affect market prices.[253] In the final Rule, EPA again listed "major uncertainties and assumptions" affecting its fishery analysis, including the failure to consider cumulative impacts and interactions with other "stressors" on fish populations.[254]

Valuing recreational fishing benefits proved even more imprecise. Because there is no market for recreational fish, EPA used so-called "random utility models (RUM) of recreational anglers' behavior, combined with benefit function transfer."[255] Both approaches "use information on recreational anglers' behavior to infer anglers' economic value for the quality of fishing."[256] But EPA was again forced to admit that because of "limitations and uncertainties," its estimates "may understate the benefits to recreational anglers."[257]

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[253] 69 Fed. Reg. at 41,659-660 (SPA 258-59).

[254] *Id.* at 41,660 (SPA 259)

[255] 69 Fed. Reg. at 41,658/2 (SPA 257).

[256] *Id.*

[257] *Id* at 41,659/1 (SPA 258).

b. Effects on Ecosystems Cannot Be Accurately Monetized.

As EPA admits, impingement and entrainment losses affect the aquatic ecosystem in many ways not addressed by typical valuation methods, "creating a gap between known disruption of ecological services and what economists usually translate into monetary values or anthropocentric motives."[258] These difficult-to-value ecological impacts include:

- Decreased local biodiversity;
- Disruption of predator-prey relationships;
- Disruption of age class structures of species;
- Disruption of natural selection processes;
- Disruption of ecological niches and strategies used by aquatic species;
- Disruption of carbon, nutrient and energy transfer through the food web; and
- Increased numbers of exotic or disruptive species.[259]

The controversy and imprecision involved in valuing these ecological functions is apparent from EPA's attempts. At proposal, EPA claimed that ecological value "can only be estimated in primary research through the use of stated preference techniques such as the contingent valuation method (CVM)."[260] To implement such studies, one must first consider "target population, sampling

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[258] Case Study Analysis for Proposed Rule ("Case Studies – Proposal") (DCN 4-0003) at A11-2 (JA 870).

[259] *Id.*

[260] Case Studies – Proposal at A9-10 (JA 869); "[S]tated preference methods rely on surveys, which ask people to state their willingness-to-pay for particular ecological improvements." 69 Fed. Reg. at 41,661/3 (SPA 260).

strategy, approximate sample size, [and] general survey design."[261] But because "no primary research was feasible within the budgeting, scheduling, and other constraints faced by the agency,"[262] EPA instead adopted a simplistic rule-of-thumb that non-use values would be equal to 50 percent of the estimated recreational fishing benefits.[263] In their comments, economists Ackerman and Stavins both found EPA's 50-percent rule "entirely inappropriate," but disagreed drastically as to the true value of the ecological benefits. Dr. Ackerman cited literature suggesting that improving water quality in all U.S. rivers and lakes to a fishable level is worth $20 billion in today's dollars, while Dr. Stavins suggested (without documentation) that non-use values might be close to zero in this case.[264]

EPA then abandoned its 50-percent rule and instead considered a variety of approaches for calculating non-use values for aquatic habitat improvements.[265] But in the final Rule, EPA encountered further difficulties and finally concluded that it was completely "unable to value the non-use benefits associated with this rule."[266]

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[261] *Id.* at 41,648 (SPA 247).

[262] Case Studies – Proposal at A9-10 (JA 869).

[263] 67 Fed. Reg. at 17,149 (SPA 30).

[264] PublicComment 1.104 (Ackerman) at 2 (JA 3853).

[265] 68 Fed. Reg. at 13,575-576 (SPA 161-62).

[266] 69 Fed. Reg. at 41,661/3 (SPA 260).

Consequently, EPA's final estimate of the Rule's economic benefits included *only* commercial and recreational fishing. Thus, despite considerable effort, the Agency "zeroed out" the most critical ecological benefits and valued the environment only according its price-per-pound at the fish market and bait shop. Given EPA's own estimate that a mere 1.8 percent of impinged and entrained organisms are harvested, the complete failure to value ecosystem impacts means that virtually none of the benefits were valued. EPA therefore included with the final Rule yet another bulled-pointed list of the deficiencies in its final benefits calculations.[267]

EPA was unable to monetize benefits despite that it had nine years to develop the Rule,[268] assigned nine full-time-equivalent (FTE) staff members, and spent approximately $3 million per year on contract services to support the rulemaking.[269] State agencies, which have far fewer resources, are even less equipped to conduct these economic analyses in permitting.

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[267] 69 Fed. Reg. at 41,662/2 (SPA 261) (for example, the benefits analysis did not "reflect reduced impacts to a variety of potential ecological and public services that are a function, in part, of healthy fish stocks and other organisms affected by cooling water intake structures.")

[268] From the consent decree in 1995 to promulgation in 2004.

[269] *See* EPA's January 18, 2005 Quarterly Status Report on the section 316(b) rulemaking (reporting 9.1 FTEs and $2.9 million contractual services in 2004), (Supp 757).

2. States Cannot Monetize Benefits During Permitting.

To value commercial fishing benefits, States will have to retain economists, assess regional fish market price data, and evaluate economic models on "producer surplus" and "consumer surplus," taking into account any price shifts due to increased supply. To value "forage fish" species, States will have to evaluate "trophic" transfer models.[270] To value "breeding stocks," states will have to assess of fish population dynamics.[271] To value recreational fishing, they will have to attempt something akin to EPA's "Random Utility Model" (RUM). For ecosystem benefits, they will have to conduct original "stated preference studies" or attempt a "benefits transfer" approach, which even EPA could not do.

In commenting on the Rule, State agencies explained their inability to perform these tasks, and the crippling effect the Cost-Benefit Variance would have on permitting. For example, New York State commented that the Cost-Benefit Variance "could effectively negate the value of the entire Phase II rule … [because] the task of placing an accurate dollar value on impacts to aquatic

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[270] 69 Fed. Reg. at 41,657/2 (SPA 256). The term "trophic" refers to the feeding habits or food relationship of different organisms in a food chain.

[271] *See* 69 Fed. Reg. at 41,660/1 (EPA acknowledging that its own analysis failed to account for the progeny of fish killed by impingement and entrainment and that "given the complexities of population dynamics, the significance of this omission is not clear.") (SPA 259).

resources is rife with ecological and economic challenges; there is no widely accepted methodology."[272] Likewise, California informed EPA of its "experience … that it is difficult to obtain agreement on costs and benefits. The result is a long series of arguments involving dueling cost/benefit analyses."[273]

Moreover, EPA itself acknowledges the impact on NPDES permitting:

> [S]ite-specific options … including a consideration of costs and benefits … increase the likelihood that each significant cooling water intake permitting issue would become a point of contention between the applicant and the permit writer, which EPA's experience indicates slows the permitting process.[274]

In fact, by electing the Cost-Benefit Variance, applicants can bring permitting to a grinding halt. EPA's naïve hope that "many, if not most, facilities will choose to comply with the presumptive standards"[275] is wholly unsupportable given that the electricity industry has long and vigorously championed site-specific approaches

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[272] Aug. 7, 2002 letter at 3-4 (PublicComment 1.038) (JA 4006).

[273] Aug. 5, 2002 letter at 4 (PublicComment 1.100); *see also* Aug. 7, 2002 letter of Atlantic States Marine Fisheries Commission at 1 ("state permitting agencies do not have the appropriate staff to evaluate … comprehensive cost-benefit analyses") (PublicComment 1.059) (JA 4063, 4051).

[274] 69 Fed. Reg. at 41,607-608 (footnote and citations omitted) (SPA 206-7).

[275] 67 Fed. Reg. at 17153/1 (SPA 34).

and cost-benefit tests for section 316(b) permitting.[276] Power plant owners have perfected the technique of inundating regulators with site-specific information and then contesting every aspect of the permitting process so as to avoid technological upgrades. For example, in New Jersey, one plant's permit renewal application comprised 36 volumes, supported by 137 volumes of technical and reference materials, which took the State agency seven years to review and finally act upon.[277] Worse yet, despite that Congress intended NPDES permits to be renewed every five years,[278] four Hudson River power plants are still operating pursuant to permits issued in 1987.[279] Nationwide, there are approximately 543 existing power plants subject to the Rule, and an enormous number of them are already significantly overdue for repermitting.[280]

The Cost-Benefit Variance gives existing facilities a powerful tool to evade

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[276] *See Riverkeeper*, 358 F.3d at 196 (utility industry arguing that "EPA should only have sought to regulate impingement and entrainment where they have deleterious effects on the overall fish and shellfish populations in the ecosystem, which can only be determined through a case-by-case, site-specific regulatory regime."); 67 Fed. Reg. at 17,162 (describing two wholly site-specific regulatory frameworks proposed by a utility association and a power company) (SPA 43).

[277] 67 Fed. Reg. at 17,153/1 (SPA 34).

[278] CWA § 402(b)(1)(B).

[279] *See* Compliance Years List at 22, 12, 20, 12 (Indian Point, Bowline, Roseton and Danskammer permits expired in 1992) (JA 2796, 2786, 2794, 2786).

[280] See footnote 57, *supra*.

regulation by converting NPDES permitting into a lengthy, controversial and ultimately futile debate about fishing yields and fish prices, and how much environmental protection is worth to the public. EPA's claim that "delay in permitting … is not an issue for existing facilities"[281] ignores the obvious fact that such delays are an enormous impediment to protecting the natural resources Congress intended to EPA to safeguard.[282] As the D.C. Circuit explained in affirming EPA's refusal to consider receiving water quality in setting effluent limitations for the pulp and paper industry, "Congress clearly intended … to avoid such problems of proof so that a set of regulations with enforceable impact is possible."[283]

C. EPA Arguments in Support of its Authority are Unavailing.

As shown above, the Cost-Benefit Variance violates Congress's intent in enacting the 1972 CWA amendments because it focuses "on the tolerable effects rather than the preventable causes of water pollution."[284] It imposes even greater hurdles to permitting than did the restoration measures provision this Court

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[281] 67 Fed. Reg, at 17,146/1 (SPA 27).

[282] Tellingly, EPA stated that for the Phase I Rule, it "chose not to engage in a site-specific analysis of costs and benefits, because *to do this properly would take time*." *Id.* (emphasis added).

[283] *Weyerhaeuser*, 590 F.2d at 1044.

[284] *EPA v. California*, 426 U.S. at 202.

remanded in *Riverkeeper* and the pre-1972 water quality-based approach to water pollution which Congress found "inadequate in every vital aspect."[285] In the preamble, EPA attempts to distinguish section 316(b) from sections 301 and 304 (the other technology-based provisions for existing facilities) on the ground that the object of BTA in section 316(b) is "explicitly articulated by reference to the receiving water."[286] The gist of EPA's argument is that Congress's explicit prohibition against considering consequential water quality to relax individual permit limits does not apply in the section 316(b) context.

EPA is mistaken for several reasons. First, this Court has already determined in *Riverkeeper* that this central guiding principle of the 1972 Act applies to regulations promulgated under section 316(b). In fact, this Court could hardly have been clearer on that point, referencing it in three different parts of the opinion: in discussing the statutory framework;[287] in remanding the restoration

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[285] *Id.* at 203, citing S. Rep. No. 92-414, p. 7 (1971).

[286] 69 Fed. Reg. at 41,627/1 (SPA 226).

[287] 358 F.3d at 184 ("[W]e review the entire statutory scheme because its development assists in interpreting the narrow statutory provision before us. … [The pre-1972] approach was impractical … because it was very difficult to prove that a particular polluter was responsible for causing the decrease in water quality.")

measures provision;[288] and finally, in rejecting industry's argument that the EPA should have focused on water quality.[289]

EPA's mistaken claim that the phrase "adverse environmental impact" gives it license to consider consequential effects contradicts its own interpretation of "adverse environmental impact as the loss of aquatic organisms due to impingement and entrainment" and its explicit rejection of industry proposals to define such impact at the population, community or ecosystem levels.[290] Congress defined pollution as "the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water," and it mandated protection of the "biological integrity of the Nation's waters."[291] Technology

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[288] *Id.* at 190-191 ("Congress … inten[ded] that the "design" of intake structures be regulated directly, based on the best technology available, and without resort in the first instance to water quality measurements.")

[289] *Id.* at 196 ("Congress rejected a regulatory approach that relies on water quality standards, which is essentially what [industry] urges here in focusing on fish populations and consequential environmental harm.")

[290] 69 Fed. Reg. 41,611-612 (SPA 210-11); *see also* RTC 011.004 ("EPA does not view adverse environmental impact as limited to demonstrated community or population level effects.") (JA 3208).

[291] CWA § 502(19); CWA § 101(a); *see also Weyerhauser* at 1043 n. 47, citing *FMC Corp. v. Train*, 539 F.2d 973, 983 (4th Cir. 1976) ("EPA need only be satisfied that the alleged pollutant affects the 'integrity' of water, not that it harms it.").

standards must measure and limit pollutants "at their source."[292] Therefore, minimizing biological pollution at its source (the intake structure) is no different than minimizing chemical pollution at its source (the discharge pipe). By using the term "adverse environmental impact" in section 316(b), Congress clearly intended EPA to minimize the massive aquatic mortality at intake structures, without having to measure the ultimate, effects on fish populations, ecosystems and markets.

As discussed above, section 316(a), which allows EPA to vary heat pollution standards so long as a "balanced, indigenous population of shellfish, fish, and wildlife in and on that body water" is protected, is the notable exception to the CWA's prohibition on consideration of water quality to relax permit limitations.[293] Consequently, the experience under section 316(a) is particularly instructive of the havoc the Cost-Benefit Variance will wreak:

> The dangers of ignoring this congressional mandate are clearly revealed by the one experiment in the Act with allowing consideration of receiving water capacity. ... In reviewing the results of that experiment during consideration of the [1977] amendments to the Act, Congress found that the water capacity issue had led to a *regulatory breakdown*. "Heat has thus become an unregulated pollutant, clearly not the intent of the Congress. . . . That limited exemption has been

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[292] *Bethlehem*, 538 F.2d at 515; *see also Riverkeeper*, 358 F.3d at 184 ("the 1972 amendments instruct the EPA to regulate the discharge of pollutants *from their source*") (emphasis added).

[293] *Riverkeeper,* 358 F.3d at 190, citing *Weyerhaueser*, 590 F.2d at 1043.

turned into a *gaping loophole.*"[294]

By allowing consideration and monetization of water quality effects, the Cost-Benefit Variance is a new, unauthorized gaping loophole.

EPA next argues that section 316(b) does not require minimization of impact beyond that which can be achieved at an "economically practicable" cost, and contends that the relationship to benefits is one component of economic practicability.[295] However, as with effluent limitations developed under sections 301, 304 and 306 of the Act, EPA takes economic practicability into account when establishing the national technology standards and, even at that stage, no formal cost-benefit analysis is called for.[296] EPA's reliance on "economic practicability" to support the variance conflates and confuses the two major steps of the regulatory process: the first step when EPA sets national standards (where it can, and did, consider costs in relation to benefits) and the second step where permit writers conform permit limitations to national standards (where they may not).

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[294] *Weyerhaueser*, 590 F.2d at 1044 *citing* S.Rep. No. 370, 95th Cong., 1st Sess. 8, Reprinted in (1977) U.S. Code Cong. & Admin. News, pp. 4326, 4334 (emphasis added) .

[295] 69 Fed. Reg. at 41,626-627, 41,602-603 (SPA 225-226, 201-02).

[296] In comparison, the Safe Drinking Water Act authorizes EPA to "measure and value benefits" by, *inter alia*, "identify[ing] consumer willingness to pay for reductions in health risks from drinking water contaminants." 42 U.S.C. § 300g-1(b)(3)(C)(iii).

EPA further argues that the Cost-Benefit Variance is necessary to address situations were there are few fish and shellfish in the waterbody, citing a "highly degraded ship channel" as an "extreme example."[297] However, even if EPA had the authority to include the Cost-Benefit Variance in the Rule (which, as explained above, it does not) the Agency's justification would lack "a rational connection between the facts found and the choice made."[298] Concern over expensive technology upgrades that would not save any fish could be rationally addressed, for example, by including a *de minimis* mortality provision in the Rule. But, as written, the Cost-Benefit Variance applies in all circumstances, even where there is massive aquatic mortality. Section 125.94(a)(5)(ii) does not rationally address EPA's stated concern because it does not focus on the levels of impingement and entrainment, but rather on the extent and valuation of consequential effects in the waterbody. Because it introduces an enormously complex new procedure that will

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[297] 69 Fed. Reg. at 41,627/2 (SPA 226). While EPA's "ship channel" example implies that biological density was depressed by navigation or channelization, a more likely cause is the past operation of intake structures themselves. *See, e.g.,* 66 Fed. Reg. at 65,263/2 ("over 99 percent of the [EPA-surveyed] existing facilities with cooling water withdrawal … are located within 2 miles of waters that are identified as impaired") (SPA 838).

[298] *State Farm*, 463 U.S. at 43.

paralyze NPDES permitting, EPA has "launche[d] a missile to kill a mouse."[299]

EPA's claim that it has previously considered benefits in relation to costs in establishing limits for a section 316(b) permit, is not at all relevant because the example it cites did not involve any analysis of economic benefits.[300] Rather, in that 1978 permitting decision, the EPA Administrator focused on the low numbers of fish to be killed by the Seabrook plant's intake structure and concluded that spending $20 million to move the structure would be wholly disproportionate to the benefit because the suggested location, farther offshore, would reduce entrainment but increase impingement (referred to as entrapment in the decision).[301] Moreover, in that instance, EPA was acting as a permit writer and making a case-by-case permitting determination using its "best professional judgment" because there were no national standards to apply. The purpose of this Rule is to obviate those *ad hoc* determinations.

Hence, the Cost-Benefit Variance should be vacated.

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[299] *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1036 (1992) (Justice Blackmun, dissenting).

[300] *See* 69 Fed. Reg. at 41,627, citing three decisions regarding the Seabrook nuclear power plant in New Hampshire (SPA 226).

[301] *In Re Public Service Co. of New Hampshire*, 1 EAD 455, 1978 WL 21140 at 21 (Decision of the EPA Administrator) (Aug. 4, 1978) (Supp 84).

POINT V

EPA EXCEEDED ITS AUTHORITY BY ALLOWING SITE-SPECIFIC DETERMINATION OF BTA BASED ON A COST-COST ANALYSIS

The Rule, at section 125.94(a)(5)(i), also allows any facility, at its option, to elect a site-specific BTA determination based on a comparison of its compliance costs to the costs EPA considered for that facility. This Cost-Cost Variance is illegal for two reasons: (a) EPA violated the CWA's and APA's public participation requirements[302] because it did not identify cost data for actual facilities until the final Rule; and (b) the provision is far more expansive than the variance Congress sanctioned for existing facility regulations, thereby transforming the "pin-hole safety valve envisioned in the Act … [into] a yawning loophole."[303]

A. EPA Thwarted Public Participation by Failing to Provide Facility-Specific Cost and Technology Data Until the Final Rule.

"Congress clearly intended to guarantee the public a meaningful role in the implementation of the Clean Water Act" by allowing public participation at three different stages of regulation: first, in EPA's development of national technology-based standards; second, in public hearings on NPDES permit issuance by States;

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[302] CWA § 101(e), 33 U.S.C. § 1251(e); 5 U.S.C. §§ 553(b), (c).

[303] *See Weyerhaeuser*, 590 F.2d at 1039-40 (explaining why variances are limited to those facilities that can prove they are "fundamentally different").

and, third, through citizen enforcement suits in the courts.[304] In contravention of these mandates, EPA deprived the public of a meaningful opportunity to participate in EPA's cost evaluations at the rule-development and permit-issuance stages because by disclosing facility-specific cost data only in final Rule.

For the proposal, EPA estimated the cost of installing various different technologies to meet the performance standards at a variety of "model plants."[305] The preamble explained that facilities electing the Cost-Cost Variance should compare their estimated costs to EPA's estimated costs for the "model plant" that most closely matches the facility.[306] But EPA included a critical caveat regarding this data:

> The Agency notes that *model plants are not actual existing facilities*. Therefore, the cost estimates developed for the rule *should not be considered to reflect those exactly of a particular existing facility*. However, in the Agency's view, the national estimates of benefits, compliance costs, and economic impacts are *representative of those expected from the industry as a whole*.[307]

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[304] *Waterkeeper*, 399 F.3d at 503, citing 33 U.S.C. §§ 1251(e), 1342(a), (b)(3), 1365(a).

[305] Technical Development Document (TDD), App. A. (DCN 4-0004) (JA 1025).

[306] 67 Fed. Reg. at 17,144/1-2 (SPA 25).

[307] TDD at 2.1 (emphasis added) (JA 875).

The proposed Rule's approach, *i.e.*, using "representative of those expected from the industry as a whole," was consistent with the CWA, because the test for whether Best Available Technology (BAT) standards are economically achievable is whether they are affordable by an industrial "category or subcategory *as a whole.*"[308]

However, the final Rule completely changed this. During the 54-day OMB review period, EPA added to the preamble for the final Rule two new appendices that, for the first time, *provided technology and cost data for virtually every existing power plant in the nation covered by the Rule, identified by name*.[309] The final Rule indicates that EPA assigned each of these actual existing facilities one of 13 different intake structure technologies that EPA expects would be used to comply with the Rule. EPA further provided specific figures for capital costs, operational costs and other costs, based on the use of these technologies.[310] These facility-specific costs are to be adjusted by each facility pursuant to a multi-step calculation formula, set forth only in the preamble to the *final* Rule, to arrive at a

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[308] *See Texas Oil & Gas*, 161 F.3d at 928 (emphasis added).

[309] 69 Fed. Reg. at 41,669-682 (Appendix A and B) (SPA 268-81).

[310] *Id.*

final figure for the costs EPA considered *for that particular identified facility*.[311]

Thus, EPA has – through the rulemaking and without public comment – effectively set a cap on each identified facility's compliance costs. For example, the final Rule indicates that EPA has already determined that compliance costs will be $322,884, $5,575,259 and $528,427, respectively, for the Cane Run, Chesapeake, and Hennepin power plants (to use the first three facilities listed in Appendix B).[312] EPA based these cost figures on its assessment of what technology these three particular facilities would use to comply with the Rule, specifically, "fine-mesh screens" at the Cane Run plant; a "passive fine-mesh [0.76 mm] screen system" at the Chesapeake plant; and a "fish handling and return system" at the Hennepin plant.[313] If these plants show that their compliance costs will be "significantly greater" than the costs EPA considered for them, they will not be required to meet the performance standards. This is a significant component of the variance, yet the key data was not disclosed and tied to specific facilities until the final Rule.

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[311] *Id.* at 41,644-647 (SPA 243-46).

[312] These are the capital costs from column 4 of Appendix A for facilities AUT001, AUT002, AUT004, which are Cane Run, Chesapeake, and Hennepin. 69 Fed. Reg. at 41,670, 41,680 (SPA 269, 279).

[313] *See* 69 Fed. Reg. at 41,670 (Column 12 – EPA modeled technology code), 41,646 (Table 9.1 – Technology Codes ands Descriptions) (SPA 269, 245).

Because EPA failed to disclose the facility-specific cost data and technologies for any of the hundreds of plants identified in Appendices A and B prior to the final Rule, the Agency has deprived the public of its right to participate in this crucial aspect of the Rule's development. Moreover, the public will not have a meaningful opportunity to contest these figures (or contest the appropriateness of the technology on which they were based) in permit hearings because EPA has already made those determinations.

As a result, the Cost-Cost Variance should be vacated as violative of the CWA's public participation requirements and the APA's notice-and-comment requirements.[314]

B. The Cost-Cost Variance Expands the Narrow "FDF Variance" into an Exception that Swallows the Rule.

Even if EPA had allowed public participation, the Cost-Cost Variance would still be illegal because it destroys the uniformity and stringency required of technology regulations. Nationally-uniform regulation of water pollution was a

[314] *See Waterkeeper*, 399 F.3d at 503-04, 521 (finding that EPA rule violates public participation requirements in several respects by shielding nutrient management plans from public scrutiny and failing to disclose regulatory several options until the final Rule); *National Black Media,* 791 F.2d at 1024.

central purpose of the 1972 Amendments.[315] As Congress stated:

> We should have uniform standards of pollution control in all fifty States – tough standards, fair standards, a set of meaningful and comprehensive rules that permit neither exception nor evasion.[316]

Furthermore, in the few instances where Congress intended to allow deviations from the general rule of uniformity, it carefully delineated the outer limits of such variances in the Act.[317]

In justifying the cost-cost variance, EPA states that "[t]his site-specific compliance option is similar to the 'fundamentally different factors' [FDF] provision in CWA section 301(n)."[318] Section 301(n) allows modification of technology requirements for existing facilities if "the facility is fundamentally different with respect to the factors *(other than cost)* . . . considered by the

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[315] *National Independent Meat Packers Ass'n v. U.S. E.P.A.*, 566 F.2d 41, 43 (8th Cir. 1977), citing *E. I. duPont de Nemours & Co. v. Train*, 430 U.S. 112, 136 (1977).

[316] *Student PIRG, Inc. v. AT & T Bell Laboratories*, 617 F. Supp. 1190, 1197 (D.N.J., 1985), quoting legislative history (statement of Rep. Reuss).

[317] *See, e.g.,* CWA § 301(g), 33 U.S.C. § 1311(g) (modifications for certain nonconventional pollutants); CWA § 301(h), 33 U.S.C. § 1311(h) (modifications for secondary treatment); CWA § 301(m), 33 U.S.C. § 1311(m) (biochemical oxygen demand and pH discharges into territorial seas); CWA § 301(n), 33 U.S.C. § 1311(n) (fundamentally different factors variance).

[318] 69 Fed. Reg. at 41,626/2 (SPA 225).

Administrator in establishing" the national standard.[319] In fact, the Rule's Cost-Cost Variance is nothing like the FDF variance which Congress codified in CWA section 301(n) and the courts have approved as a narrow "safety valve."[320]

First, while Congress in section 301(n) explicitly prohibited consideration of costs, the Cost-Cost Variance does exactly the opposite: it establishes an alternative requirement *solely on the basis of costs*. Besides contravening this explicit requirement of the FDF variance, the focus on costs rather than the relevant facility factors would allow plants with similar physical attributes to be treated differently. Although a facility's costs *may* be an indication that it is fundamentally different from other Phase II facilities, there will likely also be facilities whose excess costs are not based upon any fundamental differences. This approach rewards inefficiency by granting a variance to facilities whose costs are higher for other reasons such as inefficiency or poor management.

Second, the Cost-Cost Variance changes the standard from "fundamentally different" to "significantly greater," a term not defined in the Rule. But as several

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[319] CWA § 301(n)(1)(A) (emphasis added).

[320] *Weyerhaeuser*, 590 F.2d at 1040; *see also Chemical Mfrs. Ass'n v. NRDC,* 470 U.S. 116, 133 n.24 (1985), citing *EPA v. National Crushed Stone Assn.*, 449 U.S. 64, 77-78 (1980) ("variances are 'are available only for sources fundamentally different" from the other facilities subject to the rule); *NRDC v. EPA*, 537 F.2d 642, 644 (2d Cir. 1976).

courts have held, it is "the requirement that the difference between the individual and national situations … [be] *fundamental*" that assures "that the pin-hole safety valve envisioned in the Act and *duPont* does not become a yawning loophole."[321]

Third, contrary to EPA's existing NPDES regulations, which allow national standards to be made "either more or less stringent" on application by "[a]ny interested person,"[322] the Cost-Variance is only available to the facility itself and only to make requirements less stringent.

Fourth, EPA rejected the most protective technology, closed-cycle cooling, because it was not economically feasible for all facilities. Having considered the costs of intake screen devices, EPA established performance standards which it found to be economically feasible not only for the industry as a whole but also for each of the 543 facilities covered by the Rule – each using one of 13 different technology types – based on the factors EPA found relevant (*e.g.*, waterbody type, intake flow, capacity, existing technology). The FDF variance was intended to "allow individual operators to argue that, given the overall impact of an effluent limitation on their operations, they are faced with stricter requirements than the Act

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[321] *Weyerhaeuser*, 590 F.2d at 1040 (emphasis added); *see also Georgia-Pacific Corp. v. U.S.EPA*, 671 F.2d 1235, 1243 (9th Cir. 1982).

[322] 40 C.F.R. § 125.30(b).

authorizes EPA to place on industry *as a whole*."[323] But having already examined each facility's factors and conducted what amounts to a facility-by-facility subcategorization, EPA has obviated even a proper FDF variance. Including the expansive Cost-Cost Variance in such circumstances transforms the "pin-hole safety valve envisioned in the Act … [into] a yawning loophole"[324] contrary to Congressional intent.

Consequently, this Court should vacate the Rule's Cost-Cost Variance provisions, and direct EPA to only allow variances from the Phase II Rule on the basis of "fundamentally different factors."

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[323] *Weyerhaeuser*, 590 F.2d at 1035 (emphasis added).

[324] *Id.* at 1040.

POINT VI

EPA's CLASSIFICATION OF NEW "STAND-ALONE FACILITIES" AS "EXISTING FACILITIES" IS NOT IN ACCORDANCE WITH LAW

Congress required the most stringent CWA limitations to be imposed on new sources of pollution because they "have the opportunity to install the best and most efficient production processes and wastewater treatment technologies."[325] The classification of a particular power plant as "new" or "existing" is critical because it determines whether its permit limitations must be based on the Phase I Rule or the far more lenient Phase II Rule.

The Phase II Rule violates the APA because the proposal: (a) failed to explain how the Agency proposed to classify and regulate the new "stand-alone" facilities[326] it had deferred to this phase of the rulemaking, and (b) provided no hint that EPA was considering narrowing the class of facilities that would be subject to the performance standards of the Phase I Rule. The Rule also violates the CWA because (a) EPA's own findings (and common sense) indicate that new stand-alone facilities have the same opportunity as any other new plant to meet Phase I's technology standards, and (b) EPA failed to articulate a rational explanation for allowing such facilities to evade the Phase I requirements.

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[325] 49 Fed. Reg. 37,998, 38,043/2 (Sept. 26, 1984) (SPA 734).

[326] A stand-alone facility is a new, separate facility that is "substantially independent" of an existing facility on the same site.

A. The Phase I Rule Classified New "Stand-Alone" Facilities According to the "Substantial Independence" Test.

1. EPA Established the "Substantial Independence" Test in its 1984 NPDES Regulations.

In 1984, EPA issued criteria for determining which facilities are "new sources" to be regulated under CWA section 306, rather than section 301. Under 40 C.F.R. § 122.29(b), a new source is a new "building, structure, facility, or installation" that: (1) is constructed at a site at which no other source is located; (2) totally replaces an existing source; or (3) is "substantially independent" of an existing source at the same site.

The substantial independence test determines which facilities have "the opportunity to install the best and most efficient production processes and wastewater treatment technologies [and therefore] should be required to meet new source performance standards."[327] In proposing section 122.29(b), EPA explained:

> [While it would not] be appropriate to classify each … additional piece of equipment as a new source solely because it constitutes a new building or structure [,] … *it is appropriate to classify as a new source a facility that may happen to be located at the site of an existing source but that to a substantial degree functions independently of it.*[328]

Subsection 122.29(b)(1)(iii) sets forth two factors for permit writers to consider in

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[327] 49 Fed. Reg. at 38,043/3 (SPA 734).

[328] 45 Fed. Reg. 59,343/3 (Sept. 9, 1980) (emphasis added) (SPA 730).

determining when facilities are substantially independent: first, the degree of integration of a new process with existing processes; and second, the extent to which the new facility is engaged in the same general type of activity as the existing source.

As to the integration factor, EPA explained in the 1984 preamble: "if the only connection between the new and old facility is that they are supplied utilities such as steam, electricity, or *cooling water* from the same source …, then the new facility will be a new source."[329]

As to the same-activity factor, EPA stated that "if the proposed facility is engaged in a sufficiently similar type of activity as the existing source, it will not be treated as a new source." However, EPA added a crucial qualifier: "Of course, to the extent the construction results in facilities engaged in the same type of activity because it essentially replicates, without replacing, the existing source, the new construction would result in a new source."[330] EPA further explicated the test using power plants to illustrate the facts that must be considered:

> [I]f a facility replicates an existing facility, the fact that it shares or uses common land with another source does not prevent it from being considered a new source. … Thus, if a power company builds a *new, but identical* and completely separate power generation unit at the site

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[329] 49 Fed. Reg. at 38,043/3 (emphasis added) (SPA 734).

[330] *Id.* at 38,044/1 (SPA 735).

> of a *similar* existing unit, the new unit will be a new source. However, if a facility *increases capacity merely by adding additional equipment in one or two production steps to remove a "bottleneck,"* it will not be a new source." [331]

Consequently, when a new power plant is proposed to be constructed on the site of an existing power plant, EPA's longstanding NPDES regulations require permit writers to determine the extent of integration between the two plants, and the extent to which the second plant replicates a similar one or merely adds some equipment to expand the electric output of the existing plant.

2. The Phase I Rule Incorporated the "Substantial Independence" Test.

In the Phase I Rule, EPA defined "new facility" almost entirely consistently with the section 122.29(b)'s definition of "new source":

> New facilities include only "greenfield" and "stand-alone" facilities.... A stand-alone facility is a new, separate facility that is constructed on property where an existing facility is located and whose processes are substantially independent of the existing facility at the same site (see 40 CFR 122.29(b)(1)(iii)). New facility does not include new units that are added to a facility for purposes of the same general industrial operation (for example, a new peaking unit at an electrical generating station). [332]

In particular, the definition references subsection 122.29(b)(1)(iii) and explicitly incorporates the substantial independence test. The last sentence of this

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[331] *Id.* at 38,044/3 (emphasis added) (SPA 735).

[332] 40 C.F.R. § 125.83.

excerpt says essentially the same thing as the power plant example in the preamble to EPA's 1984 NPDES regulations – that merely adding some equipment to increase capacity (for example, a new peaking unit[333]), rather than replicating the facility with a similar or identical unit, does not render the new equipment a new source. Thus, the Phase I Rule – like section 122.29(b) – requires permit writers to determine the extent of integration (the first factor) and the extent to which new units replicate existing similar units or simply add equipment to increase the electric output (the second factor).[334]

Throughout the preamble to the Phase I Rule and in responses to comments, EPA repeatedly confirmed that it defined new facility consistently with section 122.29,[335] and incorporated the substantially independent test's two factors.[336]

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[333] Peaking units produce power only to serve peak demand and typically operate less than 15% of the time. 69 Fed. Reg. at 41,616 (SPA 215).

[334] 40 C.F.R. § 125.83, the above-quoted provision defining "new facility" in the Phase I Rule, also sets forth examples of new facilities, including a scenario in which "[a] facility is constructed on the same property as an existing facility, but is a separate and independent industrial operation" and modifies the existing intake structure to increase intake capacity. *See* Example (1)(iii).

[335] *See, e.g.*, Phase I RTC 042.002 ("EPA has defined a new facility in a manner consistent with existing NPDES definitions addressing new sources and new dischargers.") (JA 586).

[336] *See, e.g., id.*, 043.016 ("In this rule, EPA does not believe it is appropriate to further define the phrase 'substantially independent' as used in 122.29(b)(1)(iii). Section 122.29(b)(1)(iii) in the existing NPDES regulations already provides that '[i]n determining whether … processes are substantially

This definitional identity between "new facility" and "new source" was, however, subject to one exception: the Phase I Rule subjected a new stand-alone facility to the Phase I performance standards only if it requires an increase in the pre-existing cooling water intake capacity at the site.[337] As EPA explained, it deferred regulation of new sources that do not increase cooling water capacity until the Agency had gathered additional data during the Phase II and III rulemakings:

> In this rule EPA has defined a new facility in a manner consistent with existing NPDES regulations, with a limited exception. In addition to meeting the definition of a new source, the final rule requires that a new facility have a new cooling water intake structure or use an existing intake structure that has been modified to increase the design capacity. … EPA deferred the regulation of such entities from the Phase I Rule because it was limited in terms of the types of data it had to complete the Phase I rulemaking. Therefore, regulation of such facilities will await EPA's analysis of existing facilities based on the detailed questionnaire for existing facilities.[338]

In another statement in the Phase I preamble, EPA described the deferral as

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independent, the Director shall consider such factors as the extent to which the new facility is integrated with the existing plant; and the extent to which the new facility is engaged in the same general type of activity as the existing source.' EPA believes this is sufficient and promotes consistency within the NPDES program.") (JA 570).

[337] *See* 40 C.F.R. § 125.83 (providing in first sentence of definition of new facility the additional requirement that stand-alone facilities must also use "either a newly constructed cooling water intake structure, or an existing … structure whose design capacity is increased.").

[338] Phase I RTC 019.004 (JA 562); *see also* 66 Fed. Reg. at 65,259/1 (SPA 834).

follows:

> EPA generally deferred regulation of new sources constructed on a site at which an existing source is located (see 40 CFR 122.29(b)(3)) until the Agency completes analysis of its survey data on existing facilities.[339]

This vague statement cannot be used to construe the "new facility" definition in section 125.83 to exclude all new sources constructed on a site where an existing source is located because that would violate a fundamental cannon of construction by rendering superfluous much of the text of that regulatory section.[340] Specifically, the part of the third sentence (which says the rule applies to "stand-alone" facilities) and the entire fourth sentence (which defines "stand-alone" facilities as substantially independent facilities located on the site of an existing facility) would no longer have any operative effect.

Furthermore, such interpretation would contradict the text of the Phase I Rule itself and many other statements in the preamble and response to comments where EPA stated that it had defined "new facility" consistently with existing

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[339] 66 Fed. Reg. at 65,286/2 (SPA 861). EPA's use of the word "generally" in this sentence may have been an acknowledgment that the Phase I Rule did not defer the application of Phase I performance standards to new, substantially independent facilities that require an increase in the existing intake capacity at the site.

[340] *See Walters*, 519 U.S. at 209; *Babbitt*, 515 U.S. at 698 ("reluctance to treat statutory terms as surplusage").

NPDES regulations and incorporated the substantial independence test, and that the limited exception was to defer new facilities that do not increase cooling water intake capacity. In another EPA rulemaking case, this Court recently refused to construe a preamble statement in a manner contradictory with both the text of the rule itself and another statement in the preamble.[341]

Although EPA has been somewhat vague as to the precise scope of its deferral, it clearly stated that the deferral of regulation was not a decision that these entities should necessarily be subject to *different technology standards* than the rest of the Phase I facilities, but only that their regulations be *promulgated at a later time*, once the Agency had collected more information. "EPA deferred the regulation of such entities … because it was limited in terms of the types of data it had."[342] Thus, the determination of which technology standards apply to some new stand-alone power plants (*i.e.*, those that do not increase cooling water intake capacity) would be made in Phase II.

As an example of how section 125.83 was applied prior to promulgation of the Phase II Rule, consider the Elm Road Generating Station (ERGS), a new $2

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[341] *See Waterkeeper*, 399 F.3d at 522 n.32.

[342] Phase I RTC 019.004 (JA 562); *see also* 66 Fed. Reg. at 65,286 (Deferral is "until the Agency completes its analysis of its survey data on existing facilities.") (SPA 861).

billion coal-fired electric generating station proposed to be located in Oak Creek, Wisconsin. As proposed, ERGS would withdraw 970,000 gallons per minute (1.4 billion gallons per day) from Lake Michigan using a newly constructed intake structure. EPA's Region 5 in Chicago applied the substantially independent test and determined that ERGS would be a stand-alone facility – and therefore a "new facility" covered by the Phase I Rule – because its processes would be substantially independent of the existing power plant on the same 1,000 acre site and its new cooling water intake structure would increase the intake capacity of the site.[343]

B. EPA Violated the APA Because the Phase II Rule Denied the Public a Meaningful Opportunity to Comment on EPA's Classification and Regulation of Stand-Alone Facilities.

Under the APA, a notice of proposed rulemaking must "afford[] interested parties a reasonable opportunity to participate in the rulemaking process."[344] Agencies are therefore required to "provide sufficient factual detail and rationale

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[343] *See* Final Environmental Impact Statement, Elm Road Generation Station (July 2003), vol. 1 at 2, 202-204, vol. 3 at 35 (response to comments). ERGS's substantial independence is illustrated by the facts that it will use a different type of coal than the existing plant, have its own coal pile, its own boilers, its own conveyance system for getting coal from its coal pile to its boilers, its own pulverizers, its own pollution control equipment, its own power house buildings, its own electric generators, its own stacks, and its own cooling water discharge pipes. *See id.*, vol. 1 at 96-126 (Supp 669-671, 674, 640-668).

[344] *Forester v. Consumer Prod. Safety Comm'n.*, 559 F.2d 774, 787 (D.C. Cir. 1977); *see also Conference of State Bank Supervisors v. Office of Thrift Supervision*, 792 F.Supp. 837, 843 (D.C. Cir. 1992).

for the rule to permit interested parties to comment meaningfully."[345] "The prerequisites for meaningful comments are adequate time, the disclosure of data and law the agency is relying on, and the rationale the agency is applying to connect the data and law to the regulation it is promulgating."[346]

1. The Phase II Proposal Failed to Address Regulation of the Deferred Facilities.

When EPA proposed the Phase II Rule on April 9, 2002, even though it had collected the data it previously lacked, the Agency completely failed to acknowledge that it deferred regulation of some stand-alone facilities (*i.e.*, those that do not increase intake capacity) from the Phase I Rule to the Phase II Rule. EPA also failed to discuss the new information, articulate how this class of facilities should be regulated, or provide any rationale.[347]

Instead, EPA proposed a new freestanding definition of "existing facility" that is impossible to reconcile with the definition of "new facility" for a variety of

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[345] *Florida Power & Light Co. v. Wisconsin Elec. Co.*, 846 F.2d 765, 771 (D.C. Cir. 1988); *see also Nat'l. Elec. Mfrs. Ass'n. v. EPA*, 99 F.3d 1170, 1172 (D.C. Cir. 1997) (APA requires agency's notice to provide its rationale for the proposed rule to allow interested parties to comment meaningfully).

[346] Phillip M. Kannan, *The Logical Outgrowth Doctrine in Rulemaking*, 48 Admin. L. Rev. 213, 219 (1996) (Supp 211).

[347] *See* 67 Fed. Reg. at 17,127 (SPA 8).

reasons, including that it omitted the substantial independence test altogether.[348] In particular, it stated that any addition of a unit at a facility for purposes of the same industrial operation would be an existing facility.[349] The inconsistent, and potentially overlapping definitions, would have caused some new construction to be characterized as *both* a new facility under section 125.83 *and* an existing facility under proposed section 125.93. For example, addition of a new, stand-alone (*i.e.*, substantially independent) unit at an existing facility, accompanied by an increase in intake capacity, would fit both definitions.[350]

In their comments on the proposal, the Environmental Petitioners pointed out EPA's failure to address the regulatory deferral,[351] and, as discussed below, EPA subsequently addressed the issue for the first time in the final Rule. Because EPA did not discuss the facts it found, its decision, or its rationale regarding how

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[348] *Id.*

[349] *Id.*

[350] The definition of "existing facility" in the proposed Phase II Rule EPA published on April 9, 2002 differed substantially from the version EPA submitted to OMB 60 days earlier. In the OMB Review Draft – 28 Dec 3001, EPA had proposed to define "existing facility" as any facility that does not meet the definition of "new facility" under 40 C.F.R. § 125.83. The preamble submitted to OMB had discussed the substantial independence test and set forth examples of its application that were consistent with Phase I Rule. *See* DCN 4-4005 at 25-29 (Supp 240-44).

[351] Comment 206.073 at 104-05 (JA 3428).

to classify and regulate the deferred class of stand-alone facilities in the proposed Rule, it deprived the public of a meaningful opportunity to comment and violated the APA.

2. The Phase II Proposal Failed to Provide Notice that EPA Was Considering Narrowing the Class of Facilities Subject to the Phase I Rule.

The proposed Phase II Rule also completely failed to provide notice that EPA might use the Phase II rulemaking to provide a reinterpretation of the Phase I Rule's definition of "new facility," thereby attempting to retroactively broaden the class of facilities it deferred and narrow the class of facilities subject to the stricter performance standards of the Phase I Rule. But in the preamble to the final Rule, EPA did just that.

In promulgating the Phase II Rule, EPA responded to Environmental Petitioners' comment by again confirming that the Phase I Rule's definition of "new facility" had relied on the substantial independence test:

> The definition of a "new facility" in the Phase I rule (40 CFR 125.83) includes stand-alone facilities.... Thus, a new unit that is substantially independent could be a new facility if it meets other applicable criteria. The example in the comment (new electric generating unit, peaking or not[)] would be a new facility if it was substantially independent of the existing facility or met the other criteria the definition. EPA believes the definition of a "new facility" in the Phase I rule is consistent with EPA regulations at 122.29, since the latter uses total replacement and substantial independence as key

criteria.[352]

EPA also apparently recognized that its proposed "existing facility" definition would overlap the "new facility" definition, thereby subjecting some facilities to both rules. Thus, in the final Rule it jettisoned the proposed freestanding definition of existing facility and went back to the definition originally contained in the OMB Review Draft proposal submitted to OMB prior to publication of the notice of proposed rulemaking. In the final Rule, section 125.93 defines an existing facility as any facility that is not a new facility under section 125.83.

However, in a gambit to broaden the reach of the more lenient Phase II Rule without overlapping the Phase I Rule, EPA included language in its preamble that can be (and, in fact, has already been) construed to narrow the Phase I Rule's definition of new facility. Although its discussion is somewhat convoluted, in finally acknowledging its prior regulatory deferral, EPA crafted a new account of which facilities it deferred. The Agency now contends that it had deferred all stand-alone facilities dedicated to the "same industrial operation" as an existing facility on the same site.[353] In a peculiarly numbered footnote 2a, which seems not

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[352] RTC 306.073 (JA 3430).

[353] 69 Fed. Reg. at 41,579/2-3 (SPA 178).

directly related to the sentence it footnotes, EPA claims that the substantial independence test is no longer applicable.[354] Instead of applying the two factors and determining the degree of integration of the two plants and replication of the first by the second, EPA now says that all stand-alone facilities are categorically excluded from the definition of new facility if the new and existing plant are in the same industry.

This discussion plainly contradicts the text of the Phase I Rule and a majority of related statements in the Phase I preamble and response to comments, as well as EPA's response to Environmental Petitioners' Phase II comment quoted above.[355] Significantly, the record demonstrates that the preamble language narrowing the definition of "new facility" in the Phase I rulemaking (and thus broadening the definition of "existing facility") was *not* in the version of the final Rule EPA submitted to OMB on December 22, 2003, but was instead added to the final Rule "at the suggestion or recommendation" of OMB shortly before

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[354] *Id.*

[355] Moreover, it also contradicts the lone statement in the Phase I preamble that EPA "deferred regulation of new sources constructed on a site at which an existing source is located" (66 Fed. Reg. 65,286/2) because that statement broadly covers all co-located facilities regardless of any "same industrial operation" considerations.

promulgation.[356]

As a result of these OMB-mandated statements in the Phase II preamble, EPA changed its determination regarding the ERGS facility in Wisconsin and now considers the proposed $2 billion, coal-fired power plant which would withdraw 1.4 billion gallons per day to be an "existing facility" that will be subject only to the more lenient Phase II requirements.[357]

Because EPA failed at proposal to notify the public that it was considering

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[356] *See* 12/22/03 OMB Review Draft at 17 of Rule (providing, in section 125.93, definition of existing facility inconsistent with both the proposal and the final Rule) and at 2-2 to 2-7 (providing substantially different discussion, without footnote 2a) (Supp 711, 687-92); *see also* Final Changes Summary at 2 (OMB "[b]roadened definition of "existing facility") and at 8 (OMB "[R]evised discussion of definition of existing facility…") (Supp 733, 739).

[357] *See* email from Peter Howe, Water Division, EPA Region 5, to Tim Smith (7/23/2004, 11:38 AM) ("You should be aware that Region 5 has concluded because of the wording changes in the preamble to the final Existing Facility Rule published on July 9, that Elm Road is now considered an existing facility."); *see also* email from Peter Howe to Timothy Henry (7/14/2004, 04:32 PM) ("the preamble was modified extensively from the 2002 version") (Supp 752, 745). These statements of EPA staff, made within two weeks after publication of final Rule, constitute "contemporaneous construction" of its own regulations. *See, e.g., Tenneco Oil Company v. Dept. of Energy*, 475 F.Supp. 299, 316-19 (D. Del. 1979) (allowing, as exception to general rule of limiting review to administrative record, discovery of "all materials relevant to the agency's contemporaneous construction of its regulations")(citing cases); *Petrolane, Inc. v. Dept. of Energy*, 79 F.R.D. 115, 119 (D. Cal., 1978) (same); *see also Esch v. Yeutter*, 876 F.2d 976, 991 (D.C. Cir. 1989) (record may be supplemented when agency action is not adequately explained or case is "so complex that a court needs more evidence to enable it to understand the issues clearly"); *Bunker Hill Co. v. EPA,* 572 F.2d 1286, 1292 (9th Cir. 1977) (allowing explanatory materials to augment record).

using the final Phase II Rule to narrow the class of facilities subject to the Phase I Rule, EPA deprived the public of a meaningful opportunity to comment and violated the APA.

C. EPA Violated the CWA by Allowing Stand-Alone Facilities to Evade the Phase I Rule's Requirements.

CWA section 316(b) requires the best technology available, and section 306 requires the strictest standards for new facilities, because they "have the opportunity to install the best and most efficient production processes and wastewater treatment technologies."[358] Congress mandated "maximum feasible control of new sources,"[359] and thus:

> the most salient characteristic of this statutory scheme, articulated time and again by its architects and embedded in the statutory language, is that it is technology-forcing.... *This policy is expressed as a statutory mandate, not simply as a goal.*[360]

Given the CWA's technology-forcing mandate, EPA lacks authority to allow new facilities to avoid using the best technology available.

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[358] 66 Fed. Reg. at 65,261/2 (SPA 836).

[359] *E. I. Du Pont de Nemours & Co. v. Train*, 430 U.S. 112, 138 (1977) quoting S. Rep. No. 92-414, p. 58 (1971).

[360] *NRDC v. EPA*, 822 F.2d 104, 123-24 (D.C. Cir. 1987) (emphasis added).

1. EPA's Own Findings Indicate that New Stand-Alone Facilities Can Meet The Phase I Rule's Technology Standards Just as Easily as Any Other New Facility.

In the Phase I Rule, EPA determined that closed-cycle cooling was the best technology available for new facilities, and this Court upheld that determination against industry challenge.[361] EPA's determination was based on its findings that the vast majority of new plants built in the last 20 years have closed-cycle cooling towers.[362]

In the Phase II Rule, EPA rejected a similar closed-cycle cooling requirement because it found that retrofitting existing facilities to convert from once-through cooling to closed-cycle cooling would be difficult and expensive, and would take these power sources off-line during the conversions.[363] But because they have not yet been built, and because they are substantially independent from any existing facility located nearby, new stand-alone facilities obviously do not have any retrofit or conversion problems. Like any other new facility, they have the flexibility to be designed with closed-cycle cooling initially.

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[361] *Riverkeeper*, 358 F.3d at 182, 196-97.

[362] 100% of the gas-fired power plants and 73% of the coal-fired plants built in the last 20 years meet the Phase I Rule's intake capacity limit. 66 Fed. Reg. at 28,855-856; *see also* 69 Fed. Reg. at 41,606/1 (SPA 812-13, 205).

[363] *Id.* at 41,605-606 (SPA 204-205).

Again, the ERGS facility in Wisconsin is a prime example. The Phase II Rule would allow this huge new power plant to avoid the closed-cycle cooling requirement merely on the happenstance that an existing power plant is located on the same 1,000 acre site (as opposed to, for example, on a neighboring site). As EPA properly stated when it first established the substantial independence test: "if a facility replicates an existing facility, the fact that it shares or uses common land with another source does not prevent it from being considered a new source."[364]

Because none of the retrofit or conversion considerations apply to facilities that are substantially independent, EPA's own findings demonstrate that allowing such stand-alone facilities to use once-through cooling is plainly inconsistent with the best technology mandates of sections 316(b) and 306. In light of its own findings, EPA exceeded its authority by allowing some new facilities, *i.e.*, new stand-alone facilities like ERGS in Wisconsin and others around the nation, to avoid the closed-cycle cooling requirement to which all other new facilities must adhere. This conclusion is true both with regard to the class of stand-alone facilities that the Phase I Rule deferred to this rulemaking (*i.e.*, those that do not increase intake capacity) and to the class of facilities that the Phase II preamble now claims was deferred (*i.e.*, any stand-alone facility dedicated to the same

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[364] 49 Fed. Reg. at 38,044/3 (SPA 735).

industrial purpose as an existing facility on the same site).

2. EPA Has Not Articulated a Satisfactory Explanation for its Action.

An agency must "articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made."[365] EPA's rationale for classifying new stand-alone facilities as existing facilities fails to meet this standard. EPA cites "limitations associated with an existing site [including] space, existing location on a waterbody, location in already congested areas which could affect (if Phase I requirements were applied) visibility impairment, highway and airport safety issues, noise abatement issues, salt drift and corrosion problems and additional energy requirements" as reasons for treating stand-alone facilities as existing.[366] But the Agency has already, in Phase I, considered such factors (and others) and found them not to present significant impediments to the installation of closed-cycle cooling towers.[367] Moreover, merely classifying a facility as new does not, *ipso facto*, mean that the facility must necessarily install closed-cycle cooling towers. Rather, the Phase I Rule included a Track II (which allows new facilities to install other technologies that are 90 percent as effective as cooling

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[365] *State Farm*, 463 U.S. at 43 (citation omitted).

[366] 69 Fed. Reg. at 41,580/1 (SPA 179).

[367] *See, e.g., Riverkeeper*, 358 F.3d at 196-97.

towers) as well as variance provision allowing less stringent requirements than required by Track I or II if significant adverse impacts would result to air quality, water resources, or local energy markets.[368] Thus, the Phase I Rule already contains mechanisms to address EPA's stated concerns.

Further, given the obvious fact that parcels of land come in many different sizes (as noted above, ERGS is proposed to be located on a 1000 acre parcel) and in many different types of locations, the mere fact that a new, stand-alone facility is located within the same property boundaries as an existing facility says nothing about the amount of space available or the degree of congestion. Likewise, whether a new plant is dedicated to the same industrial activity as the existing one is wholly unrelated to the considerations on which EPA purports to base its decision. Space and congestion would be no more (or less) limiting for a new power plant co-located with a factory than they would be for a power plant co-located with another power plant.

EPA's second rationale is similarly irrational. The Agency stated that it did not want to discourage existing power generation facilities from making upgrades, modifications or repowerings "out of concern that *they* would be considered a new

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[368] *Id.* at 183, citing 40 C.F.R. § 125.85.

facility."[369] But section 125.83 already ensures that such changes made to an older, pre-existing facility will not convert that facility into a "new facility" because it explicitly excludes "routine maintenance," repowering, partial repowering, and all other *changes to the existing facility* short of a complete replacement.[370] Thus, the only issue pertains to classification of the new, separate facility. EPA's repowering concern has no rational connection to new stand-alone facilities.

Finally, EPA claims that it does not want to discourage incremental power generation at existing sites because that might lead to industrial sprawl.[371] But applying the same technology standards to all new, separate facilities wherever they are located (as section 122.29(b) has done for 20 years) could not tilt the scales against on-site expansion because the rules applicable to new plants constructed on-site would be the same as the rules for those constructed elsewhere, yielding a level playing field. Moreover, EPA's "sprawl" rationale bears no

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[369] 69 Fed. Reg. at 41,580/1 (emphasis added) (SPA 179).

[370] 66 Fed. Reg. at 65,286/1 ("changes to an existing facility that do not totally replace the process or production equipment that causes a discharge at an existing facility (e.g., partial repowering), and those that do not result in a new separate facility whose processes are substantially independent of any existing source at the same site, do not result in the facility being defined as a new facility.") (SPA 861).

[371] 69 Fed. Reg. at 41,580/1 (SPA 179).

relationship to the goals of the CWA,[372] and, as noted above, none of these rationales were subjected to public notice and comment.

More than two decades ago, EPA determined that the substantial independence test was the best approach to identifying new facilities "that may happen to be located at the site of an existing source" but are properly classified as new sources.[373] EPA directed permit writers applying this test to consider the degree of integration and replication, rather than simply whether there is shared land and the same industrial activity.[374] The Phase I rulemaking explicitly adopted that test, deferring only the limited subset of stand-alone facilities that do not have a new intake structure or do not increase the capacity of the existing one. Now, EPA has apparently decided not only that the limited deferred class should not have to meet the new facility standards, but also that the same is true for virtually all stand-alone facilities, and the substantial independence test no longer applies. An "agency interpretation of a relevant provision which conflicts with the agency's earlier interpretation is 'entitled to considerably less deference' than a consistently

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[372] *See* CWA § 101(a): "[T]o restore and maintain the … integrity of the Nation's waters."

[373] 45 Fed. Reg. at 59,343/3 (SPA 730).

[374] 49 Fed. Reg. at 38,044 (SPA 735).

held agency view."[375] EPA's newfound justification for departing from the substantial independence test is wholly unsupportable and its decision should be rejected.

Consequently, this Court should: (i) reject EPA's eleventh hour unexplained and legally erroneous reinterpretation of the Phase I Rule (*e.g.,* footnote 2a of the preamble to the final Phase II Rule) and hold that new, substantially independent facilities that require an increase in cooling water intake capacity are subject to the Phase I Rule's performance standards; and (ii) vacate the Phase II Rule as applied to all other new substantially independent facilities (*i.e.*, those that do not increase intake capacity) and direct EPA, on remand, to establish standards for these facilities based on the "best technology available" pursuant to a notice-and-comment rulemaking procedure that conforms to APA requirements.

CONCLUSION

For the foregoing reasons, the Phase II Rule should be vacated and remanded as set forth above.

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[375] *Cardoza-Fonseca*, 480 U.S. at 446 n.30; *see also General Electric*, 429 U.S. at 143 ("We have declined to follow administrative guidelines in the past where they conflicted with earlier pronouncements of the agency.").

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Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

I, Reed W. Super, lead attorney for the Environmental Petitioners, do hereby certify, pursuant to Fed. R. App. P. 32(a)(7)(C) as follows:

1. This brief complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B), as amended by this Court's order of May 12, 2005 because it contains 27,998 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii).

2. This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type style requirements of Fed. R. App. P. 32(a)(6) because it has been prepared in a proportionally spaced typeface using Microsoft Word in 14-point Times New Roman.

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CERTIFICATE OF SERVICE

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United States Court of Appeals for the Second Circuit

RIVERKEEPER, INC., NATURAL RESOURCES DEFENSE COUNCIL, WATERKEEPER ALLIANCE, SOUNDKEEPER, INC., SCENIC HUDSON, INC., SAVE THE BAY—PEOPLE FOR NARRAGANSETT BAY, FRIENDS OF CASCO BAY, AMERICAN LITTORAL SOCIETY, DELAWARE RIVERKEEPER NETWORK, HACKENSACK RIVERKEEPER, INC., NEW YORK/NEW JERSEY BAYKEEPER, SANTA MONICA BAYKEEPER, SAN DIEGO BAYKEEPER, CALIFORNIA COASTKEEPER, COLUMBIA RIVERKEEPER, CONSERVATION LAW FOUNDATION, SURFRIDER FOUNDATION, STATE OF RHODE ISLAND, STATE OF CONNECTICUT, STATE OF DELAWARE, COMMONWEALTH OF MASSACHUSETTS, STATE OF NEW JERSEY, STATE OF NEW YORK, APPALACHIAN POWER COMPANY, ILLINOIS ENERGY ASSOCIATION, UTILITY WATER ACT GROUP, PSEG FOSSIL LLC, PSEG NUCLEAR LLC, ENTERGY CORPORATION

Petitioners,

-against-

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, STEPHEN L. JOHNSON, IN HIS OFFICIAL CAPACITY AS ADMINISTRATOR OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

*Respondent*s

ON PETITION FOR REVIEW OF FINAL ACTION OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

[Final Form]

REPLY BRIEF OF THE ENVIRONMENTAL PETITIONERS

(Riverkeeper, Inc., Natural Resources Defense Council, Waterkeeper Alliance, Soundkeeper, Inc., Scenic Hudson, Inc., Save The Bay—People For Narragansett Bay, Friends of Casco Bay, American Littoral Society, Delaware Riverkeeper Network, Hackensack Riverkeeper, Inc., New York/New Jersey Baykeeper, Santa Monica Baykeeper, San Diego Baykeeper, California Coastkeeper, Columbia Riverkeeper, Conservation Law Foundation, and Surfrider Foundation)

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TABLE OF CONTENTS

TABLE OF AUTHORITIES v

INTRODUCTION 1

SUMMARY OF ARGUMENT 1

ARGUMENT 7

POINT I 7

EPA EXCEEDED ITS AUTHORITY BY ALLOWING COMPLIANCE WITH CWA SECTION 316(b) THROUGH RESTORATION MEASURES 7

A. This Court's Decision in *Riverkeeper* is *Stare Decisis* and Precludes the Use of Restoration Measures Here. 9

B. Congress Prohibited Restoration under Section 316(b). 13

1. The Plain Language of Section 316(b) Prohibits Restoration. 14

a. Restoration Measures are Unrelated to the Location, Design, Construction, or Capacity of Cooling Water Intake Structures. 14

b. Restoration Measures Do Not Minimize Adverse Impact. 22

2. Restoration Measures are Inconsistent with Congress's Clearly-Expressed Intent in Passing the 1972 CWA Amendments. 28

a. Congress Intended Intake Structures to be Regulated Directly, Without Resort to Water Quality Measurements. 28

b. The Rule Requires Correlating Effects of Particular Intake Structures and Proposed Restoration Measures with Fish Populations and Larger Ecosystems. 36

c. Congress Also Mandated National Uniformity to Eliminate the "Race to the Bottom." 40

C. EPA Cannot Provide the Reasoned Analysis Required for a Change in Position from 1982. 44

D. There Are No Material Differences Between the Phase II and Phase I Rules. 47

1. Restoration is Prohibited for New and Existing Facilities Alike. 47

2. EPA's "Regulatory Safeguards" Cannot Salvage Restoration. 50

3. The Phase II Rule Defines No Terms That Were Not Considered By the Court in the Phase I Rule. 52

E. The Past Use of Restoration by Some Facilities Is Irrelevant. 53

POINT II 63

THE RULE'S COST-BENEFIT VARIANCE IS UNAUTHORIZED 63

A. The CWA Prohibits the Relaxation of National Standards Based on a Site-Specific Benefits Valuation. 63

B. Like Restoration, the Cost-Benefit Variance Bases Permitting on a Prohibited Assessment of Water Quality, as Well as Monetization. 66

POINT III 71

EPA'S PERFORMANCE RANGE AND "TIOP" ARGUMENTS ARE WITHOUT MERIT 71

A. EPA Ignores the Governing Law. 71

1. Congress Required Precise, Single-Level Limitations. 71

2. This Court Required Facilities to Aim for the Benchmark on Which BTA was Based and to Not Fall Below the Margin of Error for Measuring Compliance. 75

B. EPA Provides No Justification for Allowing Facilities to Avoid Using the Best Techology, Even When It is Available and Feasible. 76

C. The TIOP Provison Thwarts Public Particiation and Citizen Enforcement. 79

1. TIOPs Improperly Prohibit Citizen Enforcement. 79

2. The TIOP Provison Is Not a Logical Outgrowth of the Proposal. 81

POINT IV 84

EPA'S CLASSIFICATION OF NEW, SUBSTANTIALLY INDEPENDENT FACILITES AS "EXISTING FACILITIES" VIOLATES SECTION 316(b) AND THE APA 84

A. EPA Has Not Sufficiently Justified Application of the Phase II Rule to Substantially Independent Facilities. 86

B. EPA Identifies No Rationale or Data in its Proposal. 91

C. The Preamble to the Final Phase II Rule Substantively Changed How the Phase I Rule's Definition of New Facility is Implemented, Without Notice. 94

POINT V 100

THE RULE'S COST-COST VARIANCE IS UNAUTHORIZED 100

A. The Final Variance Is Not a "Logical Outgrowth" of the Proposal. 100

B. The Cost-Cost Variance Is More Expansive than Any Previously-Approved CWA Variance. 105

POINT VI 113

EPA IMPROPERLY RELIED ON A MONETIZED COST-BENEFIT ANALYSIS TO SELECT THE REGULATORY OPTION IT PROPOSED AND ULTIMATELY ADOPTED 113

CONCLUSION 120

TABLE OF AUTHORITIES

Federal Cases

Alaska Dep't of Envtl. Conservation v. EPA, 540 U.S. 461 (2004) 43

Am. Textile Mfrs. Inst., Inc. v. Donovan, 452 U.S. 490 (1981) 114

American Frozen Food Inst. v. Train, 539 F.2d 107 (D.C.Cir. 1976)..... 42, 104

Appalachian Power Co. v. EPA, 671 F.2d 801 (4th Cir. 1982)..... 115

Barhart v. Walton, 535 U.S. 212 (2002)..... 53

Bates v. U.S., 522 U.S. 23 (1997) 25

Bethlehem Steel Corp. v. EPA, 538 F.2d 513 (2d Cir. 1976) ..... *passim*

Board of Governors of the Fed. Reserve Sys. v. Dimension Fin. Corp., 474 U.S. 361 (1986) 17

Chemical Mfrs. Ass'n. v. EPA, 870 F.2d 177 (5th Cir. 1989) 115

Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837 (1984) .... *passim*

Cronin v. Browner, 898 F.Supp. 1052 (S.D.N.Y 1995) 80

E. I. du Pont de Nemours & Co. v. Train, 430 U.S. 112 (1977) 35, 66

Envtl. Integrity Project v. EPA, 425 F.3d 992 (D.C. Cir. 2005)..... 82

EPA v. California ex rel. State Water Resources Control Board, 426 U.S. 200 (1976) 27, 30, 31, 49

Florida Power & Light Co. v. Wisconsin Elec. Co., 846 F.2d 765 (D.C. Cir. 1988)..... 92

Friends of the Earth v. Gaston Copper Recycling Corp., 204 F.3d 149 (4th Cir. 2000) 19

Hooker Chems. & Plastics Corp. v. Train, 537 F.2d 620 (2d Cir. 1976) 17, 30, 48, 72

Kennecott v. EPA, 780 F.2d 445 (4th Cir. 1985) 103

Lechmere, Inc. v. NLRB, 502 U.S. 527 (1992) 10

Maislin Indus., U.S., Inc. v. Primary Steel, Inc., 497 U.S. 116 (1990) 10

Nat'l. Elec. Mfrs. Ass'n. v. EPA, 99 F.3d 1170 (D.C. Cir. 1997).....92

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Neal v. United States, 516 U.S. 284 (1996)..... ...10

NRDC v. EPA, 537 F.2d 642 (2d Cir. 1976)..... .64

NRDC v. EPA, 822 F.2d 104 (D.C. Cir. 1987).....73

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NRDC v. EPA, 863 F.2d 1420 (9th Cir. 1988) 73, 74

NRDC v. Muszynski, 268 F.3d 91 (2d Cir. 2001) 17

PPG Industries, Inc. v. EPA, 495 U.S. 910 (1990)..... 115

Riverkeeper, Inc. v. EPA, 358 F.3d 174 (2d Cir. 2004)..... *passim*

Robinson v. Shell Oil Co., 519 U.S. 337 (1997) 11, 13

Russello v. U.S., 464 U.S. 16 (1983) 25

Texas Oil & Gas Ass'n v. EPA, 161 F.3d 923 (5th Cir. 1998) 28

Train v. NRDC, 421 U.S. 60 (1975) 54

United States v. Riverside Bayview Homes, 474 U.S. 121 (1985) 17, 19

Virginia Elec. & Power Co. v. Costle, 566 F.2d 446 (4th Cir. 1977) 29, 35, 80

Weyerhaeuser v. Costle, 590 F.2d 1011 (D.C. Cir. 1978)..... *passim*

Federal Statutes

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CWA § 101(a), 33 U.S.C. § 1251(a) 17

CWA § 301(b)(1)(A), 33 U.S.C. § 1311(b)(1)(A) 115

CWA § 301(b)(2)(A), 33 U.S.C. § 1311(b)(2)(A) 114

CWA § 301(g), 33 U.S.C. § 1311(g) 32

CWA § 301(n)(1), 33 U.S.C. § 1311(n)(1)..... 109

CWA § 301(n), 33 U.S.C. § 1311(n) 110

CWA § 302(b)(2), 33 U.S.C. § 1312(b)(2)..... 114

CWA § 302, 33 U.S.C. § 1312 32

CWA § 303(d)(1)(D), 33 U.S.C. § 1313(d)(1)(D) 18

CWA § 303, 33 U.S.C. § 1313 19

CWA § 304(b)(4)(B), 33 U.S.C. § 1314(b)(2)(B) 114

CWA § 304(b)(4)(B), 33 U.S.C. § 1314(b)(4)(B) 114

CWA § 316(a), 33 U.S.C. § 1326(a) 18, 35

CWA § 316(b), 33 U.S.C. § 1326(b) 72

CWA § 402(a)(1)(B), 33 U.S.C. § 1342(a)(1)(B) 74

CWA § 402(b)(1)(B), 33 U.S.C. § 1342(b)(1)(B) 41

CWA § 502(19), 33 U.S.C. § 1362(19) 62

CWA § 505(a)(1)(A), 33 U.S.C. § 1365(a)(1)(A) 80

CWA § 505(f), 33 U.S.C. § 1365(f) 80

CWA § 505, 33 U.S.C. § 1365 79

CWA § 510, 33 U.S.C. § 1370 .... 42, 103

Federal Regulations

40 C.F.R § 125.30(b) 112

40 C.F.R. § 125.30(c)(1) 110

40 C.F.R. § 125.83 .... 52, 95, 96

40 C.F.R. § 125.84(b)(1)..... ..... 21, 73

40 C.F.R. § 125.84(d)(1)..... 89

40 C.F.R. § 125.85 89

40 C.F.R. § 125.95(b)(5)(iii) 37, 39

40 C.F.R. § 125.95(b)(5)(iv)..... 38

40 C.F.R. § 125.95(b)(6)(ii)..... 69

40 C.F.R. § 125.98(b)(1)(iii)..... 77

40 C.F.R. § 125.98(b)(1)(iv)..... 81

40 C.F.R. § 1508.20 25

Federal Register

45 Fed. Reg. 59,343 (Sept. 9, 1980) 88

66 Fed. Reg. 65,255 (Dec. 18, 2001) ..... *passim*

67 Fed. Reg. 17,121 (April 9, 2002) ..... *passim*

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Executive Orders

Executive Order 12866, 58 Fed. Reg. 51,735 (Oct. 4, 1993) 113, 117, 118

Other Authorities

In re Brunswick Stream Electric Plant, Decision of the General Counsel, No. 41 (June 1, 1976) 21

In re the Petition for Contested Case Hearing Regarding WPDES Permit No. WI-0000914-07-0 issued to Wisconsin Electric Power Company for the Oak Creek Power Plant and Elm Road Generating Station located in Oak Creek, Wisconsin, Case No. IH-05-06, State of Wisconsin Division of Hearings and Appeals, October 31, 2005 98

Phillip M. Kannan, *The Logical Outgrowth Doctrine in Rulemaking*, 48 Admin. L. Rev. 213 (1996) 92

INTRODUCTION

Environmental Petitioners[1] submit this brief in reply to the November 10, 2005 brief of respondent U.S. Environmental Protection Agency ("EPA" or the "Agency"); the December 12-13, 2005 supplemental briefs of petitioners UWAG,[2] PSEG,[3] and Entergy[4] (collectively, "Industry"); and the December 12-13, 2005 proposed *amicus curiae* briefs of the American Petroleum Institute (API) and the State of Nebraska, *et al.*, ("Proposed *Amici*") in these consolidated actions.

SUMMARY OF ARGUMENT

Each year, power plants withdraw more than 78 trillion gallons from U.S. waters, impinging and entraining vast quantities of aquatic organisms.[5] In 1972, Congress required EPA to promulgate "best technology available" (BTA) regulations under Clean Water Act sections 316(b), 301, and 306[6] as end-of-pipe standards predicated on the application of technology to the plants themselves,

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[1] The Environmental Petitioners are listed on the cover hereto and in their opening brief.

[2] "UWAG" refers to the Utility Water Act Group, Appalachian Power Company, and Illinois Energy Association, collectively.

[3] "PSEG" refers to PSEG Fossil LLC and PSEG Nuclear LLC.

[4] Entergy Corporation.

[5] *See* Environmental Petitioners Opening Brief ("Env. Pets. Br.") at 12-13.

[6] 33 U.S.C. §§ 1251 *et seq.*, 1326(b), 1311, 1316 ("CWA" or "Act").

"without resort in the first instance to water quality measurements."[7] In its Phase II Rule,[8] EPA established national technology-based performance standards requiring the installation of intake structure technologies to reduce impingement and entrainment, but then illegally eviscerated its own standards with an elaborate assortment of gaping loopholes and industry-friendly escape hatches that render the Rule toothless.

EPA's lax Rule would violate the CWA's most fundamental precepts. Congress enacted the 1972 CWA to simplify the ineffective regulatory structure which had allowed gross degradation of the nation's waterways. In particular, it deliberately established the National Pollutant Discharge Elimination System (NPDES) program to standardize permitting across the nation and to relieve regulators from the need to conduct costly, lengthy, and indeterminate ecological studies to issue permits.

The Rule flouts this clear regulatory structure in numerous respects, which EPA and Industry have failed to rebut. First, the Rule would allow facilities to attempt off-site regeneration of the organisms destroyed by their intakes instead of minimizing the impacts with available intake structure technology. Contrary to

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[7] *Riverkeeper, Inc. v. EPA*, 358 F.3d 174, 190 (2d Cir. 2004).

[8] *Final Regulations to Establish Requirements for Cooling Water Intake Structures at Phase II Existing Facilities,* 69 Fed. Reg. 41,576 (July 9, 2004) ("Phase II Rule" or "Rule").

EPA's claims, this Court's decision in *Riverkeeper* – holding that restoration measures are plainly inconsistent with section 316(b)'s statutory text and Congress's clearly expressed intent in enacting the 1972 CWA[9] – is *stare decisis* and prohibits restoration here. Moreover, a *de novo* analysis compels the same result: EPA's and Industry's contortion of various words in the statute cannot change its plain language, which prohibits restoration measures because they (1) fail to regulate intake structures, and (2) do not minimize impacts. Furthermore, despite EPA's unsupported denials, the text of the Rule clearly demonstrates that restoration measures involve precisely the kind of complex ecological fact-finding as a condition to permitting that Congress abrogated in 1972. Further, because EPA lacks the statutory authority to allow section 316(b) compliance through restoration, none of the purported factual differences EPA cites between this Rule and the Phase I Rule[10] have any relevance. Indeed, the limited prior experience with restoration cited by EPA and Industry underscores the conclusion that Congress prohibited such measures, which have never been utilized, nor proven successful, as a substitute for available intake structure technologies. (*See* Point I, *infra*.)

The Rule's cost-benefit variance is unauthorized because it contains the

[9] 358 F.3d at 189.

[10] *Regulations Addressing Cooling Water Intake Structures for New Facilities*, 66 Fed. Reg. 65,255 (Dec. 18, 2001).

same fatal flaw as restoration measures – it requires permit writers to conduct complex ecological fact-finding to determine the extent of the consequential damage a particular intake structure causes to ambient water quality, as measured by wildlife levels. It also involves monetization of these water quality harms, which economics cannot accomplish, creating a further evidentiary quagmire for regulators, antithetical to NPDES permitting. (*See* Point II, *infra*.)

In addition, the Rule allows facilities that are capable of reducing entrainment by 90 percent through the use of the technologies EPA identified as the best available to instead install other technologies designed to be only 60 percent effective. It further allows them to avoid enforcement indefinitely, even if their actual performance falls below 60 percent. EPA has identified no legal basis for this discount in protection and immunity from enforcement, which flatly violates (1) the CWA requirement for a single level of protective technology; (2) this Court's directive that facilities must aim for the single-level standard and may not actually perform lower than the identified margin of error; (3) Congress's intent regarding citizen enforcement of NPDES permits; and (4) the Administrative Procedure Act's ("APA") notice-and-comment requirements. (*See* Point III, *infra*.)

EPA also determined in the Phase II rulemaking – without justification, record support, or proper notice – that a new, separate power plant to be constructed on the same site as an existing power plant should itself be considered

an "existing" facility, even if it is operationally independent from the existing plant. None of EPA's purported rationales has anything to do with substantially independent, separate facilities. Moreover, EPA identifies no rationale or data whatsoever on this subject in the proposed Rule. Furthermore, without any notice, EPA shifted the test for distinguishing new from existing facilities when it stated for the first time in the preamble to the final Rule that new power generating units added to existing *sites* would be considered "existing" regardless of their operational independence. (*See* Point IV, *infra*.)

Contrary to EPA's claims, the Rule's cost-cost variance is not a "logical outgrowth" of the proposal because, until EPA published facility names in the final Rule, it gave no hint that actual facility costs would be used in implementing the variance, and citizens had no basis for identifying the precise cost-cap EPA had assigned to any named facility. Further, the variance is a cavernous loophole far broader than any CWA variance ever sanctioned by Congress or the courts, or ever before issued by EPA. It not only bases the variance solely on cost, which CWA section 301(n)'s Fundamentally Different Factors ("FDF") variance provision prohibits, but reduces the threshold from "wholly disproportionate" or "fundamentally different" to "significantly greater"; fails to allow more stringent standards; and functions not as a variance but as an unprecedented, individualized cost-cap on industry compliance. (*See* Point V, *infra*.)

Finally, EPA admits it conducted a monetized cost-benefits analysis in the rulemaking, but argues, implausibly, that such analysis did not affect its decision-making and, incorrectly, that the CWA does not prevent it from doing so. In fact, the economic test applicable to EPA's establishment of BTA regulations prohibits such monetized cost-benefit analysis. (*See* Point VI, *infra*.)

If allowed to stand in its present form, the Rule would sanction precisely the kind of regulatory uncertainty that Congress intended NPDES technology standards to eliminate in 1972, and would perpetuate the use of outdated intake structure technology that destroys aquatic organisms by the billions.

ARGUMENT

POINT I[11]

EPA EXCEEDED ITS AUTHORITY BY ALLOWING COMPLIANCE WITH CWA SECTION 316(b) THROUGH RESTORATION MEASURES

EPA, Industry, and Proposed *Amici* devote approximately 155 pages in six different briefs to defending restoration measures.[12] Their various arguments coalesce around two basic themes, each plainly erroneous: (1) that this Court's interpretation of section 316(b) in *Riverkeeper* does not preclude restoration here;[13] and (2) that EPA's interpretation of the statute is "permissible"[14] in light of allegedly material differences between the Phase II Rule and the Phase I Rule partially remanded in *Riverkeeper*.[15]

Both arguments should be rejected. First, contrary to their claims, the *Riverkeeper* decision is *stare decisis* here because this Court held there that section

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[11] This reply brief orders the six Points differently than did Environmental Petitioners' opening brief. This point corresponds to Point III in our opening brief.

[12] *See* EPA Br. at 95-134; PSEG Supp. Br. at 1-48; UWAG Supp. Br. at 3-21; API Proposed *Amicus* Br. at 1-22; Nebraska Proposed *Amicus* Br. at 1-25; Texas Proposed *Amicus* Br. at 1-3.

[13] *See, e.g.,* EPA Br. at 96-101; PSEG Supp. Br. at 19-20.

[14] *See, e.g.,* EPA Br. at 122-34; PSEG Supp. Br. at 20-32; UWAG Supp. Br. at 9-21.

[15] *See, e.g.,* EPA Br. at 102-21.

316(b)'s plain language and clearly-expressed Congressional intent prohibit use of restoration measures as a substitute for technology. (*See* Point I.A., *infra*.) Second, a *de novo* analysis also yields the identical result: the Phase II Rule's restoration measures provision contradicts the statutory text (which requires intake structure technologies to minimize impacts) as well as Congress's intent in enacting the 1972 CWA amendments (which was to predicate pollution control technology on the plants themselves so as to reduce pollution at its source and avoid futile assessments of ambient water quality). (*See* Point I.B.) EPA also still lacks a reasoned analysis for its change in position from 1982, when it testified to Congress that section 316(b) prohibits restoration. (*See* Point I.C, *infra*.) The fundamental inconsistency between restoration and the statute is not, and could not be, remedied by EPA's purported reinterpretation of the section 316(b)'s plain language, the limited distinction between new and existing facilities, the ineffectual "procedural safeguards" EPA added to the Phase II Rule, or the prior use of restoration by a handful of facilities. (*See* Points I.D. and E, *infra*.)

As shown below, section 316(b) prohibits the use of off-site ecological restoration in lieu of the cooling water intake technologies EPA itself identified as the best technology available for minimizing impingement and entrainment, which it found are the "primary" adverse environmental impacts of cooling water intake

structures.[16] In sum, the Rule's restoration provision is unauthorized and should be vacated and remanded as a matter of *stare decisis* or, if the Court undertakes a *de novo* review, for the same reasons this Court articulated in *Riverkeeper*.

A. This Court's Decision in *Riverkeeper* is *Stare Decisis* and Precludes the Use of Restoration Measures Here.

Contrary to EPA's argument,[17] the Supreme Court in *National Cable & Telecommunications Ass'n v. Brand X* held that a "judicial precedent holding that the statute unambiguously forecloses the agency's interpretation, and therefore contains no gap for the agency to fill, displaces a conflicting agency construction."[18] This Court held in *Riverkeeper* that EPA "exceeded its authority"[19] because allowing compliance with section 316(b) through restoration measures is "plainly inconsistent with the statute's text"[20] and "contradicts Congress's clearly expressed intent."[21] That decision is entitled to *stare decisis*

[16] 69 Fed. Reg. at 41,598/3; *see also id.* at 41,600/2 (SPA 197, 199).

[17] EPA Br. at 98-101.

[18] 125 S. Ct. 2688, 2700 (2005).

[19] 358 F.3d at 191.

[20] *Id.* at 189.

[21] *Id.* at 181.

under *Brand X* and a line of prior Supreme Court cases cited with approval therein.[22]

Riverkeeper remanded restoration measures pursuant to step one of *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*,[23] and not, as EPA contends, the more deferential step two.[24] The first step of *Chevron* directs courts to determine whether Congress has "directly spoken to the precise question at issue," and if "the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress."[25] In evaluating whether Congress has directly spoken to an issue, courts "determine whether the language at issue has a plain and

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[22] *Neal v. United States*, 516 U.S. 284, 295 (1996) ("[o]nce we have determined a statute's meaning, we adhere to our ruling under the doctrine of *stare decisis*, and we assess an agency's later interpretation of the statute against that settled law."); *Maislin Indus., U.S., Inc. v. Primary Steel, Inc.*, 497 U.S. 116, 131 (1990) (holding that a court's interpretation of a statute trumps an agency's under *stare decisis* if the prior court holding "determined a statute's *clear* meaning.") (emphasis in original); *see also Lechmere, Inc. v. NLRB*, 502 U.S. 527, 536-37 (1992).

[23] 467 U.S. 837 (1984).

[24] *See* EPA Br. at 100-101, incorrectly characterizing as the holding this Court's observation in dictum concerning "EPA's prior [1982] understanding of its authority under the statute." Indeed, elsewhere in its brief EPA itself characterizes that portion of the opinion as dictum. EPA Br. at 133 n. 50 ("The *Riverkeeper* court reached the same conclusion [that EPA interpreted the statute in 1982 as not allowing restoration], albeit in dictum.").

[25] 467 U.S at 842-43.

unambiguous meaning with regard to the particular dispute in this case."[26] Further, "[t]he plainness or ambiguity of statutory language is determined by reference to [1] the language itself, [2] the specific context in which that language is used, and [3] the broader context of the statute as a whole."[27] This Court in *Riverkeeper* considered all three of these reference points before concluding that restoration is "plainly inconsistent with the statute's text"[28] and "contradicts Congress's clearly expressed intent."[29]

First, *Riverkeeper* held that restoration measures are plainly inconsistent with two different aspects of the statutory language.[30] Second, this Court examined the specific context in which that language is used, comparing section 316(b) to section 316(a), and reached the same result.[31] Third, with respect to the

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[26] *Robinson v. Shell Oil Co.*, 519 U.S. 337, 340 (1997).

[27] *Id.* at 341.

[28] 358 F.3d at 189-190.

[29] *Id.* at 181.

[30] *Id.* at 189 (Restoration measures "have nothing to do with the location, the design, the construction, or the capacity of cooling water intake structures . . . [and] do not minimize [adverse environmental impacts] in the first place."); *see also* Env. Pets. Br. at 52-54; 57-62.

[31] *Id.* at 190 ("That Congress provided for a water quality standards approach to thermal discharges but did not include that approach (or make any reference to it) in the very next subsection, counsels against including restoration measures within the best technology available."); *see also* Env. Pets. Br. at 54-57.

broader context of the statute as a whole, it concluded that restoration measures "[are] plainly inconsistent with . . . Congress's intent in passing the 1972 amendments." [32]

This Court's *Riverkeeper* decision thus makes clear that Congress unambiguously prohibited restoration measures as a means of compliance with section 316(b), thereby leaving no gap for an agency interpretation to fill. As such, *Riverkeeper* is *stare decisis* and EPA is warranted no deference under *Brand X* or *Chevron* in this case.[33]

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[32] *Id.* at 189. *See also id. at* 189-190 ("Restoration measures resemble the pre-1972 approach to water pollution . . . [because they] involve exactly the same hurdles" that caused Congress to fundamentally reform the statute.); Env. Pets. Br. at 62-66.

[33] In fact, the portion of *Brand X* cited by EPA is itself dictum. Although the interaction of *stare decisis* and *Chevron* was "not, strictly speaking, necessary" to the Supreme Court's disposition, it addressed the question because of "genuine confusion in the lower courts." 125 S. Ct. at 2702. But the circumstances causing such confusion are not present in the case at bar. In *Brand X*, the Ninth Circuit had improperly relied on the *stare decisis* effect of its statutory construction in a prior case, rather than applying the two-step *Chevron* analysis to the FCC's construction of that same term. *Id.* at 2698-99. Significantly, the Ninth Circuit had not applied the *Chevron* framework in its prior case because it was not then reviewing an administrative proceeding and the FCC was not a party. *Id.* That is clearly distinguishable from the instant case. The Supreme Court found that, in such circumstances, "[t]he better rule is to hold judicial interpretations contained in precedents to the same demanding *Chevron* step one standard that applies if the court is reviewing the agency's construction on a blank slate." *Id.* at 2700. Conversely, here, this Court's prior interpretation of the section 316(b) was made while reviewing an administrative proceeding under the demanding *Chevron* step one standard. Thus, the issue that prompted *Brand X*'s dictum – whether a judicial

B. Congress Prohibited Restoration under Section 316(b).

Even if the Court were free to disregard the doctrine of *stare decisis* and revisit the issue of whether section 316(b) allows EPA to substitute restoration measures for "best technology available," and decided to do so, the analysis and conclusion would be the same as in *Riverkeeper* because the statute has not changed and the facts of this case are not different in any material respect than the facts the Court had before it in *Riverkeeper.*

Under *Chevron*, this Court must first determine whether Congress has directly spoken to the precise question at issue and intended to prohibit restoration measures as a means of complying with section 316(b).[34] Significantly, all three reference points – *i.e.,* "the language itself, the specific context in which that language is used, and the broader context of the statute as a whole"[35] – none of which have changed since *Riverkeeper* (or, indeed, since 1972), demonstrate that Congress prohibited restoration. Thus, EPA and Industry are mistaken in claiming

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construction arrived at without application of the *Chevron* test should obviate a *Chevron* analysis in a subsequent case – is not present here. *Stare decisis* is particularly appropriate in this case because EPA was a party to *Riverkeeper*, which involved a challenge to restoration measures in an earlier phase of a three-phase rulemaking.

[34] 467 U.S. at 842-43.

[35] *Robinson*, 519 U.S. at 341.

that restoration is consistent with the statute.[36]

1. The Plain Language of Section 316(b) Prohibits Restoration.

"Section 316(b) instructs the EPA to 'minimiz[e] adverse environmental impact' by regulating the 'location, design, construction, and capacity of cooling water intake structures.'"[37] Restoration measures contradict this statutory text in two separate respects: (1) they are wholly unrelated to the "location," "design," "construction," or "capacity" of cooling water intake structures; and (2) they do not "minimize" adverse environmental impacts.[38] This Court agreed on both counts in *Riverkeeper*.[39] In an attempt to avoid the same result here and to locate some authorization for restoration measures somewhere within the statute, EPA and Industry go to extraordinary lengths to contort various words in section 316(b) and argue that its plain language should be disregarded. That argument is without merit and should be rejected.

a. Restoration Measures are Unrelated to the Location, Design, Construction, or Capacity of Cooling Water Intake Structures.

In the preambles to the proposed and final Phase II Rules, EPA claimed (just

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[36] EPA Br. at 122-34; PSEG Supp. Br. at 20-32; UWAG Supp. Br. at 9-21.

[37] *Riverkeeper*, 358 F.3d at 189.

[38] *See* Env. Pets. Br. at 52-62.

[39] 358 F.3d at 189.

as it did, unsuccessfully, in Phase I) that the "design" of a cooling water intake structure includes off-site ecological restoration measures.[40] Having failed to convince anyone – even industry[41] – of that far-fetched view, EPA has apparently abandoned that claim and does not even attempt to respond to Environmental Petitioners on that point.[42]

Contrary to EPA's mischaracterization,[43] Environmental Petitioners do not argue that restoration measures are not a "technology." Whether restoration is a technology is immaterial: while many things can be considered technologies, only *cooling water intake structure* technologies are authorized by section 316(b).

EPA and Industry maintain that authorization for restoration can be found in the word "reflect."[44] They fail, however, to address Environmental Petitioners' central contention on this point: that construing "reflect" to mean that no

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[40] 67 Fed. Reg. 17,121, 17,169/1 (April 9, 2002); 69 Fed. Reg. at 41,637/3; 66 Fed. Reg. at 65,315/1 (SPA 50, 236, 890).

[41] Pacific Gas & Electric (PG&E) stated in its rulemaking comments that "creation of an artificial reef or operation of a restocking program as an aspect of an intake structure 'design,' as EPA proposes, . . . defies any reasonable interpretation of the word." Phase II Response to Comments ("RTC") 060.022 (JA 3320).

[42] *See* Env. Pets. Br. at 52-54, 56.

[43] *See* EPA Br. at 117, mischaracterizing Env. Pets. Br. at 54-57.

[44] EPA Br. at 115-17; PSEG Supp. Br. at 21.

protective intake structure technologies are required in light of the success of other, off-site activities would violate a well-settled rule of statutory construction by rendering the words "location, design, construction, and capacity of cooling water intake structures" mere statutory surplusage.[45] Contrary to EPA's usage, the plain meaning of the word "reflect" is "to express or manifest."[46] The dictionary's example of this word in a sentence is: "Her work reflects intelligence,"[47] which obviously indicates a positive correlation between the second noun, "intelligence," and the first noun, "work." EPA and Industry ask this Court to interpret "reflect" to mean its opposite; that is, to signify an inverse relationship, so that the more effective some other technology is, the weaker the intake structure technology can be. That semantic contortion is untenable.

EPA's argument that this Court should not read section 316(b) literally, but should instead interpret the text "to effectuate statutory objectives,"[48] undermines the Agency's own position. Courts have consistently held that a central statutory objective of technology standards like section 316(b) is to "predicate[] pollution

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[45] *See* Env. Pets. Br. at 54-55.

[46] The American Heritage Dictionary 1169 (4th Ed. 2002) (Supp 477).

[47] *Id.*

[48] EPA Br. at 124.

control on the application of control technology *on the plants themselves*"[49] to reduce pollution's impacts "at their source."[50] Thus, EPA must regulate the physical plant and its operation, not other, off-site activities. EPA's citation to CWA section 101(a) to show that Congress used the word "restore" in its general "declaration of goals and policy"[51] provides no support for its position because it improperly looks to the "'broad purposes' of legislation at the expense of specific provisions."[52]

The cases EPA and Industry cite as examples of courts broadly interpreting statutory terms to effectuate the Act's purposes, *NRDC v. Muszynski*,[53] and *United States v. Riverside Bayview Homes*,[54] are inapposite. *Muszynski* was not a rulemaking case. It was a "narrow" review of agency action under the APA and,

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[49] *Hooker Chems. & Plastics Corp. v. Train,* 537 F.2d 620, 623 (2d Cir. 1976) (emphasis added).

[50] *Bethlehem Steel Corp. v. EPA*, 538 F.2d 513, 515 (2d Cir. 1976). *See also* Point I.B.2, *infra* at 28-31, on Congress's intent in establishing technology-based standards as the cornerstone of the 1972 CWA.

[51] EPA Br. at 122; 33 U.S.C. § 1251(a).

[52] *Board of Governors of the Fed. Reserve Sys. v. Dimension Fin. Corp.*, 474 U.S. 361, 373 (1986).

[53] 268 F.3d 91 (2d Cir. 2001); EPA Br. at 124-25.

[54] 474 U.S. 121 (1985); PSEG Supp. Br. at 23-24.

unlike the present case, the CWA provision at issue was ambiguous.[55] In *Muszynski,* this court affirmed the district court in holding that "a 'total maximum daily load' ['TMDL'] may be expressed by another measure of mass per time," *i.e.,* through annual rather than daily limits.[56] The court acknowledged that "each state shall estimate … the total maximum daily thermal load required to assure protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife."[57] The state's requirements regarding TMDLs focus on fish populations using precisely the same language that Congress employed in section 316(a) of the act and in stark contrast to section 316(b) at issue in the instant matter.[58] *Muszynski* concerned the water quality-based provisions[59] of the CWA

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[55] 268 F.3d at 98.

[56] *Id.* at 99.

[57] *Id.* at 97, quoting 33 U.S.C. § 1313(d)(1)(D).

[58] *Compare* 33 U.S.C. § 1313(d)(1)(D) quoted above with section 316(a)'s objective "to assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water." 33 U.S.C. § 1326(a). *See also Riverkeeper*, 358 F.3d at 190, and Point I.B.1.b., *infra* at 22-27 regarding the stark contrast between sections 316(a) and 316(b).

[59] Water quality standards were retained in the 1972 Act as a supplementary set of measures to address waters that are degraded despite individual compliance with technology-based standards. Permit requirements based on water quality standards may be stricter, but not more lenient, than applicable technology standards. *Riverkeeper*, 358 F.3d at 185 n.10.

not the CWA's technology-based standards. Indeed, section 303[60] of the CWA at issue in *Muszynski* is addressed entirely to water quality standards. That conclusion is reinforced by this Court's statement in *Muszynski* that establishing TMDLs "for an open-ended range of pollutants" under the water quality-based provisions of the Act "requires agencies to determine how the pollutant enters, interacts with, and, at a certain level or under certain conditions, adversely impacts an affected waterbody."[61] By authorizing EPA to undertake complex assessments of effects on ambient conditions, the Act's water-quality based provisions are completely distinct and largely divergent from the technology-based provisions in which Congress "eliminate[d] the need to address complex questions of environmental abasement and scientific traceability."[62] EPA's substitution of off-site ecological restoration measures in place of cooling water intake technologies in the instant Rule is not even remotely similar to the use of "some other periodic measure than a diurnal one"[63] for phosphorus in reservoirs in *Muszynski.*

PSEG's reliance on *United States v. Riverside Bayview Homes* is even more

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[60] 33 U.S.C. § 1313.

[61] 268 F.3d at 98.

[62] *Friends of the Earth v. Gaston Copper Recycling Corp.*, 204 F.3d 149, 163 (4th Cir. 2000).

[63] 268 F.3d at 99.

attenuated.[64] In *Riverside Bayview*, the Supreme Court upheld the U.S. Army Corps of Engineers' jurisdictional classification of "wetlands" as "waters" under the CWA, given that:

> the transition from water to solid ground is not necessarily or even typically an abrupt one. Rather, between open waters and dry land may lie shallows, marshes, mudflats, swamps, bogs – in short, a huge array of areas that are not wholly aquatic but nevertheless fall far short of being dry land. Where on this continuum to find the limit of "waters" is far from obvious.[65]

In light of such difficulty in drawing a clear distinction, as well as Congress's strong mandate to protect the nation's waters, the Court rejected the developer's "purely linguistic" interpretation, which would have excluded wetlands from any protection under the Act.[66] Conversely here, there is no difficulty whatsoever in distinguishing restoration from intake structure technologies,[67] and PSEG's suggestion that the Court go beyond the "purely linguistic level" to include restoration within the meaning of intake structure technologies would provide not more, but less, protection by allowing industry to increase its aquatic mortality.

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[64] *See* PSEG Supp. Br. at 23-24.

[65] 474 U.S. at 132.

[66] *Id.* at 132.

[67] Indeed, EPA concedes that "the Rule expressly excludes restoration measures from the definition of 'design and construction technology,'" and that it "did not consider restoration measures as the basis for establishing the performance standards applicable to existing facilities." EPA Br. at 118.

EPA and Industry's final textual argument is that a literal reading of "cooling water intake structure" would exclude not only restoration, but also other beneficial technologies like closed-cycle cooling systems and aquatic barriers.[68] But that is patently untrue, as closed-cycle cooling and other methods of intake flow reduction can be regulated within the "design"[69] or "capacity"[70] of the intake. Indeed, EPA's Phase I performance standard was articulated with specific reference to intake structure capacity and operation: "You must reduce your intake flow, at a minimum, to a level commensurate with that which can be attained by a closed-cycle recirculating cooling water system."[71] Similarly, barrier nets, aquatic filter barriers, and sound or light devices designed to deter fish from entering intake structures are obviously still within the design of the intake, even if they are placed in front of it without being physically attached, and, as such, cannot be

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[68] EPA Br. at 123-24 n. 46; UWAG Supp. Br. at 13.

[69] *Riverkeeper*, 358 F.3d at 198 ("the statute allows the EPA to regulate the operation of cooling water intake structures, as the word 'design' can reasonably be read to embrace the methods used in running a structure as well as its physical layout and technical specifications.")

[70] 66 Fed. Reg. at 65,313/3 ("EPA interprets the statute to authorize it to regulate [the] volume of the flow of water withdrawn through a cooling water intake structure as means of addressing 'capacity.' *In re Brunswick Stream Electric Plant*, Decision of the General Counsel, No. 41 (June 1, 1976).") (SPA 888).

[71] 40 C.F.R. § 125.84(b)(1).

equated with off-site, ecological improvement activities.

In *Riverkeeper*, this Court held that "[s]ection 316(b) instructs the EPA to 'minimiz[e] adverse environmental impact' *by regulating the 'location, design, construction, and capacity of cooling water intake structures*,'" and that restoration measures fail to meet that statutory mandate.[72] EPA's and Industry's contortion of isolated statutory terms do nothing to change section 316(b)'s plain meaning.

b. Restoration Measures Do Not Minimize Adverse Impact.

Restoration measures are also prohibited by the statutory text for an additional reason: they do not *minimize* adverse environmental impact as Congress required.[73] Central to this issue is the fact that EPA interpreted "adverse environmental impact as the loss of aquatic organisms due to impingement and entrainment,"[74] because "the administrative record establishes that impingement mortality and entrainment are themselves adverse to the environment."[75]

Restoration measures fail to meet the statutory mandate because they do not

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[72] 358 F.3d at 189 (emphasis added).

[73] Env. Pets. Br. at 57-62.

[74] 69 Fed. Reg. 41,612/1 (SPA 211); *see also* Env. Pets. Br. at 60.

[75] EPA Br. at 234.

attempt to minimize[76] – or reduce to any extent – what EPA itself found are the "primary and distinct types of harmful impacts associated with the use of cooling water intake structures" – impingement and entrainment.[77] Rather, they allow such impacts to occur and attempt to compensate by producing replacement organisms to provide a similar ecological function or by reducing other stresses on aquatic life. As this Court found in *Riverkeeper*, "[r]estoration measures correct for the adverse environmental impacts of impingement and entrainment; they *do not minimize those impacts* in the first place."[78]

In its brief, EPA attempts to read the word minimize out of the statute by arguing that section 316(b) is satisfied if restoration "significantly offset[s]" the impacts by producing ecological benefits yielding "performance substantially similar" in the overall waterbody or watershed.[79] Industry argues, essentially, that restoration allows them to engineer a better environment with more desirable fish than would otherwise populate the nation's waters.[80] But these claims ignore that

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[76] 40 CFR § 125.83 (minimize means "to reduce to the smallest amount, extent, or degree reasonably possible.")

[77] 69 Fed. Reg. at 41,598/3 (SPA 197).

[78] 358 F.3d at 189 (emphasis added).

[79] EPA Br. at 125.

[80] *See, e.g.,* UWAG Supp. Br. at 4 ("Restoration (especially hatcheries) can produce fish species that local fish and game authorities prefer over the ones lost to

EPA itself explicitly rejected Industry's requests to limit the goal of its BTA regulations to protecting fish populations or communities because "impingement and entrainment are themselves adverse to the environment" and because population-level effects are "too difficult to attribute to a particular cooling water intake structure in light of the myriad environmental and anthropogenic factors that can affect a fishery at the community level."[81] Minimization requires preventing aquatic mortality, rather than attempting to replace the lost organisms with others that provide a substantially similar function. These are fundamentally different concepts – the former is statutorily-authorized; the latter is not.

In obvious contrast to section 316(b), section 316(a) does manifest a statutorily-mandated focus on fish populations.[82] That section allows technology-based standards for thermal discharges to be relaxed so long as fish populations are

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the cooling water intake."); API Proposed *Amicus* Br. at 8 ("restoration measures may result in an overall improvement in the aquatic population, . . . [rather than] maintain[ing] something close to the population that would exist but for the intake structure").

[81] *See* EPA Br. at 234-35; *see also* Env. Pets. Br. at 91; *see also* Point I.B.2, *infra*. In *Riverkeeper*, this Court sanctioned EPA's focus on aquatic mortality as opposed to populations. 358 F.3d at 196.

[82] Section 316(a)'s objective is "to assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water."

protected.[83] This Court has determined that Congress acted "purposefully and intentionally" by including particular language in section 316(a) and not in the very next subsection, section 316(b).[84]

The various other laws and regulatory programs EPA and Industry cite as allowing restoration[85] are completely irrelevant to this Court's interpretation of the CWA's technology-based NPDES program because "[l]anguage in one statute usually sheds little light upon the meaning of different language in another statute, even when the two are enacted at or about the same time."[86] Even if this Court could draw any conclusions from those other regulatory programs, it would be that Congress acted purposefully when it specified "minimization" in section 316(b) as opposed to using the terms "compensation" or "mitigation."[87] Such terms are not equivalent and Congress's specific statutory directive must be respected.

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[83] *Riverkeeper,* 358 F.3d at 190.

[84] *Id.*, citing *Bates v. U.S.*, 522 U.S. 23, 29-30 (1997).

[85] *See* EPA Br. at 130-131, citing the CWA's wetland fill program under section 404; UWAG Supp. Br. at 17-18, citing the National Environmental Policy Act ("NEPA") and the Endangered Species Act; Nebraska Br. at 8-15, citing a hodge-podge of other laws.

[86] *Russello v. U.S.*, 464 U.S. 16, 25 (1983).

[87] *See* Env. Pets. Br. at 59-60 n. 184, citing EPA's section 404 memorandum of agreement with the U.S. Army Corps of Engineers and the NEPA regulations, 40 C.F.R. § 1508.20, which explicitly allow "compensation" in lieu of or as a supplement to "minimization."

In its proposed *amicus* brief, API also confuses two different issues in claiming it "is frankly at a loss to understand" this Court's holding that restoration measures "correct for the adverse environmental impacts of impingement and entrainment; they do not minimize those impacts in the first place."[88] First, the "benefits" of restoration will not "occur at approximately the same time the benefit from technologies aimed directly at reducing" impingement mortality or entrainment, as API assumes,[89] given EPA's admission in the record that "many of these [restoration] activities do not produce measurable results for many months or years after they are implemented."[90] Second, even if industry could engineer the simultaneous destruction and recreation of organisms, it would not meet section 316(b)'s requirements.

Industry seems unable to acknowledge that EPA rejected their requests to define adverse environmental impact solely with reference to observable population level declines, rather than the loss of aquatic organisms. EPA, on the other hand, should have no difficulty implementing its own carefully-supported

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[88] API Br. at 21 n. 8, quoting *Riverkeeper*, 358 F.3d at 189.

[89] *Id.*

[90] 67 Fed. Reg. at 17,147/3 (SPA 28).

finding[91] which, for reasons political or otherwise, it contradicts by claiming that restoration can minimize impacts. Even the legal commentary authored by PSEG's lawyers in 2000, which EPA cites for the conclusion that section 316(b) authorizes restoration, bases that conclusion on the assumption, explicitly rejected by EPA in promulgating the Rule, that adverse environmental impact "under section 316(b) consists of harm at the population, community, or ecosystem levels [and not] [l]osses of individual organisms."[92]

Finally, the word "minimizing" must also be construed in a manner consistent with the intent of the 1972 CWA's technology-based NPDES program, which is to focus on the "preventable causes of water pollution."[93] As shown immediately below, minimizing aquatic mortality is consistent with Congress's 1972 approach, while allowing such mortality to occur and managing its consequential effects is not.

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[91] EPA Br. at 234-35.

[92] EPA Br. at 131-32, n. 48. Thomas J. Schoenbaum & Richard B. Stewart, *The Role of Mitigation and Conservation Measures in Achieving Compliance with Environmental Regulatory Statutes: Lessons from Section 316 of the Clean Water Act*, 8 N.Y.U. Envtl. L.J. 237, 307 (2000) (Supp 212).

[93] *EPA v. California ex rel. State Water Resources Control Board*, 426 U.S. 200, 202 (1976); Point I.B.2, *infra* at 28-31; Env. Pets. Br. at 5-7.

2. Restoration Measures are Inconsistent with Congress's Clearly-Expressed Intent in Passing the 1972 CWA Amendments.

EPA admits that "technology-based effluent limitations requirements for existing sources . . . do not require a permitting authority to first establish on a site-specific basis the effects of a particular facility on overall fish populations or the ecosystem."[94] But EPA disregarded that principle by including the restoration measures provision in the Rule, under which any facility can submit a restoration plan and force the permitting authority to undertake exactly such an inquiry. EPA's claim that restoration measures do not represent "a return to the water quality based standards of pre-1972"[95] is based on its misapprehension of the law and its misrepresentation of the Rule, in which Industry joins.

a. Congress Intended Intake Structures to be Regulated Directly, Without Resort to Water Quality Measurements.

In the 1972 Act, Congress included sections 301, 306 and 316(b) as part of its technology-based framework. As this Court recognized in *Riverkeeper*, section 316(b) "makes clear that administrative regulations under this section are promulgated 'pursuant to' both sections 301 and 306 as well as section 316(b)."[96]

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[94] EPA Br. at 234, citing *Riverkeeper*, 358 F.3d at 184; *Texas Oil & Gas Ass'n v. EPA*, 161 F.3d 923, 927 (5th Cir. 1998).

[95] EPA Br. at 126.

[96] *Riverkeeper*, 358 F.3d at 185, citing cases.

In their supplemental briefs, Industry asks this Court to completely disregard sections 301 and 306,[97] contrary to section 316(b)'s statutory text, legislative history, and case law.

Congress's use of the term "best technology available" (BTA) in section 316(b) – which is textually similar to "best available technology economically achievable" in section 301 and "best available demonstrated control technology" in section 306 – and its explicit cross-reference to those sections illustrates its intent to include cooling water intake structures within the technology-based NPDES program. As this Court noted, the legislative history provides that "[s]ection 316 must be read with other sections in the bill including section 301 effluent limitations . . . and section 306, new sources."[98] And the Fourth Circuit has explained that section 316(b) "requires § 301 and § 306 standards to deal with cooling water intake structures."[99]

Notably, in 1972, Congress found that the pre-1972 system "ha[d] been

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[97] *See, e.g.,* Entergy Supp. Br. at 6 (arguing that sections 301 and 306 are "unrelated provisions"); *id.* at 7 (arguing that there is "simply no need to refer to 301 and 306" in interpreting section 316(b)).

[98] 358 F.3d at 186, quoting statement of Rep. Clark.

[99] *Virginia Elec. & Power Co. ("VEPCO") v. Costle*, 566 F.2d 446, 449-50 (4th Cir. 1977).

inadequate in every vital respect,"[100] and "rejected a regulatory approach that relies on water quality standards."[101] The problem "stemmed from the character of the standards themselves, which focused on the tolerable effects rather than the preventable causes of water pollution."[102] Congress's experience with the prior water quality regime demonstrated that it "was too difficult to establish the necessary correlation between effluent discharges by particular sources and the quality of the body of water into which the effluent flowed."[103]

In place of its prior water quality approach, Congress "predicated pollution control on the application of control technology *on the plants themselves* rather than on the measurement of water quality."[104] "Government regulators were therefore freed from the 'need [to] search for a precise link between pollution and

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[100] S. Rep. No. 92-414 (1971), reprinted in Senate Com. on Public Works, *A Legislative History of the Water Pollution Control Act Amendments of 1972*, 93d Cong., 1st Session, vol. 2, ("*Legislative History*") at 1425 (SPA 1389).

[101] *Riverkeeper*, 358 F.3d at 196; *id.* at189, quoting *Bethlehem Steel*, 538 F.2d at 515 ("it was . . . dissatisfaction with water quality standards as a method of pollution control that led to the proposal that they be replaced or supplemented with 'effluent limitations.'"); *see also* Env. Pets. Br. at 5-8 (statutory framework).

[102] *EPA v. California*, 426 U.S. 200, 202 (1976).

[103] *Hooker Chems.,* 537 F.2d at 623.

[104] *Id.* (emphasis added); *Riverkeeper,* 358 F.3d at 184 ("the 1972 amendments instruct the EPA to regulate the discharge of pollutants from their source by setting 'effluent limitations' based on the leading technology and regardless of the receiving water's quality.")

water quality in enforcing pollution controls."[105] This "shift to end-of-pipe standards"[106] marked, as this Court has recognized, "a sea change" in the federal approach to water pollution.[107] Moreover, it also:

> implemented changing views as to the relative rights of the public and of industrial polluters. Hitherto, the right of the polluter was pre-eminent, unless the damage caused by pollution could be proven. Henceforth, the right of the public to a clean environment would be pre-eminent, unless pollution treatment was impractical or unachievable. … This new view of relative rights was based in part on the hard-nosed assessment of our scientific ignorance: "we know so little about the ultimate consequences of injection of new matter into water that (the Act requires) a presumption of pollution. . . ."[108]

Water quality standards were retained in the 1972 Act only as a supplementary mechanism that – except in the case of thermal pollution under section 316(a), which is a "notable exception" – can only be used to set limitations stricter, but not more lenient, than technology-based limitations.[109]

Proposed *amicus* API incorrectly states that there was a "major shift in

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[105] *Gaston Copper*, 204 F.3d at 151, citing legislative history (internal citations omitted).

[106] *Id.* at 163.

[107] *Riverkeeper,* 358 F.3d at 184.

[108] *Weyerhaeuser v. Costle*, 590 F.2d 1011, 1043 (D.C. Cir. 1978), citing legislative history (internal citations omitted).

[109] *EPA v. California,* 426 U.S. at 205 n. 12; *Riverkeeper*, 358 F.3d at 184 n. 10, 190; *Weyerhaeuser*, 590 F.2d at 1043.

emphasis contained in the Clean Water Act of 1977."[110] In fact, just the opposite is true. In 1977, Congress rejected industry's pleas to shift back to a water quality approach:

> [I]n 1977 Congress amended the Act, although generally holding to the same tack set five years earlier. Notably, during those five years, representatives of the paper industry had appeared before Congress and urged it to change the Act and to incorporate receiving water capacity as a consideration. Nonetheless, Congress was satisfied with this element of the statutory scheme. Except for a provision specifically aimed at discharges from "publicly owned treatment plants," ... it resolved in the recent [*i.e.,* 1977] amendments to continue regulating discharges into all receiving waters alike.[111]

In 1977, Congress also observed that its "one experiment in the Act with allowing consideration of receiving water capacity," section 316(a), "had led to a regulatory breakdown. 'Heat has thus become an unregulated pollutant, clearly not the intent of the Congress. . . . That limited exemption has been turned into a gaping loophole.'"[112]

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[110] API Br. at 17.

[111] *Weyerhaeuser*, 590 F.2d at 1043-44, citing legislative history (internal citations omitted). The quoted passage also refutes API's claim that *Weyerhaeuser* interpreted the CWA only as it existed before the 1977 amendments. *See* API Br. at 17.

[112] *Id.* at 1044, citing legislative history. API's reference to two other provisions of the Act that refer to water quality do not support its argument. API Br. at 18-19. As API admits, section 302, 33 U.S.C. § 1312 is the provision of the Act that allows effluent limitations to be made more stringent, but not less stringent, than those resulting from technology-based standards. Section 301(g), 33 U.S.C. § 1311(g) allows, for certain pollutants, effluent limitations based on

EPA rejects Industry's far-flung position and accepts, as it must, that section 316(b)'s "best technology available" mandate should be "understood in light of similar phrases in the CWA and referenced in Section 316(b)" *i.e.*, section 301 and 306.[113] EPA errs, however, in claiming that "Section 316(b), unlike Sections 301 and 306, establishes an ecological rather than a technological endpoint" and thus gives the Agency the authority to "consider not only technologies but also their effects on and benefits to the water from which the cooling water is withdrawn."[114] But this Court explicitly rejected such interpretation in *Riverkeeper*, holding that Congress intended that "the 'design' of intake structures be regulated directly, based on the best technology available, and *without resort in the first instance to water quality measurements*."[115]

Moreover, none of the technology standards, whether in section 301, 306 or

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"best available technology" (BAT) to be modified, but "such modified requirements [must] result at a minimum in compliance" with another technology-based requirement, known as "best practicable technology" (BPT). Section 316(a) remains the only section in the Act that subordinates all applicable technology-based standards to water quality considerations.

[113] EPA Br. at 12.

[114] EPA Br. at 126; *see also id.* at 15 (same).

[115] 358 F.3d at 190 (emphasis added). The reference to the "first instance" apparently reflected the Court's understanding that water quality measurements are appropriate under the CWA in order to "set standards even higher than technology-based effluent limitations" where waters remain degraded despite the uniform application of technology. *Id.* at 184 n.10

316(b), have a "technological endpoint." Rather, all of them require mandatory technological minimums to reduce pollution at its source and to do so in a manner that is easy to administer (unlike the previous federal clean water legislation). Effluent limitations under sections 301 and 306, such as BAT, BCT, BPT, and BADCT, require the application of control technology at the plant in order to reduce discharges of chemicals and other pollutants from the discharge pipe. BTA standards under section 316(b) require the application of control technology at the plant in order to reduce impacts, which EPA primarily defined as impingement and entrainment, at the intake pipe. The words "for minimizing adverse environmental impact" in section 316(b) explain in what way the technology must the best available, but they cannot alter the fundamental nature of technology standards – *i.e.,* that they predicate technology on the plants themselves to reduce pollution at its source regardless of the provable level of consequential harm.[116]

The CWA does retain mechanisms for attaining what might be termed "ecological endpoints" that were in the regime of clean water regulation before the enactment of the 1972 amendments. These are the water quality standards ("WQS"), which are used to set more stringent effluent limitations when waters are degraded despite individual compliance with technology-based standards and are governed by section 303 of the CWA. Significantly, the Fourth Circuit in *VEPCO*

[116] *See* citations at n. 49-50, *supra*.

cited the Supreme Court's opinion in *duPont*[117] and this Court's opinion in *Bethlehem Steel*[118] to bolster its conclusion that section 316(b) regulations are "closely related to the effluent limitations and new source standards of performance of §§ 301 and 306" and distinguishable from "state-imposed water quality standards under § 303."[119]

Another "ecological endpoint" that Congress used in the CWA was "to assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water."[120] Notably, Congress did not use this endpoint in section 316(b), and, in rejecting restoration measures, this Court found significant that "Congress provided for a water quality standards approach to thermal discharges [in section 316(a)] but did not include that approach (or make any reference to it) in the very next subsection [section 316(b)]." EPA's claim that "effects to and benefits to water" may be considered by permit writers is a blatant attempt to convert section 316(b)'s technology-based standards into water quality-based standards, in contravention of Congress's clearly expressed intent and this Court's holding in *Riverkeeper*. This Court

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[117] *E. I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112 (1977).

[118] *Bethlehem Steel*, 538 F.2d at 513.

[119] *VEPCO*, 566 F.2d at 451 n. 17.

[120] CWA § 316(a).

should see through EPA's ruse and reject its attempt to recast section 316(b) in this manner.

The fatal flaw with EPA's interpretation of the statute is *not* that EPA itself considered consequential water quality effects, harms, and benefits in establishing the Phase II Rule's national performance standards. To the contrary, the Rule's performance standards are based on technologies that can be installed at the intake structure to reduce impingement and entrainment. Rather, EPA erred in allowing permitting authorities to consider such water quality effects on a case-by-case, site-specific basis instead of requiring plants to use the intake structure technologies EPA identified to meet the standards EPA set.

b. The Rule Requires Correlating Effects of Particular Intake Structures and Proposed Restoration Measures with Fish Populations and Larger Ecosystems.

EPA blatantly mischaracterizes the Rule in contending that restoration measures "are not dependent on the water quality of the waterbody from which the water is withdrawn."[121] Similarly, PSEG is simply wrong when it claims that "Phase II restoration measures are *not* based on demonstrating a causal relationship between an intake structure and area-wide fish population levels."[122]

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[121] EPA Br. at 127.

[122] PSEG Supp. Br. at 34 n. 11 (emphasis in original); *see also id.* at 33-34.

As in Phase I, implementing the Rule's restoration measures provision requires three highly complex assessments of ambient water quality: first, an assessment of the intake structure's effect on fish and shellfish populations and the larger ecology of the waterbody; second, an assessment of the effectiveness of the proposed restoration measures on those same resources; and third, a comparison of these two sets of effects to determine whether the net result would be "substantially similar" to that which would result from the application of intake structure technology to meet the performance standards.[123] Contrary to EPA's and PSEG's claims, this analysis quite obviously requires correlating effects of the intake and the restoration measures on fish populations and other aspects of ambient water quality.

The Rule's Comprehensive Demonstration Study makes this abundantly clear. When a facility opts for restoration, the study requires, among other things, "[q]uantification of the ecological benefits of the proposed restoration measures"[124] which includes "calculat[ing] the production of fish and shellfish that [the facility] will achieve with the restoration measures"[125] and "demonstrat[ing] that the restoration measures will produce a level of these fish and shellfish

[123] *See* Env. Pets. Br. at 63-66.

[124] 40 C.F.R. § 125.95(b)(5)(iii).

[125] *Id.*

substantially similar to that which would result from meeting applicable performance standards." [126] For out-of-kind restoration, it also requires a demonstration that "restoration measures produce ecological benefits substantially similar to or greater than those that would be realized through in-kind restoration . . . based on a watershed approach to restoration planning." [127]

In the record and in its brief, EPA repeatedly admits that assessing the impacts of intake structures and restoration measures involve such complex ecological assessments that are enormously difficult to interpret:

> [R]estoration measures . . . require . . . evaluation of the effects of the measures on the populations of aquatic organisms or the ecosystem as a whole. [128]
>
> [R]estoration depends on the functions, behavior, and dynamics of complex biological systems that are often not scientifically understood as well as engineered technologies. [129]
>
> [T]he determination of a change in a population that is directly attributable to the operation of a cooling water intake structure may prove to be very difficult. [130]

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[126] 40 C.F.R. § 125.95(b)(5)(iv).

[127] *Id.*

[128] 66 Fed. Reg. at 65,314/3 (SPA 889).

[129] 67 Fed. Reg. at 17,147/2; *see also id.* at 17,163/1 (noting "uncertainty associated with evaluating effects to species at higher organizational levels such as populations, communities, or ecosystems.") (SPA 28, 44).

[130] RTC 011.004 (JA 3208).

> Because of the complexity of biological studies, it is very difficult to assess the cause and effect of cooling water intake structures on ecosystems or on important species within an ecosystem.[131]

EPA claims to have "tailored its regulation to mitigate the effects of the uncertainty by including, among other things, requirements for uncertainty analysis."[132] But the Rule's "uncertainty analysis" requirement merely instructs the permittee: "You must include a discussion of the nature and magnitude of uncertainty associated with the performance of these restoration measures."[133] This does nothing to address the sheer impossibility of reliably assessing fish population studies in the context of NPDES permit proceedings, as many states have informed EPA during the rulemaking.[134]

Because restoration measures require assessment of the cause-and-effect relationships among a particular plant's operation, its restoration activities, and ambient fish populations and aquatic ecology in areas as large as a "coastal

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[131] 66 Fed. Reg. at 65,285/2 (SPA 860); *see also* EPA Br. at 235 & n. 96, citing record (noting the "myriad environmental and anthropogenic factors that can impact a fishery at the community level.").

[132] EPA Br. at 120.

[133] 40 C.F.R. § 125.95(b)(5)(iii).

[134] *See* Env. Pets. Br. at 68-69.

waterbody that transects a number of watersheds,"[135] it poses even greater analytical hurdles than the pre-1972 regime, in which just correlating the plant's effect on local water quality proved virtually impossible.[136] Contrary to API's claim that this concern is based on "unfounded fears,"[137] such problems are already occurring whenever power companies interject fish population assessments into permitting proceedings.[138] In *Riverkeeper*, this Court found that EPA's own findings demonstrated that "allowing compliance through restoration measures would involve exactly the same hurdles" that plagued the pre-1972 law, due to the "virtually unbridgeable causal gap" in correlating the effect of a particular polluter on ambient water quality.[139] The same is true here.

c. Congress Also Mandated National Uniformity to Eliminate the "Race to the Bottom."

UWAG's response to the inability of states to evaluate biological studies is that "most restoration work is done by the permittee."[140] But that is exactly the

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[135] 69 Fed. Reg. at 41,609/3 (SPA 208).

[136] *Riverkeeper,* 358 F.3d 189-90.

[137] API Br. at 9.

[138] *See* Env. Pets. Br. at 14-17, 68-69.

[139] *Riverkeeper*, 358 F.3d at 189-90 (internal citations omitted).

[140] UWAG Supp. Br. at 20.

problem. Congress did not delegate permitting authority to the permittee. The NPDES process simply cannot function as Congress intended when a power company submits a 36-volume permit renewal application supported by 137 volumes of technical and reference materials – as PSEG did in seeking to undertake restoration at its Salem plant[141] – and the state permitting agency takes seven years to review and finally act upon that application,[142] even though Congress required that the permits themselves are only of five years duration.[143] By inundating regulators with site-specific information that agencies lack the resources to independently evaluate, recalcitrant power plants (which are already in operation and which states are loathe to shut down) can force regulators to settle for restoration or other lesser controls rather than battle on for years as the aquatic mortality continues. This scenario can, unfortunately, be repeated at each of the 550 power plants subject to the Phase II Rule.

In claiming that states are not harmed by the Rule because they can simply reject any proposed restoration plans,[144] adopt their own, more stringent rules,[145] or

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[141] 67 Fed. Reg. at 17,153/1 (SPA 34).

[142] *Id.*

[143] CWA § 402(b)(1)(B), 33 U.S.C. § 1342(b)(1)(B).

[144] UWAG Supp. Br. at 20.

[145] EPA Br. at 2, n. 3 and 179, n. 62.

opt out of CWA implementation altogether,[146] EPA and Industry ignore Congress's second objective in the 1972 CWA: national uniformity of standards. "Congress considered uniformity vital to free the states from the temptation of relaxing local limitations in order to woo or keep industrial facilities."[147] While CWA section 510[148] preserves states' authority to impose stricter standards than the federal minimums, such authority does not release EPA from its responsibility to enact stringent national standards, because as Congress found, "the greatest political barrier to effective pollution control is the threat by industrial polluters to move their factories out of any State that seriously tries to protect its environment."[149]

Consequently, the concern that the Phase II Rule's case-by-case evaluation of restoration in lieu of technology "would engender a new 'race to the bottom'

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[146] Entergy Supp. Br. at 2, 11.

[147] *Weyerhaeuser*, 590 F.2d at 1042; *see also American Frozen Food Inst. v. Train*, 539 F.2d 107, 129 (D.C.Cir. 1976) ("[W]ithout national standards required by § 301, the fifty states would be free to set widely varying pollution limitations…. States would be motivated to compete for industry by establishing minimal standards in their individual permit programs.").

[148] 33 U.S.C. § 1370.

[149] 1 *Legislative History* at 577 (Remarks of Rep. Reuss) (SPA 1385).

squarely at odds with the result intended by Congress"[150] is not based on "suppositions, fears, and innuendo," as API claims.[151] Rather it was a Congressional concern, based on its experience prior to 1972 when states had the primary role in setting pollution standards. This concern is further demonstrated by decades of haphazard cooling water intake regulation in the absence of uniform federal standards.[152] Moreover, the fact that states have joined each side of the argument in the case at bar underscores the need for strict uniform national standards lest those states opting for tough environmental standards be faced with undue competitive pressure from other states vying to please industry. Moreover, because water and fish, like economic activity, do not respect state borders, the absence of stringent minimum federal standards will cause states that do take pollution control seriously to suffer degradation of their shared ecological resources at the hands of less conscientious states, contrary to the CWA's goal to protect all of the nation's waters.

The use of restoration measures would deeply submerge the NPDES permitting process in precisely the analytical quagmire that Congress intended

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[150] Env. Pets. Br. at 69.

[151] API Br. at 12. API's citation to *Alaska Dep't of Envtl. Conservation v. EPA*, 540 U.S. 461, 507 (2004) on the same page is also inapposite because it cites an off-point dissenting opinion.

[152] Env. Pets. Br. at 14-17, 68-69.

section 316(b) to avoid and "throw federal legislative efforts to control water pollution into a time warp by judicially reinstating the previous statutory regime."[153] For that reason, as well, restoration is unauthorized.

C. EPA Cannot Provide the Reasoned Analysis Required for a Change in Position from 1982.

EPA mischaracterizes Environmental Petitioners' argument regarding the Agency's 1982 Congressional testimony.[154] Contrary to EPA's claim, Environmental Petitioners do not argue that "Congress's inaction on the proposed amendment . . . evidence[s] Congressional intent that restoration measures are not appropriate."[155] Rather, we argue the very different point that EPA's testimony in 1982 was an explicit admission by the Agency that it lacks the necessary statutory authority to allow restoration measures for existing facilities.[156]

In its brief, EPA attempts to rewrite the history of the proposed 1982 amendment to section 316(b) by suggesting (in the passive voice) that the amendment "was proposed" by someone unspecified and that EPA merely

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[153] *Gaston Copper*, 204 F.3d at 163.

[154] EPA Br. at 132, mischaracterizing Env. Pets. Br. at 70-72.

[155] *Id.*

[156] Env. Pets. Br. at 70-71.

"supported" it.[157] In fact, it was EPA itself that proposed the amendment, as the legislative history shows[158] and this Court recognized.[159] EPA's further claim that it supported the amendment merely to "remove the ambiguity"[160] is obviously belied by its own testimony in 1982 that "[t]he existing statutory language is very restrictive in that it authorizes only one option, best technology available, to mitigate such [entrainment] problems."[161]

This Court found that EPA may not modify its position without providing a "reasoned analysis" for the change, and it had not done so because EPA changed its position based on nothing more than its "new-found belief" that the statute no longer so restricts it:

> This case is not analogous to one in which an agency, having implemented one regulation, alters it in light of "critical reports" suggesting that it was ineffective at implementing congressional goals. . . . The EPA has always favored restoration measures (at least at existing facilities); the only change consists of the new-found belief in the EPA's authority to include them as an aspect of the best

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[157] EPA Br. at 133.

[158] *Clean Water Act Amendments of 1982: Hearings on S. 777 & S. 2652 Before the Subcomm. on Envtl. Pollution of the Comm. on Env't and Pub. Works, U.S. Senate*, 97th Cong. (1982) ("*Hearings*") at 114 (testimony of EPA Deputy Administrator, regarding "our proposed amendment") (SPA 1417).

[159] *Riverkeeper*, 358 F.3d at 190.

[160] EPA Br. at 133.

[161] *Hearings* at 114 (SPA 1417).

> technology available. Nothing in the studies to which the EPA points in defense of this provision, *see* EPA Br. at 56 & n.38; Final Rule, 66 Fed. Reg. at 65,262-65, suggests that the statutory language itself has a different plain meaning than it once did (nor could it), nor do the studies themselves demonstrate that restoration measures are more appropriate now than they were in 1982.[162]

EPA now claims that this was dictum (although, as discussed in Point I.A., *supra* at 10 n. 24, EPA characterizes this part of the *Riverkeeper* decision as the holding), and incorrectly claims that the *Riverkeeper* court "certainly did not have before it the record of EPA's post-1982 practice of authorizing restoration measures."[163] In fact, the *Riverkeeper* court explicitly noted that EPA had cited studies in defense of the restoration provision, and UWAG cited (and included in the Phase I joint appendix) the same post-1982 restoration permits that EPA and Industry cite in this case (*i.e.*, Salem, Chalk Point, etc).[164] Thus, this Court did indeed have that record before it when it found EPA lacked the reasoned analysis supported by facts in the record needed for a change in position.

Most important, as *Riverkeeper* explained, because the statutory language cannot have a "different plain meaning than it once did," there can be no reasoned analysis supporting a new interpretation of such plain meaning. EPA's new-found

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[162] 358 F.3d at 191 n. 18 (internal citations omitted).

[163] EPA Br. at 133 n. 50.

[164] *See* Suppl. Brf. of UWAG, May 5, 2003, case no. 02-4005, at 3-5 (Supp 615-17).

belief in its statutory authority reflects only the Agency's increased brazenness since 1982.

D. There Are No Material Differences Between the Phase II and Phase I Rules.

Next, EPA argues that four differences between the Phase I and Phase II Rules justify the use of restoration measures here despite their unavailability for new facilities: (1) existing facilities warrant more flexibility; (2) the statute contemplates different standards for existing facilities than for new facilities; (3) the Phase II Rule contains additional "regulatory safeguards;" and (4) EPA claims to have newly interpreted key statutory terms.[165] This argument is also without merit.

1. Restoration is Prohibited for New and Existing Facilities Alike.

EPA's attempts to justify restoration on the basis that the Phase II Rule applies to existing, rather than new, facilities[166] fail because, as shown above, restoration measures are statutorily unauthorized under section 316(b) as a matter of law, not because of their application to any particular type of facility. As observed in *Riverkeeper*: "no distinction is unambiguously made between new and existing structures: [a]ll cooling water intake structures ought to 'reflect the best

[165] EPA Br. at 102.

[166] EPA Br. at 103-107.

technology available for minimizing adverse environmental impact.'"[167] EPA itself admits that "[n]othing in the text of Section 316(b) indicates that it should be implemented differently for new and existing facilities."[168] Significantly, the *Riverkeeper* court's remand of restoration measures was in no way premised on the fact that the Phase I Rule was for new facilities, or on the terms of section 306 (which applies to new facilities) as compared to 301 (which applies to existing facilities).

EPA claims that section 301 (and, by reference, section 304[169]) allows it to consider different factors for existing facility regulations than those it considers for new facility regulations under section 306,[170] but it fails to identify any such factor that authorizes ecological restoration in lieu of intake structure technology, or authorizes compensation rather than minimization. Notably, Congress intended to prohibit a water quality approach for all technology-based standards, whether they apply to new or existing facilities. Indeed, all of the cases cited above and in *Riverkeeper* with respect to Congress's intent in enacting the 1972 CWA's technology-based program – such as *DuPont, Weyerhaeuser, Hooker Chems.,*

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[167] 358 F.3d at 186.

[168] EPA Br. at 225 n. 86.

[169] 33 U.S.C. § 1314.

[170] EPA Br. at 106.

Bethlehem and EPA v. California – were cases reviewing EPA's section 301 standards for existing facilities.[171]

Further, that existing facilities may have less flexibility than new plants because they must retrofit to improve their technology has already been addressed in the Rule's performance standards, which are based on different technology than the Phase I Rule for precisely that reason.[172] EPA "did not consider restoration measures as the basis for establishing the performance standards applicable to existing facilities"[173] and, nevertheless, it "determined, and the administrative record demonstrates, that the technologies available to reduce impingement mortality and entrainment are available" for the power industry as a whole.[174] Existing facilities can therefore meet those performance standards with technologies that minimize impingement mortality and entrainment; there is no authority in the CWA to allow them to do otherwise.[175]

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[171] 430 U.S. at 112; 590 F.2d at 1020; 537 F.2d at 624; 538 F.2d at 517; 426 U.S. at 201.

[172] 69 Fed. Reg. at 41,605/1 (SPA 204).

[173] EPA Br. at 118.

[174] EPA Br. at 294; *see also id.* at 23 (performance standards based on "technologies that EPA has determined to be commercially available for the facilities affected.").

[175] A principal difference between new and existing facilities that EPA did

2. EPA's "Regulatory Safeguards" Cannot Salvage Restoration.

Also irrelevant here are the Rule's so-called "regulatory safeguards." Environmental Petitioners have never averred, and this Court did not find in *Riverkeeper*, that the restoration was improper due to a lack of such safeguards. Indeed, in the absence of statutory authority to allow restoration measures as a means of complying with section 316(b), the Agency cannot grant itself such authority by interposing procedural hurdles, no mater how high it raises the bar. Further, the Rule's procedural hurdles are extraordinarily low. Environmental Petitioners' opening brief explained that the Rule's token threshold requirement that restoration is allowed when design and construction technologies are "less feasible, less cost effective, or less environmentally desirable" than restoration, is completely meaningless.[176] Notably, the test is disjunctive; an applicant need only meet one of the three prongs, and because power companies invariably seek to minimize their costs, they will only opt for restoration where it is more cost-

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not consider, but should have, is that new facilities do not cause any pollution during delays in the permit process. Conversely, existing facilities are already operating, in most cases, without using the best technology available and are therefore needlessly destroying billions of aquatic organisms each year, while their permits are often significantly overdue for renewal. *See* Env. Pets. Br. at 89. Thus, the straightforward application of technology mandated by the CWA, and avoiding the analytical quagmire of complex ecological assessment, is even more critical with regard to permitting these facilities than it is for new facilities.

[176] Env. Pets. Br. at 51-52 n. 157. EPA failed to respond to this point in its brief.

effective. Thus, EPA's so-called regulatory safeguards will very rarely, if ever, prevent the use of restoration. Instead, they will prohibit restoration only where the power company has no interest in doing it.

EPA also cites the Rule's requirement of a "Comprehensive Demonstration Study" design to show that restoration will produce ecological benefits deemed "substantially similar" to those that would result from minimizing impingement and entrainment.[177] But the Phase I Rule also required a Comprehensive Demonstration Study for exactly the same purpose, as this Court observed in its decision rejecting restoration.[178] As explained above, rather than justify restoration, the Comprehensive Demonstration Study itself evinces one of the core reasons why restoration is not authorized to comply with a technology standard like section 316(b): the demonstration involves an enormously complex, controversial, and ultimately futile assessment of ambient water quality, as measured by wildlife levels as well as pollutant concentrations, which Congress prohibited.[179]

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[177] EPA Br. at 108-111.

[178] *Riverkeeper*, 358 F.3d at 187 (noting the Phase I Rule allowed restoration as a compliance alternative, if it "maintain[s] a 'substantially similar' level of wildlife in the water where the intake system is located, as shown by a 'comprehensive demonstration study.'").

[179] *See* Point I.B.2.b, *supra* at 36-40.

3. The Phase II Rule Defines No Terms That Were Not Considered By the Court in the Phase I Rule.

EPA erroneously claims that it has now defined three terms – "minimize," "reflect," and "technology" – that "were not considered by the Court in *Riverkeeper.*"[180] In fact, EPA explicitly defined "minimize" in the Phase I Rule as "to reduce to the smallest amount, extent, or degree reasonably possible,"[181] and this Court explicitly considered the meaning of the term in finding that "[r]estoration measures correct for the adverse environmental impacts of impingement and entrainment; they do not minimize those impacts in the first place."[182]

Likewise, EPA's interpretation of the term "reflect" is also not new to this Court. Environmental Petitioners' opening brief explained that, in Phase I, UWAG unsuccessfully suggested the same construction of that term that EPA posits now.[183] EPA failed to respond to or even acknowledge that point, and its attempt to internalize UWAG's contrived definition does not make it new or a plausible

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[180] EPA Br. at 112, 113-119.

[181] 40 C.F.R. § 125.83; *see also* Env. Pets. Br. at 57-59.

[182] 358 F.3d at 189; *see also* Point I.B.1.b, *supra* at 22-27, and Env. Pets. Br. at 57-62, on the proper meaning of the term "minimize."

[183] Env. Pets. Br. at 54 n. 164.

construction of the statute.[184]

EPA is also wrong that it did not define restoration as a "technology" in Phase I. In fact, in the preamble to the final Phase I Rule, EPA referred to restoration measures as "restoration *technologies.*"[185]

In sum, most of the differences EPA cites between the Phase I and Phase II Rules are not actually differences at all, and the rest are immaterial. Congress plainly prohibited restoration as a means of complying with section 316(b) by any facility under any rule EPA might adopt.

E. <u>The Past Use of Restoration by Some Facilities Is Irrelevant</u>.

The prior use of restoration programs by EPA or States[186] is irrelevant to this Court's determination. EPA cannot change the plain meaning of a statute it administers by authorizing conduct inconsistent with that statute, and the cases it cites[187] are inapposite. In both *Barhart v. Walton* and *National Wildlife Federation v. Consumers Power Co.*, the statutory language in question was ambiguous, so the

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[184] *See also* Point I.B.1.a, *supra* at 15-16, on the meaning of "reflect."

[185] 66 Fed. Reg. at 65,315/1 (emphasis added) (SPA 890).

[186] *See* EPA Br. at 128-129; UWAG Supp. Br. at 14-15; PSEG Supp. Br. at 5-8 (discussing the use of restoration at six of the approximately 550 power plants subject to the Phase II Rule).

[187] *See* EPA Br. at 129-230.

courts considered the agency's prior practice as part of the deferential *Chevron* step two analysis.[188] Similarly, in *Train v. NRDC*, which predated *Chevron*, the statute was ambiguous so the court conducted an analysis appropriate to cases involving ambiguous language.[189] Here, by contrast, as this Court held in *Riverkeeper*, the statute is not ambiguous because Congress has directly spoken to the precise question under review.[190] Hence, this Court's *Chevron* step-one analysis may not properly consider EPA's prior practice "for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress."[191]

Furthermore, the permits cited by EPA and Industry in support of restoration do not support many of the other principles for which they are offered. If anything, they further demonstrate why the Phase II Rule's restoration provision should be rejected. PSEG's assertion that the Rule simply codifies the prior use of restoration while adding additional regulatory safeguards to limit their use is incorrect.[192] In fact, the Rule allows a far more liberal and expansive use of

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[188] 535 U.S. 212, 220 (2002); 862 F.2d 580, 587 (6th Cir. 1988).

[189] 421 U.S. 60, 87 (1975).

[190] *See* Point I.A, *supra* at 9-12.

[191] *Chevron*, 467 U.S. at 842.

[192] *See* PSEG Supp. Br. at 14-15.

restoration. Significantly, none of the cited permits allowed restoration as a *complete* substitute for intake structure technology. Instead, they required technological or operational measures at the intake structure under section 316(b) to reduce impingement and entrainment, and included restoration only as a *partial,* supplemental measure either due to the unavailability of further technology or under regulatory authority other than section 316(b).[193] But the Rule allows restoration to be used in lieu of any other technology, in complete satisfaction of section 316(b) requirements, on the mere showing that it will be more "cost-effective," (in other words, cheaper for the facility).[194]

The most glaring example of this distinction is the Salem nuclear plant, whose wetlands restoration program is cited by EPA as an example and discussed extensively by PSEG.[195] Salem offers no support for EPA's and Industry's position because the permitting agency clearly stated in its response to comments on the NPDES permit that the plant's estuary enhancement activities were *not*

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[193] *See* PSEG Supp. Br. at 6 ("at least in part, through the use of restoration"). Importantly, had all of the cooling water intake structure technologies EPA has identified in the rulemaking been available at the time those plants were permitted, the permitting authorities might not have decided to include restoration at all.

[194] *See* Point I.D.2, *supra* at 50-51.

[195] *See* PSEG Supp. Br. at 1-2, 8-16; EPA Br. at 128.

utilized to fulfill BTA requirements under section 316(b).[196] The plant's section 316(b) requirements are instead being met by the use of intake structure technology and intake flow restrictions that the New Jersey Department of Environmental Protection (NJDEP) identified as "available" for the plant.[197] Finding that the cost of closed-cycle cooling would be wholly disproportionate to its benefits,[198] NJDEP required technological and operational measures to reduce impingement and entrainment:

> The Department, based on a careful evaluation of various potential intake technologies in the specific circumstances of Salem, selected the present cooling water intake structure, *in conjunction with a limitation in current flow, screen modification and a sound deterrent study, as BTA under Section 316(b) at Salem.*[199]

PSEG admits this in its brief: "NJDEP decided that Salem's intake structure, together with the intake flow limitation, screen modifications, improved fish

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[196] Response to Comments Document, Salem Generating Station NPDES Permit at 3 (DCN 1-5024-PR) (JA 254).

[197] *Id.*

[198] In the absence of a national rule, permit writers implementing section 316(b) on a case-by-case basis have used a "wholly disproportionate" cost test for determining whether technology is available.

[199] Response to Comments, Salem Generating Station NPDES permit at 3 (emphasis added) (DCN 1-5024-PR) (JA 254).

bucket design, and sound deterrent study, constituted 'best technology available."[200]

The other examples cited by EPA and Industry similarly demonstrate that restoration has never been used as a primary, much less stand-alone, means of meeting section 316(b)'s technology requirements.[201] For instance, the Chalk Point plant was able to achieve significant reductions in entrainment and impingement through use of barrier nets. Although wedgewire screen technology would have been more effective, the "feasibility for successful deployment" was deemed "questionable" due to biological "fouling" issues related to the plant's high flow rates, and mitigation efforts were eventually negotiated.[202]

Similarly, the Contra Costa plant[203] implemented intake structure technologies including barrier nets and variable speed pump motors. In spite of

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[200] *See* PSEG Supp. Br. at 13. PSEG's claim that NJDEP did "not bas[e] its BTA finding on the EEP [estuary enhancement program]" solely to eliminate a potential basis for appeal is unsupported in the record and irrelevant. Whether or not the "EEP was an integral part of NJDEP's 1994 permit determinations," *id.*, the permit itself requires intake structure technologies and flow limitations to comply with section 316(b).

[201] *See* EPA Br. at 128; PSEG Supp. Br at 5-8; UWAG Supp. Br. at 14.

[202] McClean, R. *State of Maryland Perspectives on Cooling Water Intake Technologies to Protect Aquatic Organisms,* at 37 (Supp 776). Environmental Petitioners request that this Court take judicial notice, pursuant to Fed. R. Ev. 201, of this document presented by a State of Maryland official during an EPA symposium on cooling water intake structures during the rulemaking.

[203] Cited in EPA Br. at 128.

these measures, the plant continued to entrain and impinge fish species listed as endangered and was required to implement a Habitat Conservation Plan as part of its incidental take permit under both federal and state Endangered Species Acts.[204] Likewise, the NPDES permits for the Crystal River and John Sevier plants both show restoration measures were implemented only after intake technologies had been installed and the permit authority found that "[n]o other practical technological modification of the cooling water intake structures [was] available," (Crystal River) or the cost was "wholly disproportionate to the benefit" (John Sevier).[205] Finally, the Pittsburg plant's NPDES permit required "[c]hanges to plant operations includ[ing] reducing the volume of cooling water flow by using variable speed pumps [and] preferential dispatching of [unit 7 which has closed-cycle cooling]."[206] Its fish restocking program was discontinued because of increased predation by the hatchery raised fish.[207]

In no case cited by EPA or Industry, and no instance of which Environmental Petitioners are aware, was restoration the sole means of minimizing environmental impact. None of the permits allowed restoration in lieu of available

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[204] Contra Costa NPDES Permit (DCN 6-5048D) at 11-12 (JA 3074).

[205] Crystal River NPDES Permit (DCN 6-5048C) at 8; John Sevier NPDES Permit (DCN 1-5051-PR) at 2 (JA 3054, 351).

[206] Pittsburg Plant NPDES Permit (DCN 6-5048E) at 49 (JA 3183).

[207] *Id.*

intake structure technology merely because it was more cost-effective. In contrast, the Phase II Rule would allow Salem, Chalk Point, Contra Costa, Crystal River, John Sevier, Pittsburg (and every other plant in the country) to abandon all of the technological intake structure improvements that were required in the past, avoid future upgrades, and implement less expensive restoration in complete satisfaction of their section 316(b) requirements.

Finally, the cited permits do not, as EPA and Industry claim, show that restoration is effective at replacing fish killed by intakes, or even that its results are verifiable.[208] Industry continues to cite the Salem plant as a success story for restoration efforts.[209] But there is no support in the record for PSEG's claim that its restoration program "produc[es] fish and shellfish at levels sufficient to offset losses attributable to Salem's intake operations."[210] To the contrary, Salem kills more than 3 billion fish and other aquatic organisms annually through impingement and entrainment, including more than 448 million striped bass, 412 million white perch, 77 million weakfish, 59 million blueback herring, and 2 billion bay anchovy.[211] Nowhere does EPA or Industry point to any evidence that

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[208] *See* EPA Br. at 128; *see also* PSEG Supp. Br. at 2.

[209] *See* PSEG Supp. Br. at 16, EPA Br. at 128.

[210] PSEG Supp. Br. at 2.

[211] U.S. Fish and Wildlife Service technical assistance letter to Dennis Hart, NJDEP, Table 1 (DCN 3-3062-R5) (JA 606).

PSEG's restoration efforts result in production of any of these species in these quantities.[212]

Likewise, fish hatcheries stock only a fraction of the fish species killed by each plant and do not replace the myriad non-fish species killed by intakes. Compare, for example, the Maryland hatchery, cited by UWAG, which stocks just two species,[213] with the Maryland plant that impinges forty-three different fish species.[214]

Moreover, besides being insufficiently effective or verifiable, restoration efforts may cause environmental harm.[215] Salem is a case in point. Its "Estuary Enhancement Program" involves the aerial application of the herbicide Rodeo® to replace marsh reeds (*phragamites*) with different vegetation (*spartina*).[216] Over 22,000 pounds of herbicide has been spread over 2,500 acres, but there is evidence

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[212] In fact, PSEG's success criteria for its restoration project focus on vegetation coverage, algae production, and macrophyte productivity, but do not require any quantification of fish populations known to be impacted by Salem's intake structures. Delaware Riverkeeper Comments (Aug. 2002) (PublicComment1.056) at 11 (JA 4049).

[213] UWAG Supp. Br. at 4.

[214] Stupka, R.C. and Rajandra, K.S. *Survey of Fish Impingement at Power Plants in the United States Volume III. Estuaries and Coastal Waters*, Table I (DCN 6-1849) (JA 2420).

[215] *See* Env. Pets. Br. at 62 n. 194.

[216] PSEG Estuary Enhancement Program, Phragamites Control (DCN 3-3071) (JA 609).

that replacing *phragamites* with *spartina* is having little or no effect on fish production,[217] and many areas have become "dead zones."[218] In the San Francisco Bay area, the Pittsburg plant's fish restocking program was terminated "in 1994 because of the potential of these hatchery-raised fish to prey on [Endangered Species Act-] listed salmon species and Delta smelt."[219]

In sum, the examples of restoration cited by EPA and Industry establish that restoration is not an adequate substitute for intake structure technology and that such projects carry with them a substantial risk of causing their own adverse environmental impact. Such prior attempts at restoration show little more than Industry's vain attempts to "engineer" a more suitable environment.[220] The artificial world EPA and Industry would create and substitute for the natural world might well be cheaper for Industry, but it would be a much poorer one, and, in any case, one far different than the natural world Congress acted to protect when it passed the CWA and mandated, "based in part on the hard-nosed assessment of our

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[217] Delaware Riverkeeper Comments at 12, citing Root and Windham, *Phragamites on Death Row: Is Biocontrol Really Warranted?* Wetland Journal Vol. 12 Winter 2000 (JA 4050).

[218] *Id.*, citing discussions between PSEG and NJDEP (JA 4050).

[219] Pittsburg Plant NPDES Permit (DCN 6-5048E) at 49 (JA 3183).

[220] *See* footnote 80, *supra* at 23-24.

scientific ignorance,"[221] elimination of "the man-made or man-induced alteration of the . . . biological . . . integrity of water."[222] The examples of restoration measures presented by EPA and Industry underscore the conclusion that Congress did not authorize EPA to allow "restoration measures" to comply with section 316(b).

[221] *Weyerhaeuser*, 590 F.2d at 1043, citing Legislative History at 1332 (remarks of Sen. Buckley).

[222] CWA § 502(19), 33 U.S.C. § 1362(19) (CWA definition of pollution).

POINT II[223]

THE RULE'S COST-BENEFIT VARIANCE IS UNAUTHORIZED

Although EPA combines its discussion of the Phase II Rule's "site-specific compliance alternatives,"[224] the two options violate the CWA for independent reasons, and are therefore addressed separately in Environmental Petitioners' opening brief and this reply. EPA's arguments that the cost-benefit option is consistent with its authority to create variances, is not a water quality standard, and permissibly examines and monetizes environmental benefits are all unavailing, as shown below.

A. The CWA Prohibits the Relaxation of National Standards Based on a Site-Specific Benefits Valuation.

The Cost-Benefit Variance is not a valid exercise of EPA's "general authority to allow variances,"[225] because, like the restoration measures provision discussed above, it requires ecological (and economic) evaluations that are virtually impossible during permitting. This is not "consistent" with EPA's variance authority,[226] as no prior CWA variance has ever required permit writers to

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[223] This Point corresponds to Point IV in Environmental Petitioners' opening brief.

[224] EPA Br. at 135-179.

[225] EPA Br. at 140.

[226] *Id.*

identify environmental benefits, or quantify them in any manner.[227] In fact, such an approach is antithetical to the CWA's NPDES framework. Congress prohibited enormously convoluted scientific fact-finding and economic speculation at the permitting level.[228]

EPA, which could offer no justification for this retrogression within the technology-based paradigm, seeks to transform section 316(b) *into* a water-quality-based provision. It argues that section 316(b)'s reference to "adverse environmental impact … invites consideration of … environmental conditions."[229] However, as explained above, this Court in *Riverkeeper* explicitly rejected an interpretation of section 316(b) that would allow standards to be set on the basis of site-specific water quality assessments, finding that Congress intended that "the 'design' of intake structures be regulated directly, based on the best technology

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[227] The three cases cited by EPA, *Nat'l Crushed Stone Ass'n*, 449 U.S. 64 (1980), *NRDC v. EPA*, 537 F.2d 642 (2d Cir. 1976), and *Weyerhaeuser*, 590 F.2d at 1040, (EPA Br. at 140-41) involved standard FDF variances and not consideration of water quality. EPA's Phase I variance, at issue in *Riverkeeper*, also did not require and assessment of water quality. EPA's assertion that "EPA has previously considered the costs of technologies in relation to the benefits of minimizing adverse environmental impact," citing *Public Serv. Co. of New Hampshire*, EPA Br. at 158, also has nothing to do with variances, but rather concerned a "best professional judgment" determination. *See also* Env. Pets. Br. at 95.

[228] *See* Point I.B.2.a, *supra* at 28-36.

[229] EPA Br. at 157.

available, and *without resort in the first instance to water quality measurements*."[230]

Furthermore, this Court has also observed that technology-based standards and water quality standards are completely distinct from one another: "[t]he drafters of [the CWA] drew a definite distinction between water quality standards and effluent limitations, and were unlikely to have confused the two, or used one term to include the other."[231] Congress unambiguously included the language of technology-based standards ("best technology available") in section 316(b) and, in so doing, rejected a water quality standards approach.[232]

Furthermore, even if the words "adverse environmental impact" did grant EPA *itself* authority to consider environmental benefits in establishing the national standards, that would still not provide any authority for EPA to allow *permit writers* to vary the national BTA standards based on a site-specific assessment of water quality. This is because Congress did not intend the same factors considered in establishing a national standard to be reexamined at the permitting stage:

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[230] 358 F.3d at 190 (emphasis added).

[231] *Bethlehem Steel Corp.*, 538 F.2d at 514.

[232] *Riverkeeper*, 358 F.3d at 196 ("Congress rejected a regulatory approach that relies on water quality standards [for section 316(b) standards].").

> In presenting the Conference Report to the Senate, Senator Muskie, perhaps the Act's primary author, emphasized the importance of uniformity in setting § 301 limitations … [which] required that EPA focus on classes or categories of sources in formulating effluent limitations …
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> "The Conferees intend that the factors [for permitting standards] … be considered only within classes or categories of point sources and that *such factors not be considered at the time of the application of an effluent limitation to an individual point source* within such a category or class."[233]

Consequently, if environmental benefits can be considered at all, they must be considered by EPA in creating its national BTA standards. Instead, as EPA explains, the Cost-Benefit Variance here "guide[s] the permit writer to consider the same factors that EPA considered during the rulemaking to determine whether unusual, site specific circumstances result in unusually high costs or small benefits that warrant less stringent standards."[234] That is impermissible.

B. Like Restoration, the Cost-Benefit Variance Bases Permitting on a Prohibited Assessment of Water Quality, as Well as Monetization.

Contrary to EPA's claim, the Cost-Benefit variance does in fact "convert[] the Rule into a water-quality based approach."[235] EPA's argument that "the cost-benefit test does not require a finding of 'adverse environmental impact' to the

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[233] *Du Pont,* 430 U.S. at 129-30, citing legislative history (emphasis added).

[234] EPA Br. at 142 (emphasis added).

[235] EPA Br. at 156.

receiving water before performance standards for the facility would be required,"[236] ignores that it does require determination of an individual plant's environmental impact for two purposes: first, to evaluate the availability of the Cost-Benefit Variance and, second, to establish the site-specific standards to be applied under it.

As EPA acknowledges, the Benefits Valuation Study uses a "comprehensive methodology to fully value the *impacts* of impingement and entrainment *at its site* and the benefits of complying with the applicable performance standards (i.e., benefits of reductions in impingement mortality and entrainment)."[237] The permitting authority must therefore examine the quality of water (its ecological health), as affected by varying human and non-human activities, in order to set the standard for each facility. Like restoration, such approach would paralyze permitting.[238]

Given EPA's enormous difficulties in assessing and monetizing the consequential effects of impingement and entrainment,[239] the states' explicitly

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[236] EPA Br. at 161.

[237] EPA Br. at 136 (emphasis added).

[238] *See* Env. Pets. Br. at 74-78, 90-94.

[239] *See* Env. Pets. Br. at 74-85.

stated inability to do so,[240] past difficulties in section 316(b) permitting on a case-by-case basis,[241] the pre-1972 problems with water quality assessments,[242] and the post-1972 problems with section 316(a),[243] Environmental Petitioners' concerns are not "hypothetical issues that may never arise,"[244] as EPA claims, but well-documented problems that, like restoration, violate Congress's clearly expressed intent in enacting the 1972 CWA.

EPA claims that the variance is necessary to address a situation where "only a small number of fish or shellfish would be saved,"[245] such as a "highly degraded ship channel."[246] But since the variance's application is not limited to such situations, any facility in the country – including those with the highest levels of aquatic mortality, or on the most productive or sensitive waterbodies – has the right to elect the cost-benefit option. Even if such facilities might not ultimately qualify for reduced standards, the mere election to proceed under that option would

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[240] *See* Env. Pets. Br. at 68-69, 86-89.

[241] *See* Env. Pets. Br. at 14-17.

[242] *See* Point I.B.2.a, *supra* at 28-36.

[243] *Id.* at 32.

[244] EPA Br. at 171.

[245] EPA Br. at 159.

[246] *Id.*; *see also* EPA Br. at 164 ("degraded waterbody").

require the permit writer to nonetheless evaluate an entire Benefits Valuation Study just to determine the applicability of the variance.[247] Given Industry's great enthusiasm for cost-benefit approaches,[248] most facilities will not "choose to comply with the presumptive standards,"[249] as EPA hopes, but will make the election and thereby significantly delay and obfuscate the permit process.

The Cost-Benefit Variance is also impermissibly based on complex "monetization" of benefits to fish populations and ecosystems. EPA's citation of *General Elec. Co. v. Dep't of Commerce*[250] provides no authority for the present case because, as opposed to CWA permitting, the "natural resource damage claim" at issue there necessarily required monetization so as to liquidate the liability for having caused environmental damage.[251] Although EPA claims that "the record shows it is possible" to conduct the studies, it fails to support this claim with evidence.[252] EPA naively (or disingenuously) claims that state permitting agencies

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[247] 40 C.F.R. § 125.95(b)(6)(ii).

[248] *See, e.g.,* UWAG Supp. Br. at 35-41; PSEG Br. 26-31.

[249] 67 Fed. Reg. at 17153/1 (SPA 34).

[250] EPA Br. at 166.

[251] 128 F.3d 767, 774 (D.C. Cir. 1997).

[252] *See* EPA Br. at 168-69. The Economic and Benefits Analysis for the Final Phase II Rule (DCN 6-0002) ("EBA") EPA cites only repeats EPA's belief

will have less trouble than EPA itself did.[253] But as shown above, such studies, whether possible or not, were plainly prohibited by Congress as a basis for CWA permitting under the 1972 CWA.

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that "it is possible," without providing supporting evidence, EBA at C1-1, or is silent on the issue, EBA at C1-3 (JA 1772, 1774). The only completed site-specific benefits analysis EPA cites is Brayton Point, EPA Br. at 169 n. 58, which was conducted by EPA Region 1, not a state, and took enormous federal resources and many years to complete (Mt. Hope Bay having been significantly damaged by the plant in the interim). There is no reason to suppose that states, with fewer resources and less time than the federal government, can do better.

[253] *See* EPA Br. at 169 ("that EPA found it difficult to perform a monetized analysis of non-use benefits for the national rulemaking has no bearing on the requirement to prepare an accurate qualitative analysis of benefits on a site-specific level.")

POINT III[254]

EPA'S PERFORMANCE RANGE AND "TIOP" ARGUMENTS ARE WITHOUT MERIT

EPA's defense of the Rule's performance standard ranges and Technology Installation and Operation Plan (TIOP) provision is untenable because the Agency ignores or denies: (a) governing law requiring precise single-level limitations and dictating how compliance with such limitations must be measured; (b) that the Rule allows facilities to aim for the lower bound of the ranges and avoid enforcement even if their performance falls below the bottom of the range; and (c) that its public notice never revealed that the TIOPs would indefinitely replace compliance with the performance standards (rather than being limited to a five-year optimization period) and thereby permanently foreclose citizen enforcement of those standards.

A. EPA Ignores the Governing Law.

1. Congress Required Precise, Single-Level Limitations.

EPA's brief completely ignores the extensive body of CWA case law, cited by Environmental Petitioners, requiring EPA to set BTA standards as precise, single-level limitations.[255] UWAG's claim that "nothing in § 316(b) requires EPA

[254] This Point corresponds to Point II in Environmental Petitioners' opening brief.

[255] *See* Env. Pets. Br. at 38-39.

to set 'performance standards' at all,"[256] ignores the plain language of the statute,[257] as well as this Court's conclusion that "by virtue of sections 316(b), section 306's standards 'shall require that . . . cooling water intake structures reflect the best technology available.'"[258]

Instead of addressing this authority, EPA argues the irrelevant point, never contested by anyone, that the CWA allows technology-based standards to be expressed non-numerically.[259] But regardless of whether they are numeric or narrative, the CWA requires such standards to specify a single level of technology performance as the best available. The statutory phrase "best technology available" is itself a narrative standard which requires a single level of performance, as this Court has recognized:

> Congress intended that the regulations establish a single discharge level for a given subcategory. This is implicit in the Congressional choice of the superlative form in the statutory language requiring achievement of the degree of effluent reduction attainable by '*best*' technology.[260]

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[256] UWAG Supp. Br. at 29.

[257] "Any *standard* established pursuant to" CWA section 301 or 306 must require BTA for intake structures. CWA § 316(b) (emphasis added);

[258] *Riverkeeper*, 358 F.3d at 185-86, citing cases; *see also duPont*, 430 U.S. at 133 ("§ 316(b) refers to "[any] standard established pursuant to section 301.").

[259] EPA Br. at 74-76.

[260] *Hooker Chems.*, 537 F.2d at 630.

Just as Congress used a narrative phrase in the statute that requires a single level of performance, so too must EPA in its regulations.

Indeed, EPA did just that in the Phase I Rule where it promulgated a standard that was non-numeric, but nevertheless required a single level of performance: "You must reduce your intake flow, at a minimum, to a level commensurate with that which can be attained by a closed-cycle recirculating cooling water system."[261] That the performance of closed-cycle cooling may vary from site to site[262] is of no consequence because the standard requires "the greatest attainable level"[263] of impact reduction at each site.

Contrary to EPA's claim, expressing technology standards (or even water quality standards) as a range is unique to this case.[264] The only example EPA can point to, standards for pH,[265] are not expressed as a range at all, but are actually two separate standards. The bottom limit on pH indicates maximum permissible

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[261] 40 C.F.R. § 125.84(b)(1).

[262] *See* UWAG Supp. Br. at 31.

[263] *NRDC v. EPA*, 863 F.2d 1420, 1431 (9th Cir. 1988), quoting *NRDC v. EPA*, 822 F.2d 104, 115 n.12 (D.C. Cir. 1987).

[264] EPA Br. at 75 n. 37.

[265] *Id.*

acidity while the top limit indicates maximum permissible alkalinity, and the discharger must meet both standards. In the ranges here, plants need only to meet the lower standard (and sometimes not even that). If they exceed the high end of the range, it is not a violation of the standard, as it is with pH. Unlike impingement and entrainment (or any other kind of pollution or adverse environmental impact the CWA seeks to minimize or eliminate), the goals of pH standards are to avoid *both* ends of the pH scale.

EPA further mischaracterizes the law with its argument that the Phase II Rule's use of performance ranges is acceptable because it "restricts the exercise of *best professional judgment* by putting numeric limits on what may be considered BTA."[266] But the CWA requires EPA's national standards to do more than *restrict* permit writers' exercise of best professional judgment;[267] they must *eliminate* it. "Once the EPA promulgates applicable standards, regulation of those facilities subject to those standards on a *best professional judgment basis must cease*."[268] Congress intended section 316(b) standards, like the Act's other technology-based

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[266] *Id.* at 75 (emphasis added).

[267] *See* CWA § 402(a)(1)(B), 33 U.S.C. § 1342(a)(1)(B) (permit writers use best professional judgment where EPA has not yet promulgated national technology-based standards); *NRDC v. EPA*, 863 F.2d 1420, 1424 (9th Cir. 1988).

[268] *Riverkeeper*, 358 F.3d at 203, citing *NRDC v. EPA*, 859 F.2d 156, 200 (D.C. Cir. 1988).

provisions to create a stringent, uniform national technology-based standard, not merely to establish guidelines for the exercise of best professional judgment.

2. This Court Required Facilities to Aim for the Benchmark on Which BTA was Based and to Not Fall Below the Margin of Error for Measuring Compliance.

EPA also ignores that the precise issue here – whether variation in performance from site to site or across different technologies allows EPA to let some facilities aim for a lower standard[269] – was explicitly addressed in *Riverkeeper.* In its Phase I Rule, EPA allowed facilities to use technologies other than the closed-cycle cooling system upon which the Track I performance standard was based, so long as they reduce impingement and entrainment by 90 percent of the level that would be achieved by compliance with Track I.[270] This Court ruled that "it was reasonable for the EPA to make clear in the regulation how much ambiguity it is willing to tolerate in measuring compliance and what it considers a reasonable margin of error in comparing the performance of different technologies,"[271] provided that: (1) EPA may not allow a second margin of error beyond the level it identified in the regulation to address ambiguity in measuring

[269] *See, e.g.,* EPA Br. at 76.

[270] *Riverkeeper,* 358 F.3d at 187.

[271] *Id.* at 189.

compliance;[272] (2) facilities must aim for the single-level limitation EPA identified as "best," rather than for any lower number;[273] and (3) facilities' performance may not fall below the threshold identified for measuring compliance.[274] EPA fails completely to respond to Environmental Petitioners on these points.[275]

B. EPA Provides No Justification for Allowing Facilities to Avoid Using the Best Techology, Even When It is Available and Feasible.

EPA's arguments also fail because the Agency provides no authority to justify its failures to: (1) promulgate single-level standards; (2) require facilities to aim for the top of the performance ranges; and (3) prevent double-counting of variability though the TIOP provison.[276]

First, EPA is wrong that it "could have established a single numeric performance standard at the bottom of the range[s]"[277] because the record would not support such action. If performance was established at bottom of the ranges,

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[272] *Id.* at 189 n. 16 ("it would, of course, be inappropriate for the EPA to use 90 percent as a benchmark and allow an additional margin of error in measuring compliance with that benchmark").

[273] *Id.* ("A facility must aim for 100 percent, and if it falls short within 10 percent, that will be acceptable. It may not, however, aim for 90 percent....").

[274] *Id.* ("[a facility] may not . . . achieve only an 89 percent reduction in impingement and entrainment.").

[275] *See* Env. Pets. Br. at 39-40, quoting *Riverkeeper,* 358 F.3d at 189 n. 16.

[276] *See* Env. Pets. Br. at 40-48.

[277] EPA Br. at 82.

such standards would no longer match the best performing technologies identified by EPA.[278] Likewise they would no longer approach the reductions achieved by closed-cycle cooling, which was one basis on which EPA selected the intake screen technologies as BTA.[279]

Second, EPA's claim that the Rule requires facilities to "not merely to meet the low end of the performance standard range, if better performance is practicable,"[280] is unsupportable because the provision it cites requires only that technologies be properly *maintained*, not that the facilities aim for the top of the performance ranges.[281] Moreover, EPA also states that it "anticipates that facilities will select the most cost-effective technologies or operational measures."[282] EPA thus allowed facilities to choose the cheapest technology available, so long as their

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[278] *See* 69 Fed. Reg. at 41,599/1 (identifying technologies producing impingement mortality reductions up to 99% and entrainment reductions between 80% and 90%) (SPA 198).

[279] 69 Fed. Reg. at 41606/2 ("the use of design and construction technologies as the basis for this rule is supported since they can approach closed-cycle, recirculating systems.") (SPA 205).

[280] EPA Br. at 83, citing 69 Fed. Reg. 41,637/3 and 40 C.F.R. § 125.98(b)(1)(iii).

[281] EPA Br. at 83, citing 40 C.F.R. § 125.98(b)(1)(iii) ("the permit would include a condition that facilities *maintain* technologies, operational measures, and restoration measures to *ensure their efficacy to the extent practicable*.") (emphasis added).

[282] EPA Br. at 83.

performance is expected to hit the bottom of the ranges.[283]

As Environmental Petitioners explained in their opening brief, EPA's failure to require facilities to aim for the top of the ranges would allow a facility that could, in fact, meet the top end of the range with one technology (*e.g.,* wedgwire screens) to use a cheaper and less effective technology designed only to achieve performance at the bottom end of the range (*e.g.,* a barrier net).[284] And since a large power plant can entrain billions of aquatic organisms per year, a 30 percent disparity from the top to bottom of the entrainment range translates into hundreds of millions of needlessly lost organisms.[285]

Third, the TIOPs represent exactly the type of multiple counting of variability this Court rejected in its Phase I decision[286] because they improperly allow facilities to avoid enforcement even if their actual performance is below the performance standard range. EPA's claim that TIOPs are necessary "to account for variability in efficacy and biological conditions, and to allow facilities an

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[283] UWAG's argument that "[i]f a facility wants to be sure it will achieve the minimum performance standard, it will have to aim higher to account for that variability," UWAG Supp. Br. at 32, is invalidated by the TIOP provision, which allows facilities to aim for the bottom and then avoid enforcement despite falling below.

[284] *See* Env. Pets. Br. at 43 n.135.

[285] *See id.* at 37.

[286] *Riverkeeper,* 358 F.3d at 189 n.16.

opportunity to optimize performance and operation of the technologies,"[287] ignores that this same variability was already taken into account in establishing a bottom end of the range, and that such double-counting is "inappropriate."[288]

C. The TIOP Provison Thwarts Public Particiation and Citizen Enforcement.

1. TIOPs Improperly Prohibit Citizen Enforcement.

EPA's argument fails for another reason, as well: TIOPs violate the CWA because they would prevent citizens from enforcing violations of the performance standards, contrary to Congress's intent in enacting section 505 of the Act.[289] As this Court found in *Waterkeeper Alliance, Inc. v. EPA,* citizens must be afforded the right to enforce the technology-based limitations themselves, not just compliance mechanisms.[290]

EPA's attempt to distinguish *Waterkeeper*[291] fails because the court's rationale in that case is equally applicable here. In CWA section 505(a)(1)(A), Congress guaranteed citizens the right to enforce "an effluent standard or limitation

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[287] EPA Br. at 87.

[288] *Riverkeeper,* 358 F.3d at 189 n.16.

[289] 33 U.S.C. § 1365. *See* Env. Pets. Br. at 44-46.

[290] 399 F.3d 486, 503-04 (2d Cir. 2005).

[291] *See* EPA Br. at 91-92.

under this Act."[292] The *Waterkeeper* court thus based its determination that the terms of nutrient management plans must be included in the NPDES permits and made enforceable on its "holding that the terms of the nutrient management plans constitute effluent limitations."[293] Likewise, here the Phase II Rule's performance standards must themselves be enforceable under CWA section 505(a)(1)(A) because they also constitute "effluent standard[s] or limitation[s]," which the Act defines to include "effluent limitation[s] or *other limitation[s] under section 1311* [CWA § 301]" of the Act.[294] As this Court and others have found and EPA acknowledges, the BTA standards EPA promulgates under section 316(b) are "other limitations" under CWA sections 301 and 306.[295] Congress thus intended the standards themselves to be enforceable.

Contrary to EPA's claims,[296] nothing in the Rule requires a facility with a TIOP to actually meet the performance standards, and permits based on TIOPs would contain no mechanism for a regulator, citizen or anyone else to enforce

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[292] 33 U.S.C. § 1365(a)(1)(A).

[293] 399 F.3d at 503; *see also id.* at 502 ("we believe that the terms of the nutrient management plans constitute effluent limitations.").

[294] CWA § 505(f), 33 U.S.C. § 1365(f).

[295] *Riverkeeper*, 358 F.3d at 183-84; *VEPCO,* 566 F.2d at 449-50; *Cronin v. Browner,* 898 F.Supp. 1052, 1059 (S.D.N.Y 1995); EPA Br. at 223.

[296] EPA Br. at 88-89.

subpar performance because the TIOP provision merely authorizes the regulator *to require revisions to the facility's TIOP*.[297] In striking contrast, where a facility has not elected to proceed under a TIOP (or does not comply with its own TIOP), the Rule states that the permit authority "must require the facility to comply with the applicable performance standards."[298] By precluding direct citizen enforcement of the standards, EPA has improperly deprived the public of a right that Congress guaranteed to the citizenry in order to ensure that the CWA functions properly.[299]

2. The TIOP Provison Is Not a Logical Outgrowth of the Proposal.

EPA argues that it gave proper rulemaking notice of the final TIOP provision because, in its 2003 Notice of Data Availability (NODA), it proposed a TIOP provision that EPA claims is consistent with the one it ultimately adopted.[300] That is not so. In the NODA, EPA explained it was "considering the need for regulatory language that would allow facilities *time to come into compliance*."[301] The purpose of the proposed provision was to "allow a *reasonable period* for facilities to optimize the technologies and operational measures selected" and to

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[297] 40 C.F.R. § 125.98(b)(1)(iv).

[298] *Id.*

[299] *Waterkeeper*, 399 F.3d at 503-04.

[300] EPA Br. at 95.

[301] *Id.* at 94-95, quoting 68 Fed. Reg. at 13,586 (emphasis added).

"protect facilities from enforcement for failure to achieve full compliance with the Rule *during the optimization period*"[302] of "six months, one year, two years or five years (one permit term)."[303] Most significantly, the proposed regulatory text stated that after the specified optimization period, the facility "*must comply with the standards.*"[304]

Nowhere in the NODA, nor in any other public notice prior to the final Rule, did EPA state, or give any hint, that it was considering a provision like the final TIOP under which – *for an indefinite period and possibly permanently* – "compliance with the Rule [would be] measured by compliance with the TIOP," rather than by compliance with the Rule's performance standards.[305] As the D.C. Circuit explained in a recent EPA rulemaking case, the public cannot be expected to "divine the agency's unspoken thoughts," and the APA forbids EPA from "pull[ing] a surprise switcheroo."[306] But that is exactly what it did here by

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[302] *Id.* at 92-93 (emphasis added).

[303] *Id.* at 94-95, quoting NODA, 68 Fed. Reg. at 13,586.

[304] *Id.* at 95, quoting proposed section 125.94(c), 68 Fed. Reg. at 13,586 (emphasis added).

[305] EPA Br. at 92.

[306] *Envtl. Integrity Project v. EPA,* 425 F.3d 992, 996 (D.C. Cir. 2005) (internal quotation marks omitted) (holding that EPA's reinterpretation of its periodic and umbrella monitoring rules violated the APA notice-and-comment requirements); *see also Waterkeeper*, 399 F.3d at 521.

converting the proposed time-limited, phase-in optimization period provision into one that permanently replaces the requirement to meet the performance standards with a requirement to comply with a plan.

POINT IV[307]

EPA'S CLASSIFICATION OF NEW, SUBSTANTIALLY INDEPENDENT FACILITES AS "EXISTING FACILITIES" VIOLATES SECTION 316(b) AND THE APA

Consider the following scenario: Site A contains a power plant. Adjacent to Site A is a much smaller site, Site B, which is currently empty. If a new power plant is built on Site B, it will be subject to the Phase I Rule. If the company instead proposes to build the new plant anywhere on Site A, the new plant will be subject to the Phase II Rule, regardless of the size of the site and despite the complete physical and operational independence of the two plants, including the fact that the new plant will have a new, separate intake structure.[308] Conversely, if the company were to build a new widget factory on Site A, rather than a power plant, then that factory would be subject to the Phase I Rule because it is in a different industry.

There is no reason whatsoever why less stringent regulations should apply simply because a new power plant is proposed to be located on a parcel presently being used by another power plant. If the new plant were to be moved a mile up or

[307] This Point corresponds to Point VI in Environmental Petitioners' opening brief.

[308] This scenario is similar to the Elm Road Generating Station (ERGS) discussed in Env. Pets. Br. at 112-13, 119, 122, but could occur anywhere in the country.

down the road, it would have to comply with the Phase I Rule. Why would the "best technology available" for a new facility suddenly become unavailable simply because the new power plant is located at the site of an existing facility? Why would a new facility on a large, open site containing a separate older plant have more difficulty installing technology than a new plant on a much smaller site in a congested area? Why does the industry type matter if the new and old plants are independent of each other? EPA does not answer these questions in its rulemaking (in either Phase I or Phase II), much less justify its position.

As shown below, EPA brief fails to refute any of the claims made in Environmental Petitioners' brief; to wit: (a) EPA exceeded its statutory authority by allowing the scenario described above;[309] (b) its action was arbitrary and capricious because it failed to articulate a satisfactory explanation for such result;[310] and (c) EPA deprived the public of the opportunity to comment on its promulgation of a rule that dictates such result because (i) the proposed Rule provided no explanation, facts, or rationale for such result;[311] and (ii) the preamble to the final Rule substantively reinterpreted and revised the Phase I Rule's definition of new facility without having given any notice that EPA was planning

[309] Env. Pets. Br. at 120.

[310] Env. Pets. Br. at 123.

[311] Env. Pets. Br. at 113.

to do so.[312]

At the outset, it is clear that, contrary to EPA's contention, none of these claims is time-barred.[313] Because, as EPA admits, the Agency deferred the regulation of some facilities from Phase I to Phase II,[314] this is Environmental Petitioners' first opportunity to challenge the regulation of those deferred facilities. Likewise, the challenge to EPA's inclusion of language in the final Phase II Rule's preamble could not have been brought prior to EPA's inclusion of such language.

A. EPA Has Not Sufficiently Justified Application of the Phase II Rule to Substantially Independent Facilities.

Despite EPA's claim that it "had valid reasons for treating additions and modifications to existing facilities differently than greenfield and stand-alone facilities subject to Phase I,"[315] the Agency fails to articulate any rationale or provide any support for its decision to treat new, substantially independent facilities constructed on the site of an existing facility (which are not modifications or additions to an existing facility) as existing facilities.[316]

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[312] Env. Pets. Br. at 116.

[313] EPA Br. at 181-82.

[314] EPA Br. at 189-90.

[315] EPA Br. at 194.

[316] *See* Env. Pets. Br. at 120-27. Environmental Petitioners contend that it was the *final* Phase II Rule's preamble in 2004 and not the Phase I Rule that first

In the Phase I Rule, the Agency found that closed-cycle cooling is available to "new facilities . . . [because,] unlike existing facilities, [they] do not have retrofitting costs."[317] In the final Phase II Rule, EPA again cited existing facilities' conversion costs and energy impacts from retrofitting downtime as the basis for distinguishing the Phase I and Phase II requirements.[318] But unlike existing facilities, and unlike modifications or additions to those facilities, brand new substantially independent facilities do not, of course, have to retrofit, and do not in any way affect the existing facility that happens to be located on the same site. Because such new facilities are built from the ground up to operate separately and independently from any other facility without any retrofits, they must be considered stand-alone facilities and be subjected to the Phase I Rule.

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conflated the construction of new, substantially independent *facilities at a site* with the addition of *new units to a facility*. *See* Env. Pets. Br. at 116-20 and Point IV.C. *infra* at 94-99. EPA argues that the Phase II Rule added nothing to the definition of new facility, and that it "decided in the Phase I Rule to defer regulation of new sources constructed on a site at which an existing source is located until the agency had completed analysis of its survey data on existing facilities." EPA Br. at 190. Even assuming, *arguendo*, that EPA had made such decision in Phase I, it was nevertheless required to properly explain and support its decision on how the deferred facilities would be regulated in the Phase II rulemaking, once it had collected the previously incomplete survey data. EPA does not deny that. This section of our argument, *i.e.,* Point IV.A., addresses only the issue of whether the regulatory decision was proper and properly supported, not the separate question of when it was made.

[317] 66 Fed. Reg. at 65,284/2 – 65,285/1 (SPA 859-60).

[318] 69 Fed. Reg. at 41,605/1 (SPA 204).

Such would be the result under the "substantial independence" test set forth in EPA's preexisting, 1984 NPDES regulations where, as discussed in Env. Pets. Br. at 106-08, EPA stated that "it is appropriate to classify as a new source a facility that may happen to be located at the site of an existing facility but that to a substantial degree functions independently of it."[319]

EPA ignores both the reasoning underlying its own 1984 NPDES regulations, as well as its current rationale for determining which facilities can comply with the Phase I standards, and instead offers three other considerations that have nothing to do with whether an existing plant in the same industry is located at the same site.[320] EPA's statement that "an existing site may have insufficient land to install a cooling tower" provides no justification because the existence of another plant in the same industry on a site says nothing about the site's size or the amount of available land – a 1000 acre site containing a plant may have 900 acres available, while an empty site may be only 40 acres total; likewise, the amount of land available is completely independent from the issue of what industry the two plants are in. Moreover, subjecting a facility to the Phase I Rule does not require it to install a cooling tower. Track II of the Phase I Rule allows

[319] 45 Fed. Reg. 59,343, 59,343/3 (Sept. 9, 1980), proposing 40 C.F.R. § 122.66(b) (SPA 730).

[320] EPA Br. at 196-97.

facilities to either install other technologies (such as intake screens) if they demonstrate comparable performance, or to obtain less stringent alternative requirements if the costs of closed-cycle cooling or the Track II technologies would be wholly disproportionate to those considered by EPA during the Phase I rulemaking.[321] Because EPA's concern about insufficient land has nothing to do with the existence of a plant in the same industry on the site, and is already addressed in the Phase I Rule, it provides no reasoned basis for exempting substantially independent facilities from the Phase I Rule. If the company chose a small new site which did not have enough land for a cooling tower, that alone would not waive the Phase I requirements; EPA has provided no justification for changing that approach simply because the site already has a power plant on it.

EPA's further justifications, that an existing site "may be located in an area where a cooling tower would cause other adverse environmental impacts (e.g., fogging, salt drift from cooling tower plumes)" or that "visual effects, noise, and air quality/deposition impose limitations on facilities being constructed on existing sites"[322] likewise offer no support. Whether a site is empty, contains a power plant, or contains another type of facility says nothing about whether it is located in area where cooling tower fog or drift, visual effects, noise or air quality impacts

[321] *Riverkeeper*, 358 F.3d at 183, citing 40 C.F.R. §§ 125.84(d)(1), 125.85.

[322] EPA Br. at 196-97.

might be a concern. In addition, in the Phase I Rule, EPA considered these potential concerns, "found them to be acceptable on a national level,"[323] and included the "alternative requirements" variance to "account for unusual circumstances not considered by the Agency during its rulemaking."[324]

The Agency's further "concern[] that imposing Phase I requirements on such [deferred] facilities would discourage *them* from making any upgrades or modifications to repower existing facilities,"[325] is nonsensical. Imposing the same Phase I requirements on new facilities built at an existing site as are imposed on those facilities built elsewhere could not possibly discourage upgrades or modifications to repower existing facilities.[326] If anything, it would have the opposite effect because lessening the requirements for new facilities quite obviously tips the scales in favor of building new plants rather than upgrading old ones. EPA's final rationale, that it wanted to decrease industrial sprawl,[327] bears no relationship to any of the goals of the Clean Water Act.

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[323] 66 Fed. Reg. at 65,297/1; *see also Riverkeeper*, 358 F.3d at 197 n. 28.

[324] *Riverkeeper*, 358 F.3d at 194.

[325] EPA Br. at 197 (emphasis added).

[326] Further, as noted in Env. Pets. Br. at 124-25, citing 66 Fed. Reg. at 65,286/1, changes to the existing facility itself, short of total replacement, do not result in the existing facility being reclassified as a new facility.

[327] EPA Br. at 197.

EPA's rationale for departing from (a) its 1984 "substantial independence" criterion, and (b) its determination that retrofit costs render the Phase I technology unavailable is utterly implausible and runs counter to the evidence in the record. It violates section 316(b)'s best technology mandate and must also be set aside as arbitrary, capricious, and not in accordance with law.

B. <u>EPA Identifies No Rationale or Data in its Proposal</u>.

While the rationale EPA offered with the final Rule is unsatisfactory and unconnected to the facts, at proposal EPA failed to offer any rationale or facts at all. The proposed Phase II Rule provided no data, detail, rationale or any other means of explaining *why* the Agency decided to regulate the facilities it had deferred as existing, rather than new. It failed to identify any new data gathered on the subject of new, separate facilities built on the site of an existing facility, and failed to discuss the characteristics of class of facilities that was deferred. In fact, at proposal EPA failed to even state that it had deferred any facilities from the first phase of rulemaking.[328]

EPA admits that it "did not explicitly reference the so-called deferred facilities" in the proposed Phase II Rule, and does not claim that it provided any

[328] *See* Env. Pets. Br. at 114-16. There is, of course, a dispute between the parties as to exactly which facilities were deferred. *Compare* Env. Pets. Br. at 110 *with* EPA Br. at 190. But the precise scope of the deferred class of facilities is immaterial to this claim because EPA failed to discuss in its proposal *any* deferred facilities (or even that there was a deferral at all).

data or rationale to explain its proposed decision.[329] Instead, EPA argues that it was sufficient to implicitly "signal[] EPA's attempt to bring the deferred facilities within the scope of the Phase II Rule" through "[t]he proposed definition of 'existing facility' and the repowering examples."[330] But merely signaling *how* the facilities would be regulated does not satisfy the APA's notice requirements, and EPA in its brief failed to address the law, cited by Environmental Petitioners, that agencies must "provide sufficient factual detail and rationale for the rule to permit interested parties to comment meaningfully."[331] EPA failed to meet these mandatory prerequisites in its notice. Moreover, implicitly signaling *how* the deferred facilities are to be regulated provides no substitute because the public cannot be expected to "divine the agency's unspoken thoughts."[332]

The lack of data and rationale is particularly striking in light of the fact that

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[329] EPA Br. at 193.

[330] EPA Br. at 192.

[331] *Florida Power & Light Co. v. Wisconsin Elec. Co.*, 846 F.2d 765, 771 (D.C. Cir. 1988); *Nat'l. Elec. Mfrs. Ass'n. v. EPA*, 99 F.3d 1170, 1172 (D.C. Cir. 1997) (APA requires agency's notice to provide rationale for the proposed rule); Phillip M. Kannan, *The Logical Outgrowth Doctrine in Rulemaking*, 48 Admin. L. Rev. 213, 219 (1996) ("The prerequisites for meaningful comments [include]… the disclosure of data and law the agency is relying on, and the rationale the agency is applying to connect the data and law to the regulation it is promulgating."), cited in Env. Pets. Br. at 113-14.

[332] *Envtl. Integrity Project*, 425 F.3d at 996 (internal quotation marks omitted).

EPA deferred facilities to the Phase II rulemaking because it "was limited in terms of the types of data it had to complete the Phase I rulemaking."[333] The purpose of the deferral was to allow regulation of the deferred facilities to "await EPA's analysis of existing facilities based on the detailed questionnaire for existing facilities."[334] But neither at proposal, nor at any time before publication of the final Rule, did EPA ever disclose what the new data showed or how it supported a decision to classify new separate facilities that are substantially independent from existing facilities at the same site as existing facilities themselves.

EPA argues that the notice must have been adequate because Environmental Petitioners and others submitted comments suggesting how the deferred facilities should be regulated.[335] But, as those comments show, the ability to comment was severely compromised by the lack of information in the notice. The most any member of the public could ascertain was that the deferred facilities had been inexplicably swept up with all other existing facilities. Thus, while Environmental Petitioners (and anyone else independently aware of the deferral) could and did suggest to the Agency how they believed the deferred facilities *should be* regulated, there was no basis for anyone to comment on EPA's rationale or factual

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[333] Phase I RTC, 019.004 (JA 562).

[334] *Id.*

[335] EPA Br. at 194.

support for its proposed regulatory decision.[336] As Environmental Petitioners stated in their comment, "EPA has not established *why* these facilities [*i.e.,* the facilities deferred in Phase I, but not discussed in the Phase II proposal] should instead be regulated like existing facilities."[337] Without an explanation of the factual or policy bases underlying this aspect of the proposal, EPA prevented the public from commenting "meaningfully."[338]

C. The Preamble to the Final Phase II Rule Substantively Changed How the Phase I Rule's Definition of New Facility is Implemented, Without Notice.

EPA's claim that its "discussion of 'new facility' in the Phase II preamble did not trigger a requirement to provide notice and an opportunity for public comment" because it was "consistent,"[339] or "congruous"[340] with the Phase I Rule is belied by the record: the Phase I Rule's "new facility" definition excluded only new *units* added to an existing *facility* as part of the same general industrial

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[336] That is, if there *was* any proposed regulatory decision at all. Because the content of the notice was indistinguishable from a notice that would have been given if there had been no deferral at all, there is nothing to indicate that EPA in fact remembered that it had deferred regulation of certain facilities until it gathered more information.

[337] RTC 206.073 (JA 3429) (emphasis added).

[338] *See* footnote 331, *supra*.

[339] EPA Br. at 180.

[340] *Id.* at 180, 181, 193.

operation, but the preamble to the final Phase II Rule reinterpreted that language to further exclude new *units* added to a *site* where an existing facility in the same industry is located regardless of whether they are part of the same operation.[341]

The regulatory text bears this out. In particular, the fourth sentence of the Phase I Rule's definition of new facility stated that "[a] stand-alone facility is a *new, separate facility* that is constructed on property where an existing facility is located and whose processes are substantially independent of the existing facility at *the same site* (see 40 CFR 122.29(b)(1)(iii))."[342] That sentence was the only language in the definition that addressed the construction of a new, separate *facility* at a *site* where an existing facility is located. It provides that such new facility is a "stand-alone" facility (and thus classified as a new facility[343]) so long as its "processes are substantially independent"[344] of the existing facility.[345]

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[341] *See* Env. Pets. Br. 116-20. Because Environmental Petitioners challenge an action EPA took in the final Phase II Rule, EPA's time-bar defense (EPA Br. at 181-82) is spurious.

[342] 40 C.F.R. § 125.83 (emphasis added).

[343] The second sentence of the definition provides that "[n]ew facilities include only 'greenfield' and 'stand-alone' facilities." 40 C.F.R. § 125.83.

[344] EPA admits that this sentence incorporated the "substantial independence" test from pre-existing NPDES regulations. EPA Br. at 183 n.64.

[345] To be a new facility, such facility must also use a newly constructed intake structure or an existing one whose design capacity is increased. 40 C.F.R. § 125.83 (first sentence). As explained in Env. Pets. Br. at 110, EPA has stated that

The fifth sentence of that definition addresses a somewhat different situation. It says nothing about adding a new *facility* to a *site* where an existing facility is located; rather it addresses the addition of *unit* to a *facility*: "[n]ew facility does not include new *units* that are added to a *facility* for purposes of the same industrial operation (for example, a peaking unit at an electrical generating station)."[346] Thus, as provided in the Phase I Rule's definition, a new, separate *facility* with substantially independent processes constructed at a *site* where an existing facility is located (*i.e.*, the scenario given at the beginning of this Point IV, *supra* at 84) would be a new facility, while the addition of new *units* added to an existing *facility* as part of the same operation (*e.g.,* a peaking unit) would not be.[347]

The Phase II proposal in 2002 did not change this. It repeated that the "addition of a *unit*" to an existing "*facility* for purposes of the same industrial

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this additional requirement was the "limited exception" to the definition of new source in the pre-existing NPDES regulations.

[346] 40 C.F.R. § 125.83 (emphasis added).

[347] UWAG's claim that Environmental Petitioners' rulemaking comments reveal a different understanding of the Phase I Rule, UWAG Supp. Br. at 45, mischaracterizes those comments, which explicitly noted the inconsistency between EPA staff's intent (as communicated in a post-promulgation telephone conversation) and the text of the Rule itself: "Whether the codified text of the Phase I regulations actually accomplishes what the preamble and staff claim to have intended is far from certain. Reading the regulations alone, the definition of new facility at 40 CFR § 125.83 appears to be consistent with, not narrower than, the definition of new source under CWA Section 306 and 40 CFR 122.29." RTC 206.073, nn. 169 & 170 (JA 3429).

operation" would be an existing facility.[348] This is a recapitulation of the fifth sentence of the Phase I Rule's definition. Nothing in the proposal changed (or even addressed) the scenario where a new, separate *facility* with substantially independent processes is added to a *site* where an existing facility is located.

But in the preamble to the final Phase II Rule in 2004, EPA reinterpreted the fourth and fifth sentences of the Phase I definition to mean something entirely different. Instead of acknowledging that the two sentences address somewhat different situations (which their plain language shows), EPA for the first time conflates the terminology from the two sentences, stating that any addition of a new *unit* (the fifth sentence's term) at a *site* where an existing facility is located (the fourth sentence's term) would be an existing facility so long as they both generate electricity, regardless of whether their processes were substantially independent and regardless of whether they are actually part of the same operation.[349] Under EPA's new interpretation, any new *unit* on a *site* with a

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[348] 67 Fed. Reg. at 17,128/1 (emphasis added) (SPA 9).

[349] *See* preamble to final Phase II Rule, 69 Fed. Reg. at 41,579/2 ("the addition of new generating units at the same site" are to be treated as existing facilities); *see also id.* at 41,579/3, n. 2a ("[b]ecause they are part of the same 'industrial operation,' such units are not 'stand-alone' facilities for purposes of the 'new facility' definition. … [T]hey are categorically treated as "existing facilities" regardless of any other considerations… Accordingly, there is no need to make a determination whether they are 'substantially independent' of the existing facility at the same site under the fourth sentence of the definition… The fifth sentence alone controls that question.") (SPA 178).

facility in the same industry is categorically treated as part of the "same general industrial operation" and the substantial independence test has been obviated for such facilities.

This shift means that a facility like the one in the scenario above, *i.e.*, a new, separate and substantially independent facility built on the site where an existing facility is located, (which sentence four classifies as new) can now be considered an existing facility under the discussion in the preamble to the final Phase II Rule. Significantly, that is exactly what happened with the ERGS facility in Wisconsin.[350] EPA's argument that even if the Phase II preamble is inconsistent with the regulatory text, "it is the language of the regulatory text, and not the preamble, that controls,"[351] ignores the obvious fact that permitting agencies and courts rely extensively on the preamble. For example, the Wisconsin Division of Hearings and Appeals relied heavily on the preamble to the Phase II Rule in

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[350] *In re the Petition for Contested Case Hearing Regarding WPDES Permit No. WI-0000914-07-0 issued to Wisconsin Electric Power Company for the Oak Creek Power Plant and Elm Road Generating Station located in Oak Creek, Wisconsin*, Case No. IH-05-06, "Order on Motions for Partial Summary Judgment on Co-Petitioner's 'Issue A' Regarding 'New' vs. 'Existing' Facility," State of Wisconsin Division of Hearings and Appeals, October 31, 2005 ("ERGS Decision") [http://dha.state.wi.us/home/Decisions/DNR/2005/ih0506.pdf, last visited: 3/1/06] (SPA 902).

[351] EPA Br. at 186.

holding that ERGS is an "existing" facility.[352] The decision directly quotes 43 lines – more than a full page of text – from the Phase II preamble and concludes that "EPA's *preamble* to the Subpart J 'existing facility' regulation reflects a regulatory intent to exclude a project like ERGS from the reach of the 'new facility' regulation."[353] Likewise, EPA's own regional office relied on the preamble to change its classification of ERGS and thereby not object to the permit.[354] EPA cannot, in good faith, argue that the preamble will not significantly guide implementation of the Rule.

In the final Rule's preamble, EPA has thus abandoned the substantial independence test that had been in effect for 20 years without any opportunity to comment on this significant change in the interpretation of its rules.

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[352] ERGS Decision at 8-9 (SPA 909-10).

[353] *Id.* at 8 (emphasis added).

[354] *See* Env. Pets. Br. at 119.

POINT V[355]

THE RULE'S COST-COST VARIANCE IS UNAUTHORIZED

EPA's argument that it provided adequate notice of its costing methodology and data for the Rule's Cost-Cost Variance[356] is mistaken because it failed to identify, until the final Rule, the actual facilities to be used in implementing the variance. EPA thereby denied the public an opportunity to comment on this critical aspect of the Rule and meaningful participation in subsequent permitting proceedings. Contrary to its claims, EPA does not have authority to create a variance based solely on cost and the "significantly greater" standard is not reasonable.[357] The variance exceeds EPA's authority and should be remanded because it differs in four key respects from previously-approved CWA variances to such an extent that it is no longer a narrow safety valve as Congress intended.

A. The Final Variance Is Not a "Logical Outgrowth" of the Proposal.

EPA admits it "did not identify facility names and geographic locations in the Proposed Rule and the NODA."[358] Its failure to do so deprived the public of

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[355] This Point corresponds to Point V in Environmental Petitioners' opening brief.

[356] EPA Br. at 171-74.

[357] EPA Br. at 143-46 and 149-156, respectively.

[358] EPA Br. at 152.

any meaningful opportunity to comment on the Cost-Cost Variance and its implementation in two critical ways. First, the interested parties that did comment on the Rule had no way of knowing that actual identified facilities would replace the model facilities used in the proposal and NODA. This prevented them from understanding, and commenting on, how the variance would actually function in permitting proceedings. Second, the final Rule denied an opportunity for locally affected parties to comment on the technical basis for the precise cost figures EPA identified for a specific plant of regional concern. Such citizens may not have commented on the Rule at all because they never had notice that EPA would provide facility specific cost data. Further, their right to participate in subsequent permit proceedings has been compromised because EPA has, by the Rule, foreclosed a number of options for each plant.

Significantly, in its final form, the Cost-Cost Variance functions as a cost-cap that sets precise dollar limits on what each facility can be forced to spend.[359] As a result, the final Rule not only establishes a variance procedure, but proceeds to implement the variance for each facility by dictating what its compliance costs should be. Rather than provide a limited exception to the national rule when site-specific information reveals that a particular plant faces different circumstances than those accounted for in creating that rule, EPA has created a different rule for

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[359] *See* Env. Pets. Br. at 99.

each facility in the country, allowing a variance every time a plant shows section 316(b) compliance costs will significantly greater than EPA's plant-specific estimate.[360]

That the variance would operate as such was completely unknown until the final Rule. An illustrative example makes this clear. In the final Rule EPA assigned the El Segundo plant compliance costs of zero dollars.[361] The zero-dollar figure means, presumably, that EPA determined this plant does not need to add any technology in order to comply with the Rule. But the proposed Rule and NODA gave citizens concerned with the health of Southern California's coastal waters no way of knowing that EPA would, in the Final Rule, make this determination or assign a zero-cost figure to El Segundo.

Citizens could not reasonably be expected to identify which, if any, of the

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[360] This is done at the permitting stage by taking the cost estimate from the Appendices in the final Rule for the specific facility and adjusting it according to a set formula to determine the maximum amount a facility can be required to spend on implementing control technologies after a facility has demonstrated that costs of compliance would be significantly greater. For example, if a facility's estimated cost in the Appendix was $5,000,000 and the adjusted cost was $7,000,000, then that facility would not be required to spend an amount "significantly greater" than $7,000,000 on reducing impingement or entrainment. The Hennepin power plant, for example, need only show that actual costs of compliance will be significantly greater than $528,427 as adjusted. The El Segundo plant, with an estimated cost of $0, would have to show actual costs greater than zero.

[361] *See* Appendix A and B for the Final Phase II Rule starting at 69 Fed. Reg. 41,669 (SPA 268).

500-plus model facilities was, in fact, based on El Segundo or any other plant of interest. Until the final Rule changed the methodology, citizens rightfully assumed that the costs to be utilized in a variance determination would be specified by the permit writer, informed by the model plants, but would not be pre-determined by EPA. Citizens participating in future permitting proceedings will also be prevented from objecting to EPA's establishment of a zero-compliance-cost figure for that plant because EPA established it by Rule, albeit without notice. As a result, although the Cost-Cost Variance would presumably prohibit a regulator from using the Rule to impose any compliance costs that are "significantly greater" than zero for some plants,[362] the public has been given no opportunity to comment on the determination that zero is the proper baseline figure.

EPA's argument that the change is a "logical outgrowth" is misplaced. In *Kennecott*, cited by EPA,[363] industry argued that the inclusion of an additional treatment technology, sulfide precipitation, in the final rule deprived it of notice and the opportunity to comment.[364] The court rejected that argument, noting that there had been ample discussion of sulfide precipitation as a treatment technology

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[362] States may impose stricter standards than provided under the Rule pursuant to CWA § 510.

[363] EPA Br. at 155-56.

[364] *Kennecott v. EPA*, 780 F.2d 445, 452 (4th Cir. 1985).

that was effective and similar to the other technologies in the proposed rule. Here, by contrast, EPA never provided any indication that it might adopt the *approach* of estimating costs for actual instead of model plants or that it would identify the compliance costs for actual plants in the final Rule, and thereby lock in an unassailable cost-cap for each one.

The instant case is similar to *American Frozen Food Institute v. Train* – which EPA also mistakenly relies on – where one aspect of the final rule was remanded because it failed to provide sufficient notice.[365] In *Train*, as here, the final rule included crucial information that had been omitted in the development document (DD). Specifically, the DD listed three pollutants and their effluent limitations, whereas the final rule included a fourth pollutant (fecal coli) and corresponding standards.[366] Because no notice of the intent to add fecal coli had been given, the court remanded that aspect of the Rule.[367] Here EPA never gave notice of intent to add a crucial piece of information – facility names – to the final Phase II Rule; that aspect of the Rule should therefore be remanded.

Whether EPA was required to withhold the names of individual facilities for

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[365] *American Frozen Food Inst.*, 539 F.2d at 107.

[366] *Id.* at 135.

[367] *Id.*

reasons of confidential business information (CBI) is of no import.[368] Environmental Petitioners in no way challenge EPA's right to withhold such information. Rather, Environmental Petitioners take issue only with EPA's last-minute release of the information, thereby locking in estimated costs for individual facilities without providing an opportunity to comment on that aspect. Tellingly, EPA never explained how the names of facilities could be released in the final Rule, given the confidentiality concerns it cited at proposal. Whatever EPA's reasons, having not included site-specific information or the intent to adopt the same in the proposed Rule, EPA is not justified in including it in the final Rule. By fundamentally altering the implementation of the Cost-Cost Variance through including site-specific cost estimates, EPA deprived the public of its right to notice and comment under the APA and contravened clear Congressional intent that the public meaningfully participate in the development of standards established under the CWA.[369]

B. <u>The Cost-Cost Variance Is More Expansive than Any Previously-Approved CWA Variance</u>.

Contrary to EPA's assertion, Environmental Petitioners do not "challenge EPA's authority to establish *any* exceptions to the [national performance]

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[368] EPA Br. at 152.

[369] Env. Pets. Br. at 96-100.

standards EPA adopts;"[370] rather, Environmental Petitioners stated that Congress and the courts have spoken clearly regarding the type and scope of variances allowed for such standards, and that EPA's Cost-Cost Variance exceeds that permitted scope in several ways.[371] Nor do Environmental Petitioners argue that EPA was legally bound to imitate the section 301(n) FDF variance exactly in its section 316(b) regulations;[372] rather, they argue that the scope of previously-permitted variances, particularly section 301(n), prescribe the permissible outer boundaries of other variances, and that while EPA calls the Cost-Cost Variance "similar" to section 301(n), it is in every way more lenient.

Rather than addressing these arguments, EPA generally ignores them, relying on its "broad authority" to make exceptions.[373] First, it ignores that section 301(n) was meant to be a "pin-hole safety valve" to provide flexibility and prevent manifest injustice in unforeseen situations.[374] Second, it ignores that the CWA's

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[370] EPA Br. at 137 (emphasis added).

[371] *See* Env. Pets. Br. at 96, quoting *Weyerhaeuser*, 590 F.2d at 1039-40 ("the provision is far more expansive than the variance Congress sanctioned for existing facility regulations, thereby transforming the 'pin-hole safety valve envisioned in the Act … [into] a yawning loophole.'")

[372] As suggested in EPA Br. at 143-45, UWAG Supp. Br. at 42-43.

[373] EPA Br. at 138.

[374] *See* Env. Pets. Br. at 102, citing *Weyerhaeuser*, 590 F.2d at 1040.

other statutory variances are few and extremely narrow.[375] Third, it ignores Congress's consistent refusal to let industry escape regulation because of the cost of compliance.[376] Fourth, it ignores the fact that this Court upheld EPA's Phase I variance on the grounds that it "allows relaxation of the Rule's uniform technology requirements *only insofar as necessary to account for unusual circumstances not considered by the Agency during its rulemaking*."[377] Finally, it purports to have looked to section 301(n) for "guidance" in drafting the Cost-Cost Variance, but seems to have seen only what it wanted, and ignored the rest.

Although it should be, EPA's Cost-Cost Variance is not a "limited exception to the national performance standards where certain site-specific circumstances warrant."[378] It is a gaping loophole. In reviewing it, this Court must give effect to Congress' clear intent,[379] and if the Cost-Cost variance exceeds the Congressionally intended scope for variances, it should be vacated. While EPA does not seem to deny this, it has attempted to justify the Cost-Cost Variance by

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[375] *See* Env. Pets. Br. at 101& n.317.

[376] *Nat'l Crushed Stone Ass'n*, 449 U.S. at 80 (citing Congressional acceptance that many facilities with high costs of compliance would be forced to go out of business).

[377] *Riverkeeper*, 358 F.3d at 193-94 (emphasis added).

[378] As claimed by EPA, EPA Br. at 138.

[379] *Chevron*, 467 U.S. at 842-43.

arguing that it is not so far beyond the scope of other CWA variances as to render it illegal. As explained below, this is incorrect.

Four aspects of the Cost-Cost Variance, individually and cumulatively, render it wholly unlike any variance ever previously adopted by EPA or sanctioned by Congress or the courts. First, EPA can point to no other variance where it has allowed facilities to obtain weaker standards by comparing site-specific information to plant-specific compliance cost established by EPA through rulemaking. Where national performance standards have been created, variances have been allowed *only by comparing a facility's costs to the general costs EPA considered in establishing the national standards*.[380] By putting a dollar value ceiling on the amount each facility subject to Phase II can spend in achieving performance standards, EPA allows alternate performance standards to be set based on a comparison of actual site-specific conditions against what EPA thought those site-specific considerations were, rather against considerations general to the industry as a whole.[381]

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[380] For example, that is how the variance worked in the Phase I Rule. *See Riverkeeper*, 358 F.3d at 192 (noting that the variance compared a plant's costs to the "costs EPA considered in establishing the requirement at issue.").

[381] The Cost-Cost Variance in the *proposed* Phase II Rule operated within the scope of prior allowed variances in this respect, allowing facilities to utilize it by comparing their site-specific compliance cost information to that of model facilities. Because information about model facilities was considered by EPA in

Second, EPA's argument that a variance may be based exclusively on site-specific compliance costs[382] contradicts the consistent exclusion of that factor from CWA variances by both Congress[383] and the Courts,[384] and therefore unallowably undermines the integrity of the NPDES program. Contrary to EPA's suggestion,[385] in *Riverkeeper* this Court did not change that situation by holding that cost alone could be an appropriate factor. In *Riverkeeper*, the variance's content and scope were not at issue, because they were not challenged: the only question raised was

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establishing the national performance standard and economic practicability for the industry as a whole, the same information could properly be used as a reference to depart from national standards. The NODA indicates the Agency incorporated additional site-specific information into the model facilities, but no costs were estimated for specific sites, and facilities availing themselves of the Cost-Cost Variance, as proposed, would have compared site-specific information against the "model" facilities that were used to establish the national standards. 68 Fed. Reg. at 13,527/1-2 (SPA 113).

[382] *See* EPA Br. at 144.

[383] CWA § 301(n)(1) ("The Administrator … may establish an alternative requirement … if the owner or operator of such facility demonstrates to the satisfaction of the Administrator that … the facility is fundamentally different with respect to the factors (*other than cost*).") (emphasis added).

[384] *E.g., Nat'l Crushed Stone Ass'n*, 449 U.S. at 80 ("Congress did not respond to … foreseen economic impact by making room for variances based on economic impact. In fact, this possibility was specifically considered and rejected."); *Weyerhaeuser*, 590 F.2d at 1040.

[385] EPA Br. at 143-44.

whether *new* facility regulations could have variances *at all*.[386] The question of whether cost was an appropriate factor was not a contested issue and therefore any discussion in the opinion of what factors are proper in a variance was dicta.

Third, contrary to EPA's contention, EPA's entirely new[387] "significantly greater" standard for a variance is not "slightly different" from prior variances.[388] EPA's prior CWA variances have always used a standard of "fundamentally different,"[389] or "wholly disproportionate."[390] The novel standard is more lax; has a lower threshold; and will be triggered more easily and more often than prior variances. The most important discussion of variance thresholds is found in *Weyerhaeuser*, in which the D.C. Circuit examined a "fundamentally different factors" variance to a rule that had already provided a significant amount of flexibility in accounting for cross-industry differences in establishing limits, and

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[386] *Riverkeeper*, 358 F.3d at 193 ("The Environmental Petitioners argue that [the Phase I variance] exceeds the EPA's authority under the Clean Water Act, which authorizes variances only for existing facilities."). *See also id.* at 183.

[387] EPA can point to no other CWA regulation utilizing the "significantly greater" standard.

[388] As claimed at EPA Br. 172.

[389] *See, e.g.,* CWA § 301(n); 40 C.F.R. § 125.30(c)(1).

[390] *See* 67 Fed. Reg. at 17,124/3, noting that a "wholly disproportionate" test has been used since the 1970s (SPA 124).

stated that:

> [a]llowing for variances based on *slight or moderate differentials* at individual plants would accordingly ignore the liberality that is already built into the system. It would allow for variances, when the impact on an individual did not exceed the range of impacts considered by the Agency for the industry generally. … The Agency has properly adopted an approach that focuses on only one or a few of the relevant factors but *sets a high differential standard therefore*.[391]

EPA's "significantly greater" threshold by its very wording sets less than a "high differential standard," the latter having been for years embodied in the "fundamentally different" or "wholly disproportionate" language of other variances. In conjunction with the other ways in which this so-called variance is weakened, it further expands the Cost-Cost Variance from a limited tool to provide the minimum necessary flexibility to avoid injustice into an exception that swallows the Rule, beyond EPA's authority.[392]

Finally, EPA does not respond to Environmental Petitioners' claim that the Cost-Cost Variance is inconsistent with Congressional intent because it limits the ability to request a variance to facilities only, rather than to all individuals, and only authorizes relaxed performance requirements, rather than allowing for both

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[391] 590 F.2d at 1040 (emphasis added).

[392] EPA's justifications for lowering the threshold for existing facilities – that existing facilities require more flexibility and that site-specific factors affecting cost cannot be anticipated – are specious. EPA already considered the higher costs of retrofitting control technologies at existing facilities on a national level and established BTA accordingly. EPA Br. at 307.

more and less stringent requirements.[393] The bidirectional nature of EPA's previous variances reflects the justification for allowing a variance in the first place – that the Agency was acting with incomplete information and therefore may have set poorly-tailored performance standards for that minority of facilities that are fundamentally different than those considered during the rulemaking process. That usually *any* person may request a variance further supports this: incomplete information can lead to mistakes in both directions. EPA's one-way variance for facilities only in this Rule, therefore, is a uniquely tailored giveaway to industry.

EPA's Cost-Cost Variance far exceeds the appropriate scope of CWA variances, and thereby weakens the national BTA regulations promulgated under the Act, which, given its purposes and framework for pollution control, Congress clearly did not intend.

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[393] Env. Pets. Br. at 103, citing 40 C.F.R § 125.30(b), which allows standards to be made more or less stringent upon an application of any interested person.

POINT VI[394]

EPA IMPROPERLY RELIED ON A MONETIZED COST-BENEFIT ANALYSIS TO SELECT THE REGULATORY OPTION IT PROPOSED AND ULTIMATELY ADOPTED

EPA violated the "best technology" mandates of sections 316(b) and 301 by employing an incremental *monetized* cost benefit-analysis to reject a regulatory option that would have imposed an intake capacity limit commensurate with closed-cycle cooling at 59 large facilities located on sensitive waterbodies.[395] EPA admits that it "analyzed costs in relation to monetized social benefits" pursuant to Executive Order 12866, but claims it did not use such analysis to reject the closed-cycle option.[396] Further, EPA argues that using monetized cost-benefit analysis to determine BTA requirements would not violate the CWA.[397] EPA is mistaken on both counts.

First, EPA's statutory authority in CWA section 301 mandates that its existing facility regulations require the "best available technology economically

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[394] This Point corresponds to Point I in Environmental Petitioners' opening brief.

[395] *See* Env. Pets. Br. at 28-36; OMB Watch Br. at 17-27. A monetized cost-benefit analysis weighs costs against only those benefits that can be translated into dollar values.

[396] EPA. Br. at 55.

[397] *Id.* at 55 n. 26.

achievable" (BAT), an economic test fundamentally incompatible with a monetized cost-benefit analysis. EPA acknowledges that section 301's BAT economic test applies to its determination of "best technology available" (BTA) for existing facilities.[398] Significantly, Congress prohibited cost-benefit analysis as the basis for BAT regulations. In instances "[w]hen Congress has intended that an agency engage in cost-benefit analysis, it has clearly indicated such intent on the face of the statute."[399] In the CWA, Congress did not indicate any such intent in sections 316(b) or 301, or in section 304(b)(2)(B), which sets forth the factors to be considered in the BAT economic test.[400] Further, courts have consistently rejected the position that the CWA's technology-based standards should be set pursuant to a cost-benefit analysis.[401]

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[398] EPA Br. at 47-48, 53, citing CWA § 301(b)(2)(A), 33 U.S.C. § 1311(b)(2)(A); *see also* Env. Pets. Br. at 28 & n. 90 (same).

[399] *Am. Textile Mfrs. Inst., Inc. v. Donovan*, 452 U.S. 490, 510 (1981); *see also* Env. Pets. Supp. Br. at 45-46.

[400] Compare section 304(b)(4)(B), 33 U.S.C. § 1314(b)(4)(B), and section 302(b)(2), 33 U.S.C. § 1312(b)(2), which contain explicit language directing EPA to consider costs in relation to the benefits with sections 301, 316(b), and 304(b)(2)(B), 33 U.S.C. § 1314(b)(2)(B), which do not. *See also* Env. Pets. Supp. Br., Arg. IV at 44-52; OMB Watch Br. at 6-12.

[401] *See* OMB Watch Br. at 8, citing *Weyerhaeuser*, 590 F.2d at 1036; *see also id.* at n. 26.

Furthermore, EPA is wrong that it can apply the now-defunct "Best Practicable Control Technology Currently Available" (BPT) economic test.[402] As this Court has explained, by 1989 existing facility regulations were to be based solely on BAT, which is a "[s]tiffer restriction" than BPT.[403] Even if BPT did apply, it would be of no help to EPA. When BPT was the operative economic test during the early phase-in period of the Act, it allowed only a "limited cost-benefit analysis," which considers the level of pollution reduction "in relation" to costs, without a formal cost-benefit analysis.[404] Further, the benefits to be considered under BPT were only those "benefits that are *assumed to result* … from any reduction in the level of effluents being discharged" rather than "improved receiving water quality."[405] Thus, the expired BPT test provides no support for a monetized cost-benefit analysis to determine BTA standards.

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[402] EPA Br. at 47-48, 53, citing 33 U.S.C. § 1311(b)(1)(A).

[403] *Riverkeeper,* 358 F.3d at 185. Moreover, Representative Clausen's 1972 reference to "economically practicable cost," cited in EPA Br. at 52, cannot be construed to extend the BPT test to intake structures more than fifteen years past its 1989 expiration date. *See* Env. Pets. Supp. Br. at 48-50.

[404] *Chemical Mfrs. Ass'n. v. EPA*, 870 F.2d 177, 204 (5th Cir. 1989), *cert. denied PPG Industries, Inc. v. EPA*, 495 U.S. 910 (1990).

[405] *See* Env. Pets. Supp. Br. at 48, quoting *Appalachian Power Co. v. EPA*, 671 F.2d 801, 809 n. 3 (4th Cir. 1982) (emphasis added).

EPA admitted that its monetized benefits valuation for this Rule was drastically incomplete and severely undervalued the resource. EPA was unable to monetize the vast majority of the benefits that would result from reducing aquatic mortality, explicitly stating at proposal that it "believes that its analysis is likely to lead to a potentially significant underestimate of baseline losses and … regulatory benefits."[406] EPA listed more than two dozen shortcomings in its benefits analysis, and made clear that its analysis is "subject to considerable uncertainties."[407]

Significantly, in proposing the Rule, EPA indicated it had relied on this fatally flawed monetized cost-benefit analysis to reject the 59-plant closed-cycle option in favor of the option it selected. Specifically, EPA stated that "the incremental costs of this option relative to the proposed option ($413 million) significantly outweigh the incremental benefits ($146 million)."[408] EPA did *not* state at proposal that non-monetized incremental reductions in aquatic mortality failed to justify the incremental cost, as it now claims.[409] Rather, at that time,

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[406] 67 Fed. Reg. at 17,192/1 (SPA 73).

[407] *Id.* at 17,192/1-193/1 (SPA 73-74). *See also* Env. Pets. Br. at 78-85.

[408] 67 Fed. Reg. at 17,158/3 (SPA 39).

[409] EPA Br. at 51 (citing the NODA and final Rule's preamble, but not the proposal, for the position that it rejected the 59-plant closed-cycle option solely because the incremental increase in cost outweighed the "incremental increase in percentage reductions of impingement mortality and entrainment.") (emphasis omitted).

EPA's only justification given for selecting the option it proposed and ultimately adopted was the purported difference in net incremental monetized benefits.[410]

OMB's influence on both decisions – the decision to base option selection on monetized cost-benefit analysis, and the decision to switch preferred options immediately before proposal – was apparent from the public rulemaking docket.[411] In their comments on the proposal, Environmental Petitioners explained that "[t]he record clearly demonstrates that EPA had intended to propose the waterbody/capacity based closed-cycle option … but was prevented from doing so by" OMB.[412] Moreover, Environmental Petitioners informed EPA that using Executive Order 12866's regulatory approach violated the CWA because:

> [T]he Clean Water Act requires the imposition of a series of increasingly-stringent, technology-based controls … In promulgating BTA standards, EPA must minimize adverse environmental impacts, and costs are only relevant to the determination of whether the technology that minimizes impacts is economically achievable...

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[410] *See* 67 Fed. Reg. at 17,156/1-158/3 (SPA 379).

[411] *See* DCN 4-4005, *OMB Review Draft for the Proposed Section 316(b) Rule for Large Cooling Water Intake Structures at Existing Power Generating Facilities*, at 71 and DCN 4-4019, *Summary of Major Changes During Interagency Review* at 2 (Supp 286, 495); *see also* Env. Pets. Br. at 31-34.

[412] Env. Pets. Phase II Comments (DCN PublicComment3.030) at 42, citing DCN 4-4005 and DCN 4-4019; *see also id.* at 13 ("antiregulatory ideologues in OMB's Office of Information and Regulatory Affairs (OIRA) forced EPA to abandon its carefully chosen option and remove any closed-cycle requirements.") (JA 4113, 4105).

> Since that is the regulatory approach mandated by Congress in the Clean Water Act, the statute trumps the Executive Order and the maximize net benefits principle of the EO 12866 is – by its own terms – inapplicable to Section 316(b) regulations.[413]

The fact that EPA – likely aware that its net monetized social benefits approach could not withstand judicial scrutiny – later added additional rationales to support its final rejection of that option[414] cannot change what occurred at, and just before, proposal. Further, even EPA's subsequent rationale that it rejected closed-cycle cooling because of a limited "incremental increase in percentage reductions in impingement mortality and entrainment" would only be viable if the percentage reductions EPA factored into both sides of equation were equally certain. But EPA has admitted, as it must, that "[t]he only technology effectiveness that is certain is reductions in impingement and entrainment with cooling towers."[415] In contrast, EPA considers the performance of the technologies upon which it based the Rule to be so variable that it established a 33.3 percent margin of error for measuring compliance with the entrainment standard and further granted facilities an unlimited period of time to attain reductions within that margin of error.[416]

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[413] *Id.* at 42-43 (JA 4113).

[414] EPA Br. at 51, citing NODA and preamble to final Rule.

[415] 67 Fed. Reg, at 17192/1-2 (SPA 73).

[416] *See* Env. Pets. Br. at 37-48 and Point III, *supra* at 71-83.

Moreover, EPA's retraction of its limited closed-cycle cooling requirement and its initial foray into weighing monetized social benefits at proposal started the Agency down a path that repeatedly eviscerated what was required to be a technology-based rule by including a surfeit of unauthorized excursions from best technology, including the site-specific partially-monetized cost-benefit analysis addressed in Point II, *supra* at 63-70. The last minute involvement of OMB also explains why, as shown throughout the briefing, many of EPA's actions contradicted its own carefully-developed findings.

CONCLUSION

For the foregoing reasons, the Rule should be vacated and remanded.

Dated: April 17, 2006

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

I, Reed W. Super, lead attorney for the Environmental Petitioners, do hereby certify, pursuant to Fed. R. App. P. 32(a)(7)(C) as follows:

1. This brief complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B), as amended by this Court's order of May 12, 2005 because it contains 26,140 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii).

2. This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type style requirements of Fed. R. App. P. 32(a)(6) because it has been prepared in a proportionally spaced typeface using Microsoft Word in 14-point Times New Roman.

Reed W. Super

CERTIFICATE OF SERVICE

I hereby certify that on this 17th day of April, 2006, true and correct copies of the foregoing **[Final Form] REPLY BRIEF OF THE ENVIRONMENTAL PETITIONERS** were served on the following counsel for the parties in the manner indicated:

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Note cooling water costs on second page.

A

From: Barron, Alex
Sent: Friday, April 05, 2013 3:53:10 PM
To: Ganesan, Arvin; Vaught, Laura
Cc: Schmidt, Lorie; Beauvais, Joel; Goffman, Joseph; Bittleman, Sarah; Goo, Michael
Subject: EPW Minority: A Closer Look At Gina McCarthy

For those not on Politico Pro:

http://www.epw.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=b5c719a7-ed97-41d1-8e72-63617e129731

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In the Supreme Court of the United States

ENTERGY CORPORATION, PETITIONER

v.

ENVIRONMENTAL PROTECTION AGENCY, ET AL.

PSEG FOSSIL LLC, ET AL., PETITIONERS

v.

RIVERKEEPER INC., ET AL.

UTILITY WATER ACT GROUP, PETITIONER

v.

RIVERKEEPER INC., ET AL.

ON PETITIONS FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

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QUESTIONS PRESENTED

1. Whether Section 316(b) of the Clean Water Act, 33 U.S.C. 1326(b), authorizes the Environmental Protection Agency (EPA) to compare costs with benefits in determining the "best technology available for minimizing adverse environmental impact" at cooling water intake structures.

2. Whether Section 316(b) prohibits the use of restoration measures as a means of minimizing the adverse environmental impact associated with cooling water intake structures.

3. Whether Section 316(b) authorizes EPA to regulate cooling water intake structures at existing facilities, as well as at new facilities.

TABLE OF CONTENTS

Page

Opinion below 1
Jurisdiction 2
Statement 2
Argument 9
Conclusion 25

TABLE OF AUTHORITIES

Cases:

American Textile Mfrs. Inst. v. *Donovan*, 452 U.S. 490 (1981) 11
Appalachian Power Co. v. *Train*, 566 F.2d 451 (4th Cir. 1977) 4
Barnhart v. *Walton*, 535 U.S. 212 (2002) 11
BP Exploration & Oil, Inc. v. *United States EPA*, 66 F.3d 784 (6th Cir. 1995) 11
Chevron U.S.A. Inc. v. *NRDC,* 467 U.S. 837 (1984) 11, 23
Citizens Coal Council v. *United States EPA*, 447 F.3d 879 (6th Cir. 2006) 11
EPA v. *National Crushed Stone Ass'n*, 449 U.S. 64 (1980) 14
Garcia v. *DHS*, 437 F.3d 1322 (Fed. Cir. 2006) 24
Holderfield v. *MSPB*, 326 F.3d 1207 (Fed. Cir. 2003) 23
King v. *Department of the Navy*, 130 F.3d 1031 (Fed. Cir. 1997) 24
Michigan v. *United States EPA*, 213 F.3d 663 (D.C. Cir. 2000), cert. denied, 532 U.S. 903, and 532 U.S. 904 (2001) 12
NLRB v. *City Disposal Sys., Inc.*, 465 U.S. 822 (1984) 23

Cases—Continued: Page

Northern Ill. Steel Supply Co. v. *Secretary of Labor*, 294 F.3d 844 (7th Cir. 2002) 24

NRDC v. *United States EPA*, 859 F.2d 156 (D.C. Cir. 1988) 20, 21

Riverkeeper, Inc. v. *United States EPA*, 358 F.3d 174 (2d Cir. 2004) 5

Seacoast Anti-Pollution League v. *Costle*, 597 F.2d 306 (1st Cir. 1979) 9, 13

Sierra Club v. *United States EPA*, 314 F.3d 735 (5th Cir. 2002) 12

Travelers Cas. & Sur. Co. of Am. v. *Pacific Gas & Elec. Co.*, 127 S. Ct. 1199 (2007) 22

United States v. *Gabriel*, 125 F.3d 89 (2d Cir. 1997) 22

United States Steel Corp. v. *Train*, 556 F.2d 822 (7th Cir. 1977) 20

Virginia Elec. & Power Co. v. *EPA*, 566 F.2d 446 (4th Cir. 1977) 21

Statutes and regulations:

Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1251 *et seq.*:

33 U.S.C. 1251(a) 19

33 U.S.C. 1311 (§ 301) . . . . . *passim*

33 U.S.C. 1311(b) 18

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33 U.S.C. 1314(b)(1)(B) 3, 10

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33 U.S.C. 1316 (§ 306) . . . . . *passim*

Statutes and regulations—Continued: Page

33 U.S.C. 1316(a)(1) 3, 10
33 U.S.C. 1316(b) 18
33 U.S.C. 1326(b) (§ 316(b)) . . . . . *passim*
33 U.S.C. 1342 4
33 U.S.C. 1342(a)(1) (§ 402(a)(1)) 20
33 U.S.C. 1342(a)(3) 14
33 U.S.C. 1342(b)(1)(B) 14
33 U.S.C. 1369(b)(1)(E) 21

National Environmental Policy Act of 1969,
42 U.S.C. 4321 *et seq.* 21

40 C.F.R.:
Section 125.84(d)(1) 16
Section 125.90(a) 4
Section 125.94(a)(1)-(4) 5
Section 125.94(a)(5) 5
Section 125.94(b) 5
Section 125.94(c) 8
Section 401.14 4

Miscellaneous:

Central Hudson Gas & Elec. Corp., In re,
Op. EPA Gen. Counsel, NPDES No. 63,
1977 WL 28250 (July 29, 1977) 4, 15, 1 9

41 Fed. Reg. 17,387 (1976) 4

44 Fed. Reg. (1979):
p. 32,854 4
p. 32,956 4

Miscellaneous—Continued: Page

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p. 65,256 4
pp. 65,270-65,271 5
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p. 41,576 5
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p. 41,605 . . . . . 6, 15
pp. 41,605-41,606 6
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p. 35,006 5
p. 35,011 19
p. 35,015 16
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Staff of the Senate Comm. on Public Works, 93d Cong., 1st Sess., *A Legislative History of the Water Pollution Control Act Amendments of 1972* (Comm. Print 1973) 13

In the Supreme Court of the United States

No. 07-588

ENTERGY CORPORATION, PETITIONER

v.

ENVIRONMENTAL PROTECTION AGENCY, ET AL.

No. 07-589

PSEG FOSSIL LLC, ET AL., PETITIONERS

v.

RIVERKEEPER INC., ET AL.

No. 07-597

UTILITY WATER ACT GROUP, PETITIONER

v.

RIVERKEEPER INC., ET AL.

ON PETITIONS FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

BRIEF FOR THE FEDERAL RESPONDENTS IN OPPOSITION

OPINION BELOW

The opinion of the court of appeals (07-589 Pet. App. 1a-86a) is reported at 475 F.3d 83.

JURISDICTION

The judgment of the court of appeals was entered on January 25, 2007. A petition for rehearing was denied on July 5, 2007 (07-589 Pet. App. 87a-89a). On September 25, 2007, Justice Ginsburg extended the time within which to file a petition for a writ of certiorari to and including November 2, 2007, and the petitions were filed on that date. The jurisdiction of this Court is invoked under 28 U.S.C. 1254(1).

STATEMENT

1. Steam electric power plants and other industrial and manufacturing facilities employ cooling water intake structures (intake structures) to absorb heat. The intake structures at such plants collectively withdraw large amounts of water each day from the Nation's lakes, rivers, and other water bodies. Among the adverse environmental impacts that occur as those structures withdraw water are "impingement," which occurs when aquatic organisms are trapped against the intake structures by the force of the inflowing water, and "entrainment," which occurs when smaller organisms are pulled into a facility's cooling system. See 07-589 Pet. App. 2a.

Section 316(b) of the Clean Water Act (CWA or the Act) requires that "[a]ny standard established pursuant to" Section 301 or 306 of the Act "and applicable to a point source shall require that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact." 33 U.S.C. 1326(b). That provision is unique among CWA provisions in that it addresses the *intake* of water, in contrast to other

provisions that regulate the *discharge* of pollutants into waters of the United States.

The CWA does not define the substantive standard specified in Section 316(b)—"best technology available for minimizing adverse environmental impact" (BTA). 33 U.S.C. 1326(b). Section 316(b) does, however, cross-reference Sections 301 and 306 of the CWA by requiring that any standards established pursuant to those sections also require that intake structures reflect the BTA. *Ibid.* Section 301 authorizes the Environmental Protection Agency (EPA) to establish, among other things, effluent limitations based on the "best practicable control technology currently available" (BPT) or the "best available technology economically achievable" (BAT). 33 U.S.C. 1311(b)(1)(A) and (2)(A). Section 306 directs EPA to establish performance standards based on the "best available demonstrated control technology" (BADT). 33 U.S.C. 1316(a)(1).

The CWA specifies that, in establishing BPT, EPA must consider, among other factors, "the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application * * * and such other factors as the Administrator deems appropriate." 33 U.S.C. 1314(b)(1)(B). In determining BAT, EPA may consider factors similar to the BPT factors, including "the cost of achieving such effluent reduction * * * and such other factors as the Administrator deems appropriate." 33 U.S.C. 1314(b)(2)(B). The limitations and standards promulgated under Sections 301, 306, and 316(b) are implemented through National Pollutant Discharge Elimination System (NPDES) permits, which are issued for terms of up to five years, either by States with approved NPDES programs or, in States without an ap-

proved NPDES program, by EPA. See 33 U.S.C. 1342; 40 C.F.R. 125.90(a).

2. a. EPA first promulgated regulations implementing Section 316(b) in 1976. 41 Fed. Reg. 17,387. The Fourth Circuit remanded those regulations to EPA for procedural reasons. *Appalachian Power Co.* v. *Train*, 566 F.2d 451 (1977). When EPA subsequently withdrew the remanded regulations, it left intact a separate provision, which had not been remanded, that directs permitting authorities to use their best professional judgment to determine the BTA for each facility on a case-by-case basis. See 44 Fed. Reg. 32,854, 32,956 (1979); 40 C.F.R. 401.14. In 1977, EPA also issued a General Counsel opinion confirming its previous interpretation that, while Section 316(b) does not require a full cost-benefit analysis, it would be unreasonable "to interpret Section 316(b) as requiring use of technology whose cost is wholly disproportionate to the environmental benefit to be gained." *In re Central Hudson Gas & Elec. Corp.*, Op. EPA Gen. Counsel, NPDES No. 63, 1977 WL 28250, at *8 (July 29, 1977) (citation omitted). Thus, for more than 30 years, permitting authorities have considered costs and benefits to at least that extent in determining a facility's BTA.

b. In 1995, EPA entered into a consent decree establishing deadlines for proposing and taking final action on regulations implementing Section 316(b). That consent decree was later amended to provide for three phases of rulemaking addressing different categories of facilities. See 07-589 Pet. App. 4a-5a.

EPA published a Phase I rule in 2001. 66 Fed. Reg. 65,256. That rule governs new facilities that meet certain threshold specifications, and it provides that closed-cycle cooling technology (which reuses withdrawn wa-

ter) is generally the BTA for such facilities. *Id.* at 65,270-65,271. The Second Circuit largely upheld the Phase I rule. *Riverkeeper, Inc.* v. *United States EPA*, 358 F.3d 174, 181 (2004). The Phase II rule, which is at issue here, establishes requirements for intake structures at large, existing power plants that meet certain threshold specifications. 69 Fed. Reg. 41,576 (2004). The Phase III Rule, which governs new offshore and coastal oil and gas facilities and existing manufacturing and industrial facilities and smaller power plants, see 71 Fed. Reg. 35,006 (2006), is pending review in the Fifth Circuit. *ConocoPhillips Co.* v. *EPA*, No. 06-60662 (filed July 14, 2006).

In the Phase II rule at issue here, EPA selected a suite of technologies to reflect the BTA. 69 Fed. Reg. at 41,598-41,599. Those technologies include, among others, relocation of intakes, fine mesh passive screens, double-entry single exit traveling screens, velocity caps, larger intakes to decrease intake velocity, and barrier nets. See *id.* at 41,599. Based on that suite of technologies, EPA adopted national performance standards for reducing impingement mortality by 80%-95% and entrainment by 60%-90%. 40 C.F.R. 125.94(b). Facilities may use any combination of control technologies or operational controls, including restoration measures, to meet those standards. 40 C.F.R. 125.94(a)(1)-(4). A facility may request a variance that results in a site-specific BTA determination if the facility demonstrates that the cost of complying with the national performance standards is significantly greater than the benefits of compliance. 40 C.F.R. 125.94(a)(5).

EPA considered treating closed-cycle recirculating cooling towers, which it had determined to be the BTA for (new) Phase I facilities, as the BTA for (existing)

Phase II facilities. See 69 Fed. Reg. at 41,605-41,606. EPA rejected that alternative, however, because of its "generally high costs (due to conversions), the fact that other technologies approach the performance of this option, concerns for energy impacts due to retrofitting existing facilities, and other considerations." *Id.* at 41,605. EPA explained that: the cost of closed-cycle recirculating cooling towers for Phase II facilities was many times higher than for Phase I facilities (at least $130-$200 million per tower, and probably more than that, with additional annual operating costs up to $20 million per facility); such cooling towers were less energy efficient than EPA's chosen alternatives; and, "[a]lthough not identical, the ranges of impingement and entrainment reduction are similar" under EPA's chosen option and the closed-cycle alternative. *Id.* at 41,605, 41,606.

3. After several parties petitioned for review, the petitions were consolidated in the Second Circuit. See 07-589 Pet. App. 1a-86a. As relevant here, the court of appeals held that: (i) EPA may not consider the relationship between an alternative's costs and benefits in determining the BTA, *id.* at 17a-33a; (ii) Section 316(b) precludes the use of restoration measures as a means of minimizing adverse environmental impacts, *id.* at 40a-45a; and (iii) EPA may apply Section 316(b)'s requirements to both new and existing facilities through the NPDES permit process, *id.* at 65a-70a.

a. The court of appeals recognized that "Section 316(b) does not itself set forth * * * the specific factors that the EPA must consider in determining BTA." 07-589 Pet. App. 18a. Because Section 316(b) cross-references Sections 301 and 306, however, the court looked to the factors that EPA may consider in implementing

various standards under those sections. *Id.* at 18a-20a. While those standards treat costs in different ways, including by requiring cost-benefit analysis in some circumstances, the court concluded that Congress had manifested a clear intent in those other provisions "to move cost considerations under the CWA from a cost-benefit analysis to a cost-effectiveness one." *Id.* at 20a. The court further asserted that, if Congress had intended to permit a comparison of costs and benefits, it would have said so expressly in the statute. *Id.* at 22a-23a.

The court of appeals then held that EPA may not engage in cost-benefit analysis, but instead "may permissibly consider cost in two ways: (1) to determine what technology can be 'reasonably borne' by the industry and (2) to engage in cost-effectiveness analysis." 07-589 Pet. App. 23a. After consulting the definition of "cost-effectiveness" found in an Office of Management and Budget (OMB) circular, the court explained that, in its view, permissible cost-effectiveness review is limited to choosing "a less expensive technology that achieves essentially the same results" as the best technology that industry can reasonably bear. *Id.* at 20a n.10, 23a-24a. "For example, assuming the EPA has determined that power plants governed by the Phase II Rule can reasonably bear the price of technology that saves between 100-105 fish, the EPA, given a choice between a technology that costs $100 to save 99-101 fish and one that costs $150 to save 100-103 fish * * * could appropriately choose the cheaper technology on cost-effectiveness grounds." *Id.* at 24a. Thus, the court concluded, "the specified level of benefit is * * * a narrowly bounded range, within which the EPA may permissibly choose between two (or more) technologies that produce essen-

tially the same benefits but have markedly different costs." *Id.* at 25a.

The court of appeals then remanded to EPA because, in the court's view, "it is unclear whether the Agency improperly weighed the benefits and the costs of requiring closed-cycle cooling." 07-589 Pet. App. 29a. Based in part on its cost-benefit holding, the court also invalidated the provision of the Phase II rule that authorized site-specific variances based on a comparison of costs and benefits at particular sites. *Id.* at 52a.

b. The court of appeals went on to hold that Section 316(b) unambiguously precludes EPA from considering restoration measures, such as restocking of fish and improvement of surrounding habitat, in determining the BTA for a facility. 07-589 Pet. App. 40a-45a. In limited circumstances, EPA had allowed facilities to use such measures to offset the adverse environmental impacts that would otherwise be caused by the operation of an intake structure. 40 C.F.R. 125.94(c). In the court of appeals' view, however, such mitigation measures do not "minimize" adverse environmental impacts within the meaning of Section 316(b), but instead "substitute after-the-fact compensation for adverse environmental impacts that have already occurred." 07-589 Pet. App. 44a.

c. The court of appeals also upheld EPA's determination that Section 316(b) applies to existing as well as new facilities. 07-589 Pet. App. 65a-70a. The court explained that "[S]ection 316(b), on its face, applies to existing facilities" because it cross-references Section 301, which applies to existing facilities. *Id.* at 68a. "At the very least," the court concluded, "EPA's view that section 316(b) applies to existing facilities is a reasonable interpretation of the statute." *Ibid.*

In so holding, the court of appeals rejected the contention that EPA could not use the NPDES permitting process to enforce Section 316(b)'s requirements against existing facilities. 07-589 Pet. App. 68a-70a. The court noted that EPA must enforce Section 316(b) against existing facilities through "some permit process," and NPDES permits are "used to enforce the effluent limitations of sections 301 and 306." *Id.* at 69a. Thus, the court held, "EPA's decision to use the NPDES process to enforce section 316(b) is not unreasonable." *Ibid.*

ARGUMENT

1. Petitioners contend (*e.g.*, 07-589 Pet. 17-27) that the court of appeals erred in holding that, in determining the BTA, EPA may not consider the relationship between a technology's costs and benefits. The government agrees. The court of appeals' holding to that effect is wrong, and is in tension with *Seacoast Anti-Pollution League* v. *Costle*, 597 F.2d 306 (1st Cir. 1979). There is, however, no square circuit conflict on that question. And, while the question presented has great significance, it is not yet clear whether the decision is sufficiently important to merit the Court's review.

To be sure, the uncertainty created by the erroneous decision below may have significant repercussions for facilities that undergo permitting decisions before the remand proceedings are completed. In the government's view, however, the full impact of the decision will not be clear until EPA completes proceedings on remand. For that reason, the government decided not to file a petition for a writ of certiorari in this case. If this Court were to grant the petitions, however, the government would support the position of the petitioners on this issue.

a. The court of appeals' holding that Section 316(b) unambiguously precludes comparison of a technology's costs and benefits is incorrect. Section 316(b) requires EPA to select the "best technology available for minimizing adverse environmental impact." 33 U.S.C. 1326(b). As the court of appeals recognized, "Section 316(b) does not itself set forth * * * the specific factors that the EPA must consider in determining BTA." 07-589 Pet. App. 18a.

Nor does anything in the general statutory phrase preclude EPA's conclusion that the statute permits consideration of cost-benefit analysis in determining the BTA. The "best" technology for minimizing adverse impacts is not necessarily the one that provides the greatest reduction of such impacts, without regard to any other considerations. Section 316(b) cross-references Sections 301 and 306 of the Act, which direct EPA to adopt various other "best" standards: the "best practicable control technology currently available" (BPT); the "best available technology economically achievable" (BAT); and the "best available demonstrated control technology" (BADT). See 33 U.S.C. 1311(b)(1)(A) and (2)(A), 1316(a)(1), 1326(b). Congress specified that, in establishing BPT, EPA must consider, among other factors, "the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application * * * and such other factors as the Administrator deems appropriate." 33 U.S.C. 1314(b)(1)(B). In determining BAT, EPA is not *required* to consider the relationship between costs and benefits, but Congress expressly provided that the agency may consider "the cost of achieving such effluent reduction * * * and such other factors as the Administrator deems appropriate." 33 U.S.C. 1314(b)(2)(B).

Those statutory provisions confirm that "the CWA's requirement that EPA choose the 'best' technology does not mean that the chosen technology must be the best [at] pollutant removal." *Citizens Coal Council* v. *United States EPA*, 447 F.3d 879, 903 (6th Cir. 2006) (en banc) (quoting *BP Exploration & Oil, Inc.* v. *United States EPA*, 66 F.3d 784, 796 (6th Cir. 1995)).[1]

The court of appeals asserted that, if Congress had intended to permit consideration of the relationship between costs and benefits, it would have clearly said so. 07-589 Pet. App. 22a-23a. By treating statutory silence as an unambiguous prohibition, the court turned normal rules of statutory construction and *Chevron* deference on their head. "[S]uch silence, after all, normally creates ambiguity. It does not resolve it." *Barnhart* v. *Walton*, 535 U.S. 212, 218 (2002); see *Chevron U.S.A. Inc.* v. *NRDC*, 467 U.S. 837, 843-844 (1984). Moreover, the court of appeals erred in construing *American Textile Manufacturers Institute* v. *Donovan*, 452 U.S. 490, 510 (1981), to erect a presumption against consideration of the relationship between costs and benefits. See 07-589 Pet. App. 22a-23a. *Donovan* upheld an agency's determination that it was not *required* to undertake cost-benefit analysis under a different statute. *Donovan*, 452 U.S. at 506. Thus, *Donovan*—which predated

[1] The court of appeals asserted that BTA is more akin to BAT than BPT, and construed BAT (unlike BPT) to preclude cost-benefit analysis. 07-589 Pet. App. 18a-20a. All three standards, however, include the terms "best," "technology," and "available," and neither the BAT nor the BPT standard goes on to consider minimizing adverse environmental impacts. See 33 U.S.C. 1311(b)(1)(A) and (2)(A), 1326(b). As such, the court of appeals erred in concluding that the Act unambiguously treats BTA like BAT (but not BPT) for this purpose.

Chevron in any event—did not hold that silence unambiguously *precludes* consideration of costs and benefits.

More recent decisions applying *Chevron* principles of statutory construction have construed congressional silence as permitting cost-benefit analysis. See, *e.g.*, *Sierra Club* v. *United States EPA*, 314 F.3d 735, 744 (5th Cir. 2002); *Michigan* v. *United States EPA*, 213 F.3d 663, 678-679 (D.C. Cir. 2000), cert. denied, 532 U.S. 903, and 532 U.S. 904 (2001). The District of Columbia Circuit, for example, has explained that "[i]t is only where there is clear congressional intent to preclude consideration of cost that we find agencies barred from considering costs." *Id.* at 678 (internal quotation marks and citation omitted). The court of appeals erred by relying on the opposite presumption in this case.

The court of appeals confirmed its error by purporting to micro-manage the agency's decisionmaking by establishing rules that cannot be found anywhere in the Act. The court concluded, for example, that EPA may consider costs as part of cost-effectiveness but not cost-benefit analysis—terms that appear nowhere in the statute. After consulting the definition of "cost-effectiveness" found in an OMB circular that does not purport to interpret Section 316(b), the court proclaimed that EPA could adopt a significantly cheaper technology that would save 99-101 fish instead of 100-103 fish. 07-589 Pet. App. 20a & n.10, 24a. While it is not clear what result the court of appeals would reach if five or ten fish were potentially affected instead of one or two, the point for present purposes is that the court of appeals' freelancing violates *Chevron* by usurping the agency's role of construing and filling in an ambiguous statute.

Indeed, the court of appeals also agreed to let EPA consider other practical factors, such as energy effi-

ciency and countervailing environmental effects. 07-589 Pet. App. 24a n.12. While those factors are very important considerations, the lines drawn by the court of appeals between what it will and will not permit the agency to consider are by no means required by the statute; instead, they are simply the court of appeals' preferences imposed on the agency, in violation of *Chevron*.

b. The court of appeals' decision is also in tension with the First Circuit's decision in *Seacoast*, *supra*. In determining the BTA in that case under Section 316(b), EPA rejected an alternative that would have further minimized entrainment "only slightly," and would have cost an additional $20 million. *Seacoast*, 597 F.2d at 311. EPA rejected that alternative because "the costs would be 'wholly disproportionate to any environmental benefit.'" *Ibid.* (quoting EPA's opinion). After resolving a factual dispute concerning the magnitude of the costs, the First Circuit stated that "[p]etitioners, wisely, do not argue that the cost may not be considered." *Ibid.* Rather, "[t]he legislative history clearly makes cost an acceptable consideration in determining whether the intake design 'reflect[s] the best technology available.'" *Ibid.* (quoting Staff of the Senate Comm. on Public Works, 93d Cong., 1st Sess., *A Legislative History of the Water Pollution Control Act Amendments of 1972*, at 264 (Comm. Print 1973)).

Seacoast does not present a square conflict for two reasons. First, it appears from the court of appeals' brief discussion that the permissibility of considering costs was not in dispute in that case. 597 F.2d at 311. Second, while the First Circuit clearly stated that EPA may consider costs, the court did not explicitly discuss the *extent* to which costs may be considered. See *ibid.*

Nonetheless, *Seacoast* upheld EPA's rejection of an alternative on the ground that its costs were wholly disproportionate to its benefits—a legal standard that cannot be squared with the court of appeals' decision below. Indeed, the court of appeals below faulted EPA for applying a standard that, in the court of appeals' view, resembled one that looks to whether costs are "wholly out of proportion" to benefits. 07-589 Pet. App. 19a (quoting *EPA* v. *National Crushed Stone Ass'n*, 449 U.S. 64, 71 n.10 (1980)). In this case, therefore, the court of appeals rejected essentially the same legal standard that EPA had applied in *Seacoast*.

c. While the court of appeals' decision is undoubtedly important, and it unjustifiably constrains EPA's consideration of costs and benefits, it is unclear how significant the decision ultimately will prove to be. The court of appeals did not determine that EPA had considered costs in an unlawful fashion; instead, it found EPA's rationale "unclear" and remanded for further proceedings. 07-589 Pet. App. 26a. In doing so, the court of appeals noted that EPA could permissibly consider the energy impacts, countervailing environmental effects, and cost-effectiveness of alternatives. *Id.* at 24a n.12.

Nonetheless, it is clear that the court of appeals' decision will be disruptive. The Phase II rule affects approximately 550 facilities that account for approximately 40% of our Nation's energy production. See 69 Fed. Reg. at 41,608; Office of Water, EPA, *Economic and Benefits Analysis for the Final Section 316(b) Phase II Existing Facilities Rule* A3-6, A3-13 (2004). Because those facilities' NPDES permits expire every five years, see 33 U.S.C. 1342(a)(3) and (b)(1)(B), many affected permitting decisions may be made before EPA com-

pletes the remand proceedings and an appellate court reviews those proceedings. Until EPA completes the remand proceedings, permitting authorities will issue permits on a case-by-case basis based on their best professional judgment. At least in the Second Circuit, however, they will no longer be able to consider the relationship between costs and benefits. That will mark a sharp break from past practice, because EPA and other permitting authorities have understood for at least 30 years that cost-benefit analysis is an appropriate consideration. See, *e.g.*, *Central Hudson*, Op. EPA Gen. Counsel, NPDES No. 63, 1977 WL 28250, at *8 (explaining that it would be "unreasonable to interpret Section 316(b) as requiring use of technology whose cost is wholly disproportionate to the environmental benefit to be gained") (citation omitted). The short-term consequences of the resulting uncertainty will be magnified by the fact that existing facilities have made enormous investments based, in part, on their reliance on past permitting decisions made under a different legal standard.

As EPA determined in the Phase II rulemaking, any requirement that existing facilities must adopt closed-cycle cooling technology would have dramatic effects. Nationwide, the cost would exceed $3.5 billion annually, and possibly be much more than that. 69 Fed. Reg. at 41,605. Such controls would also impose a significant "energy penalty" by reducing the amount of energy created by affected plants while forcing others to remain idle during extensive retrofits (or to close their doors forever). See *ibid.* At this time, however, any assessment of the likely consequences is speculative, as explained above.

It is also unclear whether the court of appeals' decision will have practical consequences beyond the

Phase II rule. EPA's Phase III rule expressly relies on cost-benefit considerations. *E.g.*, 71 Fed. Reg. at 35,015. Challenges to that rule are currently pending before the Fifth Circuit, and the United States is defending EPA's consideration of the relationship between costs and benefits in that rulemaking. See U.S. Br. at 54-73, *ConocoPhillips*, *supra* (No. 06-60662). If the Fifth Circuit were to agree with the Second Circuit, the practical importance of the question would be magnified. If the Fifth Circuit were to disagree with the Second Circuit, the resulting circuit conflict would also weigh in favor of this Court's review. At this juncture, however, it is not clear that the consequences of the court of appeals' ruling below are sufficiently important to satisfy this Court's certiorari criteria.

2. In addition to challenging the court of appeals' erroneous cost-benefit holding, petitioners argue (*e.g.*, 07-589 Pet. 28-31) that the court of appeals erred in holding that the CWA precludes the use of restoration measures to minimize the adverse environmental impacts of cooling water intake structures. While the court of appeals' holding on that issue is wrong as well, it does not warrant further review at this time.

As discussed, the statute requires that "the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact." 33 U.S.C. 1326(b). EPA's regulations permit the use of restoration measures (instead of, for example, improvements to the equipment used in intake structures) when, among other things, "the impacts to fish and shellfish * * * within the watershed [through the use of restoration measures] will be comparable to those which would result" from other compliance methods. 40 C.F.R. 125.84(d)(1). That

is a reasonable interpretation of the statutory text, because it provides a common sense way of minimizing environmental impacts in a cost-effective manner.

The court of appeals construed Section 316(b) to require that BTA be implemented through "the location, design, construction, or capacity of cooling water intake structures." 07-589 Pet. App. 44a. Restoration measures are, however, part of the overall "design" of such structures. In any event, the statute requires only that the design "reflect[]" BTA, and the design does so when restoration measures help the facility achieve that level of protection. The court of appeals also thought that "minimizing adverse environmental impact" under the statute unambiguously requires minimizing that impact before any consequence occurs, as opposed to using restoration measures to replace, for example, entrained organisms with new organisms. 07-589 Pet. App. 44a. But nothing in the statute requires minimization to take either form, so long as the end result is comparable. Thus, if the Court were to grant the petitions, the government would support the position of the petitioners on this issue as well.

The restoration-measures question does not, however, warrant further review at this time. No other court of appeals has held that restoration measures are a permissible means of compliance under Section 316(b). While the court of appeals' decision has the potential to be disruptive and to require inefficient and wasteful results at existing facilities that had intended to rely upon restoration measures, the issue is not so exceptionally important as to warrant review in the absence of a circuit conflict. The court of appeals' holding is limited to Section 316(b), and does not extend to the use of restoration measures under other provisions of the CWA or

other environmental statutes. Moreover, the permissibility of restoration measures lacks the far-reaching significance of the more fundamental cost-benefit question described above, because such measures are simply one means of complying with BTA once BTA is established.

3. Alone among the petitioners, Entergy also argues (07-588 Pet. 15-25) that the court of appeals erred in upholding EPA's determination that Section 316(b) applies to existing facilities. The court of appeals' holding on that point is correct and does not warrant further review.

a. As noted, Section 316(b) requires that "[a]ny standard established pursuant to section [301] of [the CWA] or section [306] of [the CWA] and applicable to a point source shall require that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact." 33 U.S.C. 1326(b). The opening phrase establishes the scope of Section 316(b)'s applicability—*i.e.*, standards developed pursuant to Sections 301 and 306 and applicable to point sources—while the closing phrase establishes its substantive requirement—*i.e.*, that the location, design, construction, and capacity of intake structures reflect BTA. Significantly, while Section 306 addresses only new sources, 33 U.S.C. 1316(b), Section 301 provides for limitations on existing sources, as Entergy concedes (07-588 Pet. 5). See 33 U.S.C. 1311(b). Thus, by mandating that "*[a]ny* standard established pursuant" to Sections 301 or 306 reflect BTA for intake structures, Section 316(b) unambiguously imposes its requirements on both new and existing facilities. 33 U.S.C. 1326(b) (emphasis added).

Entergy argues (07-588 Pet. 15-16) that Section 316(b) is limited to new sources because it imposes requirements on "the location, design, construction, and capacity of cooling water intake structures." 33 U.S.C. 1326(b). As discussed, however, Section 316(b) separately defines its scope by stating that it applies to "[a]ny standard established pursuant to" Sections 301 and 306. *Ibid.*

Even if Section 316(b) does not unambiguously apply to existing facilities, EPA's interpretation is certainly reasonable and entitled to deference. Applying Section 316(b) to existing facilities furthers the CWA's general objective "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. 1251(a). It also fulfills Section 316(b)'s particular objective of minimizing adverse environmental impacts at facilities that are subject to Section 301 standards. Moreover, EPA has a longstanding and consistent practice of applying Section 316(b) to existing facilities, dating back to its 1977 regulations and a general counsel opinion that same year. See 71 Fed. Reg. at 35,011; *Central Hudson*, Op. EPA Gen. Counsel, NPDES No. 63, 1977 WL 28250, at *6.

b. Entergy nonetheless argues (07-588 Pet. 17-19) that its position is "confirmed by the absence of any CWA mechanism for imposing new requirements relating to the intake of water on existing facilities." As the court of appeals determined, however, EPA may implement Section 316(b) through the NPDES permitting process. 07-589 Pet. App. 68a-70a.

As discussed, Section 316(b) requires that standards established under Sections 301 and 306 must comply with Section 316(b)'s requirements. Section 301 and 306 standards are, in turn, implemented through NPDES

permits. See 33 U.S.C. 1342(a)(1). Indeed, the Act authorizes EPA to "issue [an NPDES] permit for the discharge of any pollutant * * * upon condition that such discharge will meet * * * *all applicable requirements* under sections [301 and 306]." *Ibid.* (emphasis added). Because the Act ties Section 316(b)'s requirements to standards established under Section 301, and the Act further directs that NPDES permits contain all applicable Section 301 requirements, the Act "implicitly requires the Administrator to insure compliance with § 316(b) as one of the permit conditions." *United States Steel Corp.* v. *Train*, 556 F.2d 822, 850 (7th Cir. 1977).

Entergy argues (07-588 Pet. 17-18) that Section 402(a)(1), 33 U.S.C. 1342(a)(1), which authorizes the issuance of NPDES permits, *requires* only that such permits mandate that the "discharge" of a pollutant comply with Section 301 requirements, whereas Section 316(b) governs the intake, as opposed to discharge, of water. But the intake and discharge of water are closely associated with one another, and there is no reason to read Section 402(a)(1) as *precluding* NPDES permits from including all Section 301 requirements. As the court of appeals observed, Entergy's reading cannot be squared with Section 316(b)'s clear application to existing sources. 07-589 Pet. App. 69a-70a. At a bare minimum, EPA's interpretation is reasonable.

c. There is no division among the circuits on the question presented here. Indeed, Entergy does not assert a circuit conflict on the question whether Section 316(b) applies to existing sources; instead, it asserts (07-588 Pet. 18-19) only a circuit conflict on the subsidiary question whether Section 316(b) may be enforced through NPDES permits. There is no such conflict. The District of Columbia Circuit's decision in *NRDC* v. *Uni-*

ted States EPA, 859 F.2d 156 (1988) (cited at 07-588 Pet. 19) does not even involve Section 316(b); instead, it addresses the question whether EPA may include conditions in NPDES permits based on the requirements of an entirely different statute, the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. 4321 *et seq.* See *NRDC*, 859 F.2d at 168-170. As the District of Columbia Circuit explained, NEPA—unlike Section 316(b)—is a "procedural" statute that "does not expand the agency's substantive powers." *Id.* at 169, 170.

Nor is there a conflict with *Virginia Electric & Power Co.* v. *EPA*, 566 F.2d 446 (4th Cir. 1977) (*VEPCO*) (cited at 07-588 Pet. 18-19). *VEPCO* did not involve NPDES permits. Instead, the "sole question" there was whether the district court or the court of appeals had original jurisdiction to review regulations implementing Section 316(b). *VEPCO*, 566 F.2d at 447. That question turned on "whether the regulations constitute 'effluent limitation[s] or other limitation[s]' within the meaning of [33 U.S.C. 1369(b)(1)(E)]." 566 F.2d at 449. It was undisputed that the regulations were not effluent limitations. *Ibid.* The court of appeals held that the regulations were other limitations for purposes of the jurisdictional provision, primarily because "§ 316(b) itself seems to indicate its limitations are to be adopted under §§ 301 and 306." *Id.* at 450. Nothing in *VEPCO*'s analysis, much less its jurisdictional holding, conflicts with the court of appeals' decision in this case; if anything, *VEPCO* supports the court of appeals' determination that Section 316(b)'s requirements are requirements under Sections 301 and 306.

d. Entergy argues (07-588 Pet. 22-25) that the court of appeals' decision implicates a circuit conflict on whether courts must defer to an agency's reasonable inter-

pretation of its own statutory jurisdiction. That question is not properly presented here, for at least two reasons. First, it was not timely raised or considered below. Entergy raised that contention for the first time in its reply brief in the court of appeals, and therefore has forfeited it. See, *e.g.*, *United States* v. *Gabriel*, 125 F.3d 89, 100 n.6 (2d Cir. 1997). Nor did the court of appeals address the question. Thus, the question is not properly presented here. See, *e.g.*, *Travelers Cas. & Sur. Co. of Am.* v. *Pacific Gas & Elec. Co.*, 127 S. Ct. 1199, 1208 (2007).[2]

Moreover, the court of appeals had an even more fundamental reason for not addressing the question: the court held that Section 316(b) "plainly applies" "on its face * * * to existing facilities." 07-589 Pet. App. 68a, 70a; see *id.* at 69a (emphasizing the "clear textual basis" for that conclusion). Because the court of appeals held that the statute is unambiguous, it had no occasion to analyze the deference that would be due to EPA's reasonable construction of an ambiguous statute. To be sure, the court of appeals stated, apparently as an alternative holding, that "at the very least, the EPA permissibly interpreted the statute to cover existing facilities." *Id.* at 65a; see *id.* at 68a. But the court's analysis rested on the plain language of the statute, see *id.* at 67a-68a, and, as discussed above, the court concluded that the text is "clear" and "plain[]." *Id.* at 69a, 70a. Thus, the court's holding does not appear to rely on deference.

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[2] In a string-cite for the general proposition that agencies' interpretations must be reasonable, Entergy's opening brief in the court of appeals included a parenthetical that said, "discretion inappropriate regarding matters of agency authority." Entergy C.A. Br. 33. That brief statement in a parenthetical to a case cited for a different proposition did not adequately raise the issue.

Even if the basis for the court's holding were unclear, that lack of clarity would make this case a poor vehicle for considering the deference question.

In any event, under *Chevron*, EPA's reasonable interpretation of the statutes it administers is entitled to deference, even if those statutes are considered jurisdictional. Indeed, an agency's construction of statutory provisions it is charged with administering normally affects the scope of the agency's regulatory authority and responsibilities. As a result, Entergy's position would all but eviscerate *Chevron*. In *Chevron* itself, this Court deferred to EPA's interpretation of the Clean Air Act's statutory term "stationary source"—an interpretation that determined the scope of EPA's regulatory responsibilities and authority. See *Chevron*, 467 U.S. at 839-840. Entergy makes no attempt to explain how its position can be squared with *Chevron*, and it cannot. Indeed, just three months before this Court decided *Chevron*, it held that an agency was entitled to deference on the scope of its jurisdiction and authority. *NLRB* v. *City Disposal Sys., Inc.*, 465 U.S. 822, 830 n.7 (1984). Since then, this Court has never held otherwise.

Entergy argues (07-588 Pet. 24-25) that two courts of appeals have nonetheless held that an agency's view of its own jurisdiction is not entitled to deference. Those cases are distinguishable. *Holderfield* v. *MSPB*, 326 F.3d 1207, 1208 (Fed. Cir. 2003), involved the Merit Systems Protection Board's (MSPB's) interpretation of the statutes that, quite literally, determine the scope of its adjudicatory jurisdiction. *Holderfeld* is distinguishable not only because it involves adjudicatory jurisdiction as opposed to regulatory authority, but also because the Federal Circuit reviews most of the MSPB's legal determinations *de novo*, not only its jurisdictional ones. See,

e.g., *King* v. *Department of the Navy*, 130 F.3d 1031, 1033 (Fed. Cir. 1997). Moreover, the Federal Circuit *does* defer to MSPB regulatory (as opposed to adjudicatory) interpretations of its jurisdiction. See *Garcia* v. *DHS*, 437 F.3d 1322, 1338 (2006) (en banc).

Petitioner is correct (07-588 Pet. 24-25) that, in the context of a different statute, the Seventh Circuit has declined to defer to an agency's interpretation of the scope of its regulatory authority. *Northern Ill. Steel Supply Co.* v. *Secretary of Labor*, 294 F.3d 844, 846-847 (2002). That case did not, however, involve Section 316(b) (or the CWA more generally). In any event, as discussed above, this case does not properly present the question, and the Seventh Circuit's decision is clearly wrong.

e. Finally, Entergy's prediction (07-588 Pet. 20-21) that the court of appeals' decision will have calamitous consequences is premature and is not supported by the record. Indeed, Entergy points (*id.* at 20) only to the cost of retrofitting nuclear facilities—which comprise a small percentage of the relevant facilities—with closed-cycle cooling towers. As discussed, however, the court of appeals' decision does not necessarily require that result on remand. Thus, while Entergy's arguments underscore the importance of the cost-benefit issue, they do not justify further review of the court of appeals' holding that Section 316(b)'s requirements apply to both new and existing facilities.

CONCLUSION

Although the decision below is incorrect in important respects, and has great potential practical importance, and the government would support reversal in the event that certiorari were granted, the petitions for a writ of certiorari should be denied.

Respectfully submitted.

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Nos. 07-588, 07-589 and 07-597

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QUESTION PRESENTED

Whether Section 316(b) of the Clean Water Act, 33 U.S.C. 1326(b), authorizes the Environmental Protection Agency to compare costs with benefits in determining the "best technology available for minimizing adverse environmental impact" at cooling water intake structures.

TABLE OF CONTENTS

Page

Opinion below 1
Jurisdiction 2
Statutory and regulatory provisions involved 2
Statement 2
Summary of argument 10
Argument 13
The Environmental Protection Agency may consider costs in relation to benefits in determining the best technology available for minimizing adverse environmental impact under Section 316(b) 13
A. The statutory text does not unambiguously prohibit consideration of the relationship between costs and benefits 15
B. The statutory structure, context, and history confirm that EPA may consider the relationship between costs and benefits 18
1. Section 316(b) cross-references provisions that require consideration of costs, including comparison of costs and benefits 19
2. Congress conferred broad authority on EPA to determine how best to consider costs, benefits, and other relevant factors 22
C. The court of appeals usurped EPA's discretion by imposing extra-textual constraints on EPA's consideration of various factors 26
D. There is no basis for applying an artificial presumption against consideration of the relationship between costs and benefits 30
E. EPA's consideration of costs and benefits in the rulemaking at issue here fell well within its discretion 35

Table of Contents—Continued: Page

1. EPA based the national performance standards on its weighing of multiple relevant factors 35
2. EPA permissibly authorized site-specific determinations in circumstances where costs significantly exceed benefits 39
Conclusion 42
Appendix 1a

TABLE OF AUTHORITIES

Cases:

American Iron & Steel Inst. v. *EPA*, 526 F.2d 1027 (3d Cir. 1975), amended, 560 F.2d 589 (3d Cir. 1977) 26
American Paper Inst. v. *United States EPA*, 660 F.2d 954 (4th Cir. 1981) 20
American Textile Mfrs. Inst. v. *Donovan*, 452 U.S. 490 (1981) 31, 32
Appalachian Power Co. v. *Train*, 566 F.2d 451 (4th Cir. 1977) 4
Barnhart v. *Walton*, 535 U.S. 212 (2002) 27, 30
BP Exploration & Oil, Inc. v. *United States EPA*, 66 F.3d 784 (6th Cir. 1995) 16, 39
Chemical Mfrs. Ass'n v. *United States EPA*, 870 F.2d 177 (5th Cir. 1989), cert. denied, 495 U.S. 910 (1990) .. 25
Chevron U.S.A. Inc. v. *NRDC*, 467 U.S. 837 (1984) 10, 15, 26, 28, 31, 34
Citizens Coal Council v. *United States EPA*, 447 F.3d 879 (6th Cir. 2006) 16

Cases—Continued: Page

CPC Int'l, Inc. v. *Train*, 540 F.2d 1329 (8th Cir. 1976), cert. denied, 430 U.S. 966 (1977) 26

EPA v. *National Crushed Stone Ass'n*, 449 U.S. 64 (1980) 20, 21, 24

Gregory v. *Ashcroft,* 501 U.S. 452 (1991) 31

Michigan v. *United States EPA*, 213 F.3d 663 (D.C. Cir. 2000), cert. denied, 532 U.S. 903, and 532 U.S. 904 (2001) 32, 33

Morton v. *Ruiz*, 415 U.S. 199 (1974) 27

NWF v. *EPA*, 286 F.3d 554 (D.C. Cir. 2002) 39

Public Serv. Co. of N.H. (Seabrook Station, Units 1 & 2), In re:

No. 76-7, 1977 WL 22370 (June 10, 1977) remanded on other grounds, 572 F.2d 872 (1st Cir. 1978) 5, 27

No. 76-7, 1978 WL 21140 (E.P.A. Aug. 4, 1978) 27

Riverkeeper, Inc. v. *United States EPA*, 358 F.3d 174 (2d Cir. 2004) ..... *passim*

Seacoast Anti-Pollution League v. *Costle*, 597 F.2d 306 (1st Cir. 1979) 27

Sierra Club v. *United States EPA*, 314 F.3d 735 (5th Cir. 2002) 32

Spector v. *Norwegian Cruise Line Ltd.*, 545 U.S. 119 (2005) 31

Texas Oil & Gas Ass'n v. *United States EPA*, 161 F.3d 923 (5th Cir. 1998) 39

Weyerhaeuser Co. v. *Costle*, 590 F.2d 1011 (D.C. Cir. 1978) 39

Case—Continued: Page

Whitman v. *American Trucking Ass'ns, Inc.*, 531 U.S. 457 (2001) 31, 32, 33

Statutes and regulations:

Clean Air Act, 42 U.S.C. 7401 *et seq.* 32
42 U.S.C. 7409(b)(1) 33
Clean Water Act, 33 U.S.C. 1251 *et seq.* 2
33 U.S.C. 1311(b)(1)(A) (§ 301(b)(1)(A)) 3, 19, 25
33 U.S.C. 1311(b)(2)(A) 3, 20, 21, 25
33 U.S.C. 1311(b)(2)(C) 20
33 U.S.C. 1311(b)(2)(D) 20
33 U.S.C. 1311(b)(2)(E) 3, 20, 24
33 U.S.C. 1311(b)(2)(F) 20
33 U.S.C. 1311(g) 21
33 U.S.C. 1314(a)(4) 20
33 U.S.C. 1314(b)(1)(B) 3, 4, 20, 24, 26
33 U.S.C. 1314(b)(2)(B) 4, 21, 24
33 U.S.C. 1314(b)(4)(B) 4, 20, 24
33 U.S.C. 1316(a)(1) (§ 306(a)(1)) 4, 21
33 U.S.C. 1316(b)(1)(B) (§ 306(b)(1)(B)) 4, 21, 24, 26
33 U.S.C. 1326(b) (§ 316(b)) 3, 10, 15, 16, 18, 22
33 U.S.C. 1342 4
33 U.S.C. 1361(a) 26
33 U.S.C. 1362(13) 20
40 C.F.R.:
Section 125.83 18
Section 125.90(a) 4
Section 125.94(a)(5) 7

Regulations—Continued: Page

Section 125.94(a)(5)(i) 40
Section 125.94(a)(5)(ii) 35, 39, 41
Section 125.94(b) 6, 36
Section 401.14 5

Miscellaneous:

American Heritage Dictionary (4th ed. 2006) 16, 17
Black's Law Dictionary (8th ed. 2004) 17
Central Hudson Gas & Elec. Corp., In re, Op. EPA Gen. Counsel, NPDES No. 63, 1977 WL 28250 (July 29, 1977) 27
Hon. Stephen Breyer, *Breaking the Vicious Circle: Toward Effective Risk Regulations* (1994) 14, 18
Matthew D. Adler & Eric A. Posner, *Rethinking Cost-Benefit Analysis*, 109 Yale L.J. 165 (1999) 31
Oxford English Dictionary (2d ed. 1989) 16
Random House Dictionary of the English Language (2d ed. 1987) 17
118 Cong. Rec. 33,762 (1972) 23
41 Fed. Reg. (1976):
p. 17,387 4
p. 17,388 41
51 Fed. Reg. 24,976 (1986) 25
66 Fed. Reg. 65,256 (2001) 5
66 Fed. Reg. 17,145 42
67 Fed. Reg. 17,145-17,146 ..... 41, 42
68 Fed. Reg. 13,541 (2003) 41, 42

Miscellaneous—Continued: Page

69 Fed. Reg. (2004):

p. 41, 576 6

71 Fed. Reg. 35,006 (2006) 6

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OPINION BELOW

The opinion of the court of appeals (Pet. App. 1a-94a) is reported at 475 F.3d 83.[1]

[1] Citations to the Pet. App. refer to the appendix filed in No. 07-588.

JURISDICTION

The judgment of the court of appeals was entered on January 25, 2007. A petition for rehearing was denied on July 5, 2007 (Pet. App. 95a-96a). On September 25, 2007, Justice Ginsburg extended the time within which to file the petitions for a writ of certiorari to and including November 2, 2007, and the petitions were filed on that date. The jurisdiction of this Court rests on 28 U.S.C. 1254(1).

STATUTORY AND REGULATORY PROVISIONS INVOLVED

The pertinent statutory and regulatory provisions are set forth in an appendix to this brief. App., *infra*, 1a-24a.

STATEMENT

1. Steam electric power plants and other industrial and manufacturing facilities depend upon intake structures to withdraw water from the Nation's lakes, rivers, and other water bodies. The withdrawn water then absorbs heat from the steam used to generate electricity. Among the adverse environmental impacts associated with the use of intake structures are "impingement," which occurs when aquatic organisms are trapped against the structures by the force of inflowing water, and "entrainment," which occurs when smaller organisms are pulled into a facility's cooling system. Billions of aquatic organisms are impinged or entrained by intake structures annually. See Pet. App. 3a.

Section 316(b) of the Clean Water Act (CWA or Act), 33 U.S.C. 1251 *et seq.*, requires that "the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for mini-

mizing adverse environmental impact." 33 U.S.C. 1326(b). That provision is unique among CWA provisions because it addresses the *intake* of water, in contrast to other provisions that regulate the *discharge* of pollutants into waters of the United States.

The CWA does not define the substantive standard specified in Section 316(b)—"best technology available for minimizing adverse environmental impact" (BTA). 33 U.S.C. 1326(b). Section 316(b) does, however, cross-reference Sections 301 and 306 of the CWA by specifying that standards established pursuant to those sections must require that intake structures reflect BTA, *ibid.*, and Sections 301 and 306, in turn, call for consideration of costs.

Section 301 requires the Environmental Protection Agency (EPA) to establish standards known as "effluent limitations" for *existing* point source discharges in two phases. In the first phase, applicable to all pollutants, EPA must establish effluent limitations based on the "best practicable control technology currently available" (BPT). 33 U.S.C. 1311(b)(1)(A). In establishing BPT, EPA must consider a number of specified factors, including "the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application," as well as "such other factors as the Administrator deems appropriate." 33 U.S.C. 1314(b)(1)(B).

In the second phase, EPA must establish effluent limitations for conventional pollutants based on the "best conventional pollution control technology" (BCT), and for toxic pollutants based on the "best available technology economically achievable" (BAT). 33 U.S.C. 1311(b)(2)(A), (E). In determining BCT, EPA must consider, *inter alia*, "the relationship between the costs of

attaining a reduction in effluents and the effluent reduction benefits derived" and "such other factors as the Administrator deems appropriate." 33 U.S.C. 1314(b)(4)(B). In determining BAT, EPA must consider, *inter alia*, "the cost of achieving such effluent reduction" and "such other factors as the Administrator deems appropriate." 33 U.S.C. 1314(b)(2)(B).

Section 306 directs EPA to establish performance standards for *new* sources based on the "best available demonstrated control technology" (BADT). 33 U.S.C. 1316(a)(1). In establishing BADT, EPA "shall take into consideration the cost of achieving such effluent reduction, and any non-water quality, environmental impact and energy requirements." 33 U.S.C. 1316(b)(1)(B).

The limitations and standards promulgated under Sections 301, 306, and 316(b) are implemented through National Pollutant Discharge Elimination System (NPDES) permits. Such permits are issued for terms of up to five years, either by States with approved NPDES programs or by EPA in States without such programs. See 33 U.S.C. 1342; 40 C.F.R. 125.90(a).

2. a. EPA first promulgated regulations implementing Section 316(b) in 1976. J.A. 38-49 (41 Fed. Reg. 17,387). In the preamble to those regulations, EPA stated that, while Section 316(b) does not "require" the agency to conduct a cost-benefit assessment, the agency would consider a technology's "economic practicality" for individual facilities on a case-by-case basis. J.A. 42.

The Fourth Circuit remanded those regulations to EPA for procedural reasons. *Appalachian Power Co.* v. *Train*, 566 F.2d 451 (1977). When EPA subsequently withdrew the remanded regulations, it directed permitting authorities to use their best professional judgment to determine BTA for each facility on a case-by-case

basis. See 40 C.F.R. 401.14. In 1977, EPA distributed a draft guidance document that proposed a process for determining BTA on a facility-specific basis. See Pet. App. 160a-161a.

In 1977, EPA also issued a permitting decision and a General Counsel opinion explaining that it would not be "reasonable to interpret Section 316(b) as requiring use of technology whose cost is wholly disproportionate to the environmental benefit to be gained." *In re Pub. Serv. Co. of N.H. (Seabrook Station, Units 1 and 2)*, No. 76-7, 1977 WL 22370 (June 10, 1977), remanded on other grounds, 572 F.2d 872 (1st Cir. 1978); accord *In re Central Hudson Gas & Elec. Corp., Op. EPA Gen. Counsel*, NPDES No. 63, 1977 WL 28250, at *8 (July 29, 1977). Thus, the framework in existence for more than 30 years has provided for permitting authorities to consider the relationship between costs and benefits to at least that extent in determining each facility's BTA on a case-by-case basis.

b. In 1995, EPA entered into a consent decree establishing deadlines for proposing and taking final action on regulations implementing Section 316(b). That consent decree was later amended to provide for three "phases" of rulemaking addressing different categories of facilities. See Pet. App. 6a.

EPA published a Phase I rule in 2001. 66 Fed. Reg. 65,256. That rule governs *new* facilities that meet certain threshold specifications, and it provides that closed-cycle recirculating cooling systems (which reuse withdrawn water) reflect BTA for such facilities. *Id.* at 65,270-65,271. The Second Circuit largely upheld the Phase I rule. *Riverkeeper, Inc.* v. *United States EPA*, 358 F.3d 174, 181 (2004) (*Riverkeeper I*). The Phase II rule, which is at issue here, establishes requirements for

intake structures at *existing* large power plants that meet certain criteria. Pet. App. 122a-593a (69 Fed. Reg. 41,576 (2004)). The Phase III Rule establishes requirements for new offshore and coastal oil and gas facilities, existing manufacturing and industrial facilities, and smaller power plants. 71 Fed. Reg. 35,006 (2006). That rule is under review in the Fifth Circuit, which stayed its proceedings pending this Court's disposition of this case. *ConocoPhillips Co.* v. *EPA*, No. 06-60662 (filed July 14, 2006).

c. In the Phase II rule at issue here, EPA selected a combination of technologies to reflect BTA for existing large power plants. Pet. App. 224a-225a. Those technologies include, among others, relocation of intakes, fine mesh passive screens, double-entry single-exit traveling screens, velocity caps, larger intakes to decrease intake velocity, and barrier nets. See *id.* at 228a. EPA selected those technologies based on the various options' "overall efficacy, availability, economic practicability, including economic impact and the relationship of costs with benefits, and non-water quality environmental impacts, including energy impacts." *Id.* at 253a.

Based on the chosen technologies, EPA established national performance standards for reducing impingement mortality (by 80%-95%) and entrainment (by 60%-90%). 40 C.F.R. 125.94(b). EPA did not, however, require the use of any specific technology, because it wanted to "provide[] a high degree of flexibility for existing facilities to select the most effective and efficient approach and technologies for minimizing adverse environmental impact associated with their cooling water intake structures." Pet. App. 226a.

EPA considered treating closed-cycle recirculating cooling systems, which it had determined to be BTA for

(new) Phase I facilities, as BTA for (existing) Phase II facilities. See Pet. App. 254a-261a. EPA rejected that alternative, however, because of its "generally high costs (due to conversions), the fact that other technologies approach the performance of this option, concerns for energy impacts due to retrofitting existing facilities, and other considerations." *Id.* at 255a. EPA explained that: the cost of closed-cycle recirculating cooling towers for existing Phase II facilities was many times higher than for new Phase I facilities because of the need to retrofit facilities that had not been designed to use closed-cycle towers; such cooling towers were less energy efficient than EPA's chosen alternatives; and, "[a]lthough not identical, the ranges of impingement and entrainment reduction are similar" under EPA's chosen option and the closed-cycle alternative. *Id.* at 255a-261a; see *id.* at 368a-369a.

The rule also allows a facility to request a variance resulting in a site-specific BTA determination if the facility demonstrates that its cost of complying with the national performance standards is significantly greater than the environmental benefits. 40 C.F.R. 125.94(a)(5). EPA provided that flexibility because its "comparison of national costs to national benefits" underlying the nationwide performance standards "may not be applicable to a specific site due to variations in (1) the performance of intake technologies and (2) characteristics of the waterbody in which the intake(s) are sited." Pet. App. 250a.

3. After several parties petitioned for review, the petitions were consolidated in the Second Circuit. See Pet. App. 1a-94a. The court of appeals recognized that "Section 316(b) does not itself set forth * * * the specific factors that the EPA must consider in determining

BTA." *Id.* at 20a. Because Section 316(b) cross-references Sections 301 and 306, however, the court looked to the factors that EPA must consider in implementing various standards under those sections. *Id.* at 20a-23a. While those standards treat costs in different ways, and two of them specifically require a comparison of costs and benefits, the court concluded that Congress had manifested a clear intent in those other provisions "to move cost considerations under the CWA from a cost-benefit analysis to a cost-effectiveness one." *Id.* at 22a. The court further asserted that, if Congress had intended to permit a comparison of costs and benefits under Section 316(b), it would have said so expressly in the statute. *Id.* at 25a.

The court of appeals then held that EPA may not engage in cost-benefit analysis, but instead "may permissibly consider cost in two ways: (1) to determine what technology can be 'reasonably borne' by the industry and (2) to engage in cost-effectiveness analysis." Pet. App. 26a. After consulting the definition of "cost-effectiveness" found in an Office of Management and Budget (OMB) circular that does not purport to implement the CWA, the court explained that, in its view, permissible cost-effectiveness review is limited to choosing "a less expensive technology that achieves essentially the same results" as the best technology that industry can reasonably bear. *Id.* at 23a n.10, 26a-28a. "For example, assuming the EPA has determined that power plants governed by the Phase II Rule can reasonably bear the price of technology that saves between 100-105 fish, the EPA, given a choice between a technology that costs $100 to save 99-101 fish and one that costs $150 to save 100-103 fish * * *, could appropriately choose the cheaper technology on cost-effectiveness grounds." *Id.*

at 26a-27a. Thus, the court concluded, "the specified level of benefit is * * * a narrowly bounded range, within which the EPA may permissibly choose between two (or more) technologies that produce essentially the same benefits but have markedly different costs." *Id.* at 28a.

The court of appeals then remanded to EPA because, in the court's view, "it is unclear whether the Agency improperly weighed the benefits and the costs of requiring closed-cycle cooling." Pet. App. 32a-33a. Based on its cost-benefit holding, the court also invalidated a provision of the Phase II rule that authorizes site-specific variances for facilities where costs of compliance with the nationwide performance standards would significantly exceed the environmental benefits. *Id.* at 56a-60a. On the same basis, the court rejected an industry petitioner's contention that the rule's costs impermissibly exceed its benefits. *Id.* at 27a n.13. While the court upheld EPA's authority to express BTA as a range, it also concluded that the agency must "require facilities to choose the technology that permits them to achieve as much reduction of adverse environmental impacts as is technologically possible," and the court directed EPA to reconsider its chosen ranges under that standard on remand. *Id.* at 43a-44a.

The court of appeals addressed a number of other challenges to the rule as well. For example, the court held that EPA had not provided sufficient public notice concerning a provision that authorizes the operator of a facility to apply for a site-specific BTA determination in circumstances where the facility's costs of complying with the nationwide performance standards would be significantly greater than the costs considered by EPA in establishing those standards. Pet. App. 51a-56a. The

court also upheld EPA's determinations that Section 316(b) applies to existing as well as new facilities, *id.* at 72a-77a, and that the loss of aquatic organisms is an adverse environmental impact within the meaning of Section 316(b), *id.* at 78a-80a.

SUMMARY OF ARGUMENT

The agency's gap-filling interpretation of Section 316(b) of the CWA is entitled to deference under *Chevron U.S.A. Inc.* v. *NRDC*, 467 U.S. 837 (1984). The CWA is full of requirements governing the *discharge* of pollutants, and in many instances Congress specified, in detail, the factors that EPA must consider in implementing those requirements. In Section 316(b), in contrast, Congress included a single terse sentence concerning the *intake* of water, and assigned broad authority to the agency to determine how best to address that distinct issue. The court of appeals erred by attempting to micro-manage the agency's exercise of its broad statutory discretion.

A. The CWA requires that "the location, design, construction, and capacity of cooling water intake structures reflect the *best* technology *available* for *minimizing* adverse environmental impact." 33 U.S.C. 1326(b) (emphases added). Nothing in that statutory standard speaks directly to the question whether, or to what extent, EPA should consider the relationship between costs and benefits. The "best" way for pursuing a goal is not always the one that most single-mindedly pursues that goal at all costs. Instead, the best way often depends on other considerations.

Moreover, whether a technology is "available" under Section 316(b) depends on its cost, as even the court of appeals acknowledged. And the term "minimizing" is

commonly used to refer to reductions that fall short of the greatest amount possible. Thus, the statutory standard does not unambiguously require EPA to set BTA without regard to the relationship between costs and benefits. Nor does it specify the extent to which EPA may consider that relationship. Instead, the Act leaves that determination to EPA—the agency with expertise in making such determinations.

B. Section 316(b) cross-references Sections 301 and 306 of the Act by specifying that standards established pursuant to those sections must require that intake structures reflect BTA. Those sections contain several "best" standards that govern the discharge of pollutants. Significantly, the Act expressly *requires* EPA to consider costs in promulgating all of those standards, and specifically requires EPA to consider the relationship between costs and benefits in promulgating two of them. Thus, while Section 316(b) sets forth a different standard than the "best" standards of Sections 301 and 306, and does not require EPA to follow those provisions as a model for determining BTA, the cross-reference to those provisions nonetheless suggests that EPA's consideration of the relationship between costs and benefits is at least reasonable.

Congress had good reason to confer greater discretion on the agency under Section 316(b) than under Sections 301 and 306. Section 316(b) is unique among the CWA's provisions in that it governs the *intake* of water, as opposed to the *discharge* of pollutants. Moreover, "Section 316(b) is something of an afterthought, having been added by the conference committee without substantive comment." *Riverkeeper I*, 358 F.3d at 186 n.12. Especially compared to the far more detailed provisions governing *discharge* limitations under Sections 301 and

306, Section 316(b)'s single sentence vests broad gap-filling authority in EPA to address the unique issue of *intake* restrictions.

C. The court of appeals' error is confirmed not only by the text, structure, and history of the statute, but also by the extent to which the court attempted to micro-manage EPA's consideration of various factors. The court held that EPA could undertake what the court called "cost-effectiveness" but not "cost-benefit" analysis—terms that appear nowhere in Section 316(b). While the court ultimately acknowledged that the agency could consider the relationship between costs and benefits, it held that the agency could do so only within an unspecified but "narrowly bounded" range. Pet. App. 28a. And the court held that, while cost-benefit analysis is impermissible, consideration of energy efficiency is permissible. Nothing in Section 316(b)'s single, terse sentence unambiguously draws those distinctions; instead, the court effectively imposed its own preferences on the agency, in contravention of *Chevron*.

D. The court of appeals also turned normal rules of statutory construction and agency deference on their head by asserting that agencies *may* consider the relationship between costs and benefits only when Congress has *clearly* authorized them to do so. Under *Chevron*, if Congress has not directly spoken to the precise question at issue, the agency has leeway to adopt its own construction of the statute as long as it is reasonable. Thus, Congress's silence or ambiguity on an issue confers discretion, not limitation. In any event, the traditional interpretive principles discussed above make clear that, in this instance, Congress intended to confer especially *broad* discretionary authority on EPA.

E. The agency's measured consideration of costs and benefits in this rulemaking fell well within its discretion. Indeed, EPA's selection of a nationwide performance standard based on multiple relevant factors may be permissible even under the cramped standard created by the court of appeals. The agency found that the environmental respondents' preferred technology had similar benefits, but far higher costs, than the performance standards selected by EPA, and that other factors such as energy efficiency and air quality also weighed in favor of EPA's chosen performance standards. The agency further authorized a site-specific determination of BTA if a facility's costs of compliance with the nationwide performance standards would be significantly greater than the benefits. Especially considering that BTA was historically determined on a facility-specific, best-professional-judgment basis, and the site-specific provision looks only to whether costs *significantly* exceed benefits, that provision falls comfortably within EPA's discretion.

ARGUMENT

THE ENVIRONMENTAL PROTECTION AGENCY MAY CONSIDER COSTS IN RELATION TO BENEFITS IN DETERMINING THE BEST TECHNOLOGY AVAILABLE FOR MINIMIZING ADVERSE ENVIRONMENTAL IMPACT UNDER SECTION 316(b)

Consideration of the costs of a certain action in relation to its benefits is common in government regulation, as it is in human experience generally. In everyday life, people routinely weigh costs against benefits in deciding whether to do something. If a bigger car would be safer than a smaller and less expensive one, a person must decide whether the extra expense (of both the larger car

and the subsequent gasoline purchases) is justified by the safety and other benefits. Similarly, if a better home fire alarm would cost more than a traditional one, or if expensive new insulation would be more fire-resistant than the insulation already installed in a house, the homeowner must decide whether the added safety benefit justifies the added cost. See Hon. Stephen G. Breyer, *Breaking the Vicious Circle: Toward Effective Risk Regulation* 16 (1994) (*Vicious Circle*).

In numerous contexts, federal agencies engage in conceptually similar analyses by deciding whether a regulatory alternative's costs are justified by its benefits. To be sure, agencies do not always make cost-benefit analyses. And when they do such analyses, agencies consider costs and benefits in different ways, and give differing weight to costs and benefits. Sometimes costs and benefits are measured in monetary terms; other times they are compared qualitatively, as people do in everyday life. Sometimes an agency looks only at whether the benefits exceed the costs; other times (as here) the agency considers the cost-benefit relationship in conjunction with other factors. In the latter circumstance, after considering all relevant factors, an agency might decide to issue a regulation even though its costs are very high in proportion to its benefits. Or the agency might decide that the costs are too disproportionate to benefits to justify the proposal. But however an agency approaches the issue, consideration of costs and benefits is a common feature of agency decision-making, including in the environmental area.

The question presented here is not whether or to what extent cost-benefit analysis is a good thing. Instead, the question is whether Section 316(b) permits EPA to consider the relationship between costs and ben-

efits in determining the best technology available for minimizing the adverse environmental impact of cooling water intake structures. That question must be answered by applying the familiar two-step framework established by *Chevron*: first, "whether Congress has directly spoken to the precise question at issue"; and, if not, "whether the agency's answer is based on a permissible construction of the statute." 467 U.S. at 842-843. As explained below, Section 316(b) does not directly answer the question presented (or preclude EPA from considering the relationship between costs and benefits), and EPA's determination that it is appropriate to consider both costs and benefits in this context is an entirely permissible construction of the statute.

A. The Statutory Text Does Not Unambiguously Prohibit Consideration Of The Relationship Between Costs And Benefits

Section 316(b) requires that "the location, design, construction, and capacity of cooling water intake structures reflect the *best* technology *available* for *minimizing* adverse environmental impact." 33 U.S.C. 1326(b) (emphases added). That statutory standard does not directly speak to the question presented. Nor, to be clear, does it unambiguously preclude EPA from considering the relationship between costs and benefits—especially considering that Congress did not define any of the key statutory terms or otherwise specify the factors the agency may or must consider. See Pet. App. 20a ("Section 316(b) does not itself set forth * * * the specific factors that the EPA must consider in determining BTA.").

The first key statutory term is "best." Best is a relative term capable of different meanings, and the "best"

way of pursuing a goal is not always the one that most single-mindedly achieves that goal at all costs. For example, the best way to drive home might not be the quickest and most direct route on a map. That route might be more dangerous than others, more prone to traffic jams, or more expensive (*e.g.*, if it required payment of a toll). Similarly, the best way to win a game does not typically entail violating the rules, even if cheating would improve one's odds of winning, because other values matter as well. And the best way to catch fish is not necessarily the one that nets the most fish in the shortest period of time; to many, fly fishing has offsetting advantages.

Moreover, Section 316(b) refers to the "best technology available *for* minimizing adverse environmental impact," not the technology that is best *at* minimizing such impact. 33 U.S.C. 1326(b) (emphasis added). The word "for" is sometimes "[u]sed to indicate appropriateness or suitability." *American Heritage Dictionary* 686 (4th ed. 2006) (*American Heritage*); accord VI *Oxford English Dictionary* 26 (2d ed. 1989). Thus, while an individual may be regarded as the best person *at* his trade, he might not be the best person *for* a particular job, depending on a range of considerations. As the Sixth Circuit explained in construing another "best" standard in the CWA, the "requirement that EPA choose the 'best' technology does not mean that the chosen technology must be the best pollutant removal." *BP Exploration & Oil, Inc.* v. *United States EPA*, 66 F.3d 784, 796 (1995); accord *Citizens Coal Council* v. *United States EPA*, 447 F.3d 879, 903 (6th Cir. 2006) (en banc).

The statute also refers to the "best technology *available* for *minimizing* adverse environmental impact." 33 U.S.C. 1326(b) (emphases added). As the court of

appeals recognized, a technology's availability under Section 316(b) depends on its cost. Pet. App. 24a; see also *id.* at 349a-350a. The court erred, however, in holding that the statute unambiguously constrains EPA's consideration of costs to whether a technology's cost could be "reasonably borne by the industry." *Id.* at 24a. Even considering the term "available" in isolation, many people would not think of a luxury item as being "available" simply because its purchase would not bankrupt them. See *Random House Dictionary of the English Language* 142 (2d ed. 1987) (defining "available" to mean, among other things, "readily obtainable; accessible"); *American Heritage* 123 ("[p]resent and ready for use; at hand; accessible"). Indeed, assuming that the court of appeals did not intend to require a just-shy-of-bankruptcy standard, but instead intended the "reasonably borne" standard to be a more flexible one, that only underscores that Section 316(b)'s use of the term "available" does not unambiguously preclude consideration of whether an option's costs are warranted in light of other considerations.

The statutory term "minimizing" is also significant. To be sure, that term most formally refers to "reduc-[ing] to the smallest possible amount, extent, size, or degree." *American Heritage* 1119. But in common usage, the terms "minimal" and "minimize" often refer to a lesser degree of reduction. See, *e.g.*, *ibid.*; *Black's Law Dictionary* 1016 (8th ed. 2004) ("smallest *acceptable* or possible quantity") (emphasis added). For example, if a person said that he was trying to minimize the risk of being hit by a car while crossing a street, he presumably would not mean that he was staying inside his house at all times. Instead, the person would presumably mean that he was trying to reduce that risk consis-

tent with other practical considerations, including economic ones such as the need to travel to work, and thus, for example, was looking both ways before crossing a street. Accordingly, EPA determined that the appropriate "degree" of minimization may depend in part on "the relationship between costs and benefits." Pet. App. 355a; see 40 C.F.R. 125.83 ("Minimize means to reduce to the smallest amount, extent, or degree *reasonably* possible.") (emphasis added).

The upshot is that the "best technology available for minimizing adverse environmental impact," 33 U.S.C. 1326(b), is not unambiguously the one that achieves the greatest degree of environmental protection without regard to other considerations, including the relationship between costs and benefits. If it did, EPA might have to require a facility to devote billions of dollars to saving a relatively small number of organisms, even if those billions might be far better spent in other ways, including on more beneficial environmental objectives. Cf. *Vicious Circle* 18-19. Nothing in the statutory text compels that result.

B. The Statutory Structure, Context, And History Confirm That EPA May Consider The Relationship Between Costs And Benefits

Section 316(b) does not define its key terms or set forth the factors that EPA must or may consider in determining BTA. It does, however, cross-reference Sections 301 and 306 of the CWA by specifying that standards established pursuant to those sections, which govern the discharge of pollutants, must require that intake structures reflect BTA. 33 U.S.C. 1326(b). The only direct consequence of the cross-reference is a procedural one: when any standard under Section 301 or 306

is made applicable to a point source with an intake structure, such as in an NPDES permit, the standard must also reflect BTA limits. Cf. Pet. App. 5a. Nonetheless, the cross-reference to Sections 301 and 306 is informative, especially because those sections include numerous other "best" standards. See *id.* at 6a, 20a; *Riverkeeper I*, 358 F.3d at 186; Pet. App. 154a, 349a-350a.

As discussed below, Congress specified the factors that EPA must consider in promulgating each of the various "best" standards found in Sections 301 and 306. In doing so, it expressly *required* consideration of costs for all of those standards, and specifically *required* consideration of the relationship between costs and benefits for two of them. The express statutory mandate to consider costs under the cross-referenced sections strongly supports EPA's interpretation that consideration of the relationship between costs and benefits is *permissible* under Section 316(b). Moreover, Congress's decision to specify the factors that EPA must consider under the "best" standards for the discharge of pollutants under Sections 301 and 306, but not under the different "best" standard for the intake of water under Section 316(b), confirms that Congress intended to grant broad discretion to the agency to interpret and implement Section 316(b)'s terse and unique provision.

1. Section 316(b) cross-references provisions that require consideration of costs, including comparison of costs and benefits

The cross-referenced Section 301 directs EPA to promulgate "effluent limitations for point sources * * * which shall require the application of the best practicable control technology currently available" (BPT). 33 U.S.C. 1311(b)(1)(A). Congress specified that, in es-

tablishing BPT, EPA *must* consider, among other factors, "the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application." 33 U.S.C. 1314(b)(1)(B). Determination of BPT, therefore, requires "weighing benefits and costs." *EPA* v. *National Crushed Stone Ass'n*, 449 U.S. 64, 76 (1980).

While the BPT standards were to provide the first effluent limitations for all pollutants, Congress directed EPA to promulgate more stringent effluent limitations thereafter. *National Crushed Stone*, 449 U.S. at 69-70 & n.9. For conventional pollutants, Congress required EPA to promulgate effluent limitations based on the "best conventional pollution control technology" (BCT). 33 U.S.C. 1311(b)(2)(E); see 33 U.S.C. 1314(a)(4) (granting EPA authority to identify conventional pollutants); see also *National Crushed Stone*, 449 U.S. at 70 n.9. In determining BCT, EPA must consider, among other factors, "the relationship between the costs of attaining a reduction in effluents and the effluent reduction benefits derived." 33 U.S.C. 1314(b)(4)(B). Thus, Congress again expressly required consideration of the relationship between costs and benefits. See, *e.g.*, *American Paper Inst.* v. *United States EPA*, 660 F.2d 954, 961 (4th Cir. 1981).

For toxic and some other non-conventional pollutants, Congress required limitations that "require application of the best available technology economically achievable * * * which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants" (BAT), unless EPA determines that the complete elimination of pollutant discharges is "technologically and economically achievable" for a category or class of point sources. 33 U.S.C.

1311(b)(2)(A), (C), (D), (F); see 33 U.S.C. 1362(13) (defining the term "toxic pollutant"); see also *National Crushed Stone*, 449 U.S. at 70-71. In the latter situation, EPA is to require the elimination of such discharges. 33 U.S.C. 1311(b)(2)(A). Congress specified that, in promulgating BAT standards, EPA "shall take into account" a number of factors, including "the cost of achieving such effluent reduction * * * and such other factors as the Administrator deems appropriate." 33 U.S.C. 1314(b)(2)(B). Congress further authorized EPA to promulgate standards less stringent than BAT, but at least as stringent as BPT, for certain non-conventional pollutants. See 33 U.S.C. 1311(g).

While the various Section 301 standards govern *existing* sources, Section 306 requires EPA to promulgate standards of performance for *new* sources. 33 U.S.C. 1316(b)(1)(B). Those standards must "reflect the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants" (BADT). 33 U.S.C. 1316(a)(1). In establishing BADT, EPA "shall take into consideration the *cost* of achieving such effluent reduction, and any non-water quality, environmental impact and energy requirements." 33 U.S.C. 1316(b)(1)(B) (emphasis added).

The bottom line is that each of the cross-referenced provisions *requires* consideration of costs, and two of them (BPT and BCT) specifically require comparison of costs and benefits. Section 316(b)'s cross-reference to those provisions therefore reinforces the conclusion that it does not unambiguously *preclude* EPA from consider-

ing the relationship between costs and benefits. Pet. App. 345a-350a. Indeed, considering that standards established pursuant to Sections 301 and 306 must require that intake structures reflect BTA, and that all of the relevant standards and limitations are set forth in the same NPDES permit for a facility, see 33 U.S.C. 1326(b), it would make little sense for EPA to have less flexibility in determining BTA than in determining the other standards.

2. Congress conferred broad authority on EPA to determine how best to consider costs, benefits, and other relevant factors

a. Especially measured against the detailed provisions governing the factors that EPA must consider in promulgating effluent limitations under Sections 301 and 306, the single sentence set forth in Section 316(b) confers broad authority on the agency to determine both which factors to consider and how to consider them. Section 316(b) sets forth a different standard (BTA) than the other sections. And nothing in the Act evinces an intent to require EPA to treat BTA like—or differently than—any one of the Section 301 or 306 effluent limitations. Nor does Section 316(b) evince any intent to require EPA to consider only the factors listed in one or another of those sections, or to consider any given factor in precisely the same manner that it considers that factor in determining another of the "best" standards. Instead, as the Second Circuit itself observed in *Riverkeeper I*, the fact that Congress set forth lists of factors that EPA must consider in implementing the various "best" standards of Sections 301 and 306, but conspicuously did not do so in Section 316(b), confirms the

breadth of the discretion left to EPA. 358 F.3d at 187; see Pet. App. 156a-157a.

b. Congress had good reason to confer greater discretion on EPA under Section 316(b) than under Sections 301 and 306. Section 316(b) is unique among the CWA's provisions in that it governs the *intake* of water, as opposed to the *discharge* of pollutants. Because "intake structures are in a class by themselves," *Riverkeeper I*, 358 F.3d at 193, there is no reason to presume that the same standards that govern the discharge of pollutants should also govern the intake of water. Indeed, as the court of appeals observed, "Section 316(b) is something of an afterthought, having been added by the conference committee without substantive comment." *Id.* at 186 n.12. Thus, as the Second Circuit explained in *Riverkeeper I*, the "brevity" of Section 316(b), combined with the "paucity of legislative history, when measured against the volumes of drafts and speeches devoted to other aspects of the 1972 amendments," suggests that Congress "desire[d] to delegate significant rulemaking authority to the Agency." *Ibid.*

Moreover, what little legislative history there is supports EPA's interpretation. A legislator explained that "[t]he reference here to 'best technology available' is intended to be interpreted to mean the best technology available commercially *at an economically practicable cost*." 118 Cong. Rec. 33,762 (1972) (statement of Rep. Clausen) (emphasis added). Even the court of appeals acknowledged that "practicable" connotes cost-benefit considerations. Pet. App. 30a-31a.

c. The court of appeals relied on what it believed to be a clear intent on the part of Congress to abolish cost-benefit analysis after 1989 because, in the court's view, EPA may not undertake such analysis in determining

either BAT or BADT, and BAT replaced BPT in 1989. Pet. App. 20a-23a. As discussed above, Congress set forth lists of factors that EPA "shall" consider in determining BAT and BADT. 33 U.S.C. 1314(b)(1)(B); 33 U.S.C. 1316(b)(1)(B); see pp. 19-21, *supra*. Without explanation, the court of appeals treated those lists as setting forth the only factors that EPA "could consider." Pet. App. 21a. That interpretation is contradicted by the statute itself with respect to BAT, because Section 304(b)(2)(B), after identifying certain specific factors that EPA "shall" take into account, also authorizes consideration of "such other factors as the Administrator deems appropriate." 33 U.S.C. 1314(b)(2)(B).

Assuming for the sake of argument that cost-benefit analysis is not one of the other factors that EPA may consider in determining BAT, however, the court of appeals' conclusion does not follow. Cf. *National Crushed Stone*, 449 U.S. at 71. Even if no Section 301 or 306 effluent limitations could be based in part on cost-benefit analysis after 1989, that would manifest only an intent to preclude cost-benefit analysis for *discharge* limitations under Sections 301 and 306; it would not unambiguously reflect an intent to preclude cost-benefit analysis for *intake* limitations under the different Section 316(b) standard.

Moreover, the court of appeals erred in assuming that all Section 301 effluent limitations after 1989 are BAT limitations. As discussed above, the BAT standard is inapplicable to conventional pollutants, which are generally governed instead by the BCT standard. 33 U.S.C. 1311(b)(2)(E). In determining BCT, EPA must consider "the reasonableness of the relationship between the costs of attaining a reduction in effluents and the effluent reduction benefits derived." 33 U.S.C. 1314(b)(4)(B).

If the incremental costs of more stringent technologies are not reasonable in light of their incremental benefits, EPA will set BCT effluent limitations at the BPT level. 51 Fed. Reg. 24,976 (1986). Thus, since 1989, EPA has continued to adopt BPT standards for some conventional pollutants. See *Chemical Mfrs. Ass'n* v. *United States EPA*, 870 F.2d 177, 206-207 (5th Cir.), decision clarified on reh'g by 885 F.2d 253 (1989), cert. denied, 495 U.S. 910 (1990). And Congress authorized EPA to set effluent limitations for certain non-conventional pollutants at a level less stringent than BAT but at least as stringent as BPT. 33 U.S.C. 1311(g). The court of appeals therefore erred in assuming that the BAT standard governs all Section 301 effluent limitations after 1989.

Nor is there any basis for the court of appeals' conclusion that the Act unambiguously requires EPA to treat BTA as being more equivalent to BAT and BADT than to BPT. The court of appeals stated that BTA is "linguistically similar" to BAT but not BPT. Pet. App. 23a. But BTA, BPT, and BAT all include the terms "best," "technology," and "available," and neither BPT nor BAT goes on to consider minimizing adverse environmental impacts, as BTA does. See 33 U.S.C. 1311(b)(1)(A) and (2)(A). The court of appeals suggested that the BPT standard is inapposite because the word "practicable" appears in BPT but not BTA. Pet. App. 31a. One could argue with equal force, however, that BAT is inapposite because the phrase "economically achievable" appears in BAT but not BTA. Accordingly, the court of appeals erred in concluding that the Act unambiguously treats BTA like BAT (but not BPT) for this purpose. The only sensible conclusion one can draw from the differences in jargon used by Congress is that all of the different "best" standards are indeed different

and susceptible to differing interpretations in their own right, such that none of the others controls the meaning of BTA.

The BADT standards promulgated under Section 306 provide a poor analogy for an additional reason: they govern only *new* sources, while Section 316(b) governs both new and existing sources. See 33 U.S.C. 1316(b)(1)(B). Congress generally imposes stricter requirements on new sources because it is generally more feasible and less expensive for technology to be installed in new sources when they are first being built than for existing facilities to be reconfigured to incorporate that technology. See, *e.g.*, *CPC Int'l, Inc.* v. *Train*, 540 F.2d 1329, 1341 (8th Cir. 1976), cert. denied, 430 U.S. 966 (1977); *American Iron & Steel Inst.* v. *EPA*, 526 F.2d 1027, 1058 (3d Cir. 1975), amended, 560 F.2d 589 (1977). The applicability of Section 316(b)'s BTA standard to both new and existing sources demonstrates not only that the BADT analogy is inapposite, but also that flexibility is needed in the application of the BTA standard. Section 316(b)'s broader coverage also provides another basis for Congress's decision to confer greater discretion on EPA to implement Section 316(b) than to implement the Section 301 and 306 standards.

C. The Court Of Appeals Usurped EPA's Discretion By Imposing Extra-Textual Constraints On EPA's Consideration Of Various Factors

Because Section 316(b) does not "directly [speak] to the precise question at issue," *Chevron*, 467 U.S. at 842, and Congress granted EPA broad rulemaking authority to administer the Act, see 33 U.S.C. 1361(a), EPA's reasonable interpretation of the ambiguous statutory text is entitled to deference, *Chevron*, 467 U.S. at 843.

EPA's authority includes "the formulation of policy and the making of rules to fill any gap left, implicitly or explicitly, by Congress." *Ibid.* (quoting *Morton* v. *Ruiz*, 415 U.S. 199, 231 (1974)).

EPA has long construed Section 316(b) to permit consideration of the relationship between costs and benefits. Cf. *Barnhart* v. *Walton*, 535 U.S. 212, 219-220 (2002). As early as 1977, EPA issued a permitting decision and a General Counsel opinion that explained that, while Section 316(b) does not require a formal cost-benefit analysis, it would *not* be "reasonable to interpret Section 316(b) as requiring use of technology whose cost is wholly disproportionate to the environmental benefit to be gained." *In re Pub. Serv. Co. of N.H. (Seabrook Station, Units 1 and 2)*, No. 76-7, 1977 WL 22370 (E.P.A. June 10, 1977), remanded on other grounds, 572 F.2d 872 (1st Cir. 1978); accord *In re Cent. Hudson Gas & Elec. Corp., Op. EPA Gen. Counsel*, NPDES No. 63, 1977 WL 28250, at *8 (E.P.A. July 29, 1977). Thus, the legal framework followed for more than 30 years has provided for EPA and state permitting authorities to consider the relationship between costs and benefits to at least that extent in making individual permitting decisions. See, *e.g.*, *In re Pub. Serv. Co. of N.H. (Seabrook Station, Units 1 and 2)*, No. 76-7, 1978 WL 21140 (E.P.A. Aug. 4, 1978) (finding that an alternative's costs would be wholly disproportionate to its benefits), aff'd, *Seacoast Anti-Pollution League* v. *Costle*, 597 F.2d 306, 311 (1st Cir. 1979) (upholding the agency's consideration of costs); C.A. App. 492 (EPA determination, as part of 1988 permitting decision, that closed-cycle cooling towers were not BTA for a facility because the costs would be "wholly disproportionate to the environmental benefit"); *id.* at 351 (EPA determination, as part of 1986 per-

mitting decision, that an alternative was not BTA because its costs were "wholly disproportionate to anticipated benefits"); J.A. 140 (describing "measures that have been required" by EPA when other technologies would have "wholly disproportionate" costs).

While the court of appeals recited deference principles, Pet. App. 16a-17a, the court sharply departed from those principles. The degree of that departure is underscored not only by the implausibility of the court's contention that Section 316(b) unambiguously precludes consideration of the relationship between costs and benefits, but also by the extent to which the court attempted to micro-manage EPA's decisionmaking by establishing rules that cannot be found anywhere in the Act. The court concluded, for example, that EPA may consider costs as part of "cost-effectiveness" but not "cost-benefit" analysis—terms that appear nowhere in Section 316(b). See *id.* at 24a, 26a. After consulting the definition of "cost-effectiveness" found in an OMB circular that does not purport to interpret Section 316(b), the court proclaimed that EPA could adopt a significantly cheaper technology that would save 99-101 fish instead of 100-103 fish. *Id.* at 22a-23a & n.10, 27a. While it is not clear what result the court of appeals would reach if five or ten additional fish were potentially affected instead of one or two, the point for present purposes is that the court of appeals' approach contravenes the principles of *Chevron* by usurping the agency's role of construing and filling in gaps in an ambiguous statute. As this Court has made clear, "a court may not substitute its own construction of a statutory provision for a reasonable interpretation made by the administrator of an agency." *Chevron*, 467 U.S. at 844.

Indeed, by permitting the agency to weigh costs against at least one or two fish, the court of appeals essentially permitted EPA to consider the relationship between costs and benefits, but only in the most extreme cases. Even on its own terms, therefore, the court of appeals' decision lacks a principled grounding in the statutory text, because nothing in the Act unambiguously permits such consideration but limits it in the manner the court of appeals imposed.

Moreover, the court of appeals agreed to let EPA consider other practical factors, such as energy efficiency and countervailing environmental effects. Pet. App. 26a-27a n.12. While those factors are important, the lines drawn by the court of appeals are by no means required by the Act. The statutory standard makes no more reference to a technology's energy efficiency than to the relationship between costs and benefits. Indeed, energy efficiency could be viewed as a cost issue, because a power plant's less efficient operation due to the use of new technology increases the cost of producing the same amount of energy. Yet the court of appeals permitted EPA to weigh energy efficiency but not costs against benefits.

The court of appeals also was of the view that BTA must be "technology-driven," and that a standard selected based in part on cost-effectiveness analysis (or energy efficiency) is technology-driven, while a standard based in part on cost-benefit analysis is not. Pet. App. 24a. There is no statutory basis for those distinctions. Once one recognizes (as the court of appeals did) that EPA has discretion to consider factors other than technology, the Act provides no basis for the court of appeals' picking and choosing among such factors, especially among factors that EPA is expressly required to

consider under one or more of the cross-referenced standards in Sections 301 and 306. That is especially true with respect to cost-benefit analysis. Section 316(b) does not require the use of technology for technology's sake. Instead, it expressly looks to benefits by requiring the best technology available for *minimizing adverse environmental impact*. *Id.* at 157a, 249a-250a. And, as discussed above, the BTA standard and all of the cross-referenced provisions in Sections 301 and 306 authorize consideration of costs. See pp. 15-21, *supra*. As long as EPA is considering both costs and benefits, nothing in the Act prohibits the agency from considering the relationship between the two.

D. There Is No Basis For Applying An Artificial Presumption Against Consideration Of The Relationship Between Costs And Benefits

The court of appeals turned normal rules of statutory construction and *Chevron* deference on their head by reasoning that, if Congress had intended to permit cost-benefit analysis, it would have clearly said so. See Pet. App. 25a. There is no logical or precedential basis for such a presumption against cost-benefit analysis. But even if there were, it would not apply in the context of this case, where Congress intended to confer broad authority on the agency and expressly cross-referenced sections that require cost-benefit analysis.

a. Congress's *silence* on whether an agency may consider the relationship between costs and benefits provides no basis for inferring an unambiguous legislative prohibition against such consideration. "[S]ilence, after all, normally creates ambiguity. It does not resolve it." *Barnhart*, 535 U.S. at 218. And in *Chevron*, this Court admonished that, "if a statute is silent * * *

with respect to the specific issue, the question for the Court is whether the agency's answer is based on a permissible construction of the statute." 467 U.S. at 843.

On unusual occasions, this Court has erected a plain statement rule in order to avoid constitutional difficulties, *e.g.*, *Gregory* v. *Ashcroft*, 501 U.S. 452, 460-461, 464 (1991), or because of the unlikelihood that Congress would have intended a result, *e.g.*, *Spector* v. *Norwegian Cruise Line Ltd.*, 545 U.S. 119, 131-132 (2005). But there is nothing inherently suspect about weighing costs and benefits. Numerous environmental and other statutes require or permit such analysis. See, *e.g.*, Matthew D. Adler & Eric A. Posner, *Rethinking Cost-Benefit Analysis*, 109 Yale L.J. 165, 167 (1999). And in everyday life, people routinely determine whether an item is worth its cost. See pp. 13-14, *supra*. Thus, "other things being equal, [the Court] should read silences or ambiguities in the language of regulatory statutes as permitting, not forbidding, this type of rational regulation." *Whitman* v. *American Trucking Ass'ns, Inc.*, 531 U.S. 457, 490 (2001) (Breyer, J., concurring in part and in the judgment).

The court of appeals erred in reading *American Textile Manufacturers Institute* v. *Donovan*, 452 U.S. 490, 510 (1981), as erecting a presumption against consideration of the relationship between costs and benefits. See Pet. App. 24a-25a. *Donovan* upheld the Occupational Safety and Health Administration's determination that it was not *required* to undertake cost-benefit analysis under a different statute. *Donovan*, 452 U.S. at 506, 541. Moreover, *Donovan* predated *Chevron*. Thus, while *Donovan* stated that, "[w]hen Congress has intended that an agency engage in cost-benefit analysis, it has clearly indicated such intent on the face of the stat-

ute," *id.* at 510-511, the *Donovan* Court did not have occasion to address the question whether silence unambiguously *precludes* consideration of costs and benefits. Indeed, the dissenting opinion in *Donovan* construed the Court's opinion as "suggest[ing] * * * that the Act *permits* the Secretary to undertake [a cost-benefit] analysis if he so chooses." *Id.* at 544 (Rehnquist, J., dissenting).

More recent court of appeals decisions applying *Chevron* principles of statutory construction have construed congressional silence as permitting cost-benefit analysis. See, *e.g.*, *Sierra Club* v. *United States EPA*, 314 F.3d 735, 744 (5th Cir. 2002); *Michigan* v. *United States EPA*, 213 F.3d 663, 678-679 (D.C. Cir. 2000) (citing cases), cert. denied, 532 U.S. 903, and 532 U.S. 904 (2001). The District of Columbia Circuit, for example, has explained that "[i]t is only where there is clear congressional intent to preclude consideration of cost that we find agencies barred from considering costs." *Michigan*, 213 F.3d at 678 (internal quotation marks and citation omitted). The court of appeals erred by relying on a contrary presumption.

Riverkeeper's reliance (Br. in Opp. 25-26) on *Whitman* is also misplaced. In that case, the Court agreed with EPA that the Clean Air Act (CAA), 42 U.S.C. 7401 *et seq.*, unambiguously precludes consideration of costs in setting National Ambient Air Quality Standards (NAAQS). 531 U.S. at 464-465. The Court stated that, because NAAQS are "the engine that drives" much of the CAA, EPA could consider costs only if Congress had provided a clear textual commitment of such authority to the agency. *Id.* at 467-468. The Court then agreed with EPA that the text of the CAA—which requires EPA to set NAAQS at levels "requisite to protect the

public health" with "an adequate margin of safety," 42 U.S.C. 7409(b)(1)—"unambiguously bars cost considerations from the NAAQS-setting process" when that provision is "interpreted in its statutory and historical context and with appreciation for its importance to the CAA as a whole." 531 U.S. at 471.

Whitman is inapposite for a number of reasons. While that case applied a presumption against *any consideration of costs* in setting NAAQS, the court of appeals here held that EPA *may* consider costs in determining BTA. See Pet. App. 26a. The question here is not (as it was in *Whitman*) whether EPA may consider costs at all in setting the relevant standards, but whether the agency's consideration of costs may take the form of cost-benefit analysis. A presumption against any consideration of costs provides little if any support for the court of appeals' decision permitting the agency to consider costs but greatly circumscribing its manner of doing so, which is presumably why the court of appeals itself did not rely on *Whitman*.

In addition, the *Whitman* Court repeatedly emphasized that its holding turned on the NAAQS' centrality to the CAA. See 531 U.S. at 468, 469 n.1, 471. Thus, the Court did not disapprove the District of Columbia Circuit's cases holding that EPA may generally consider costs in the absence of an express directive to the contrary. Instead, the *Whitman* Court emphasized that "[n]one of the sections of the CAA in which the District of Columbia Circuit has found authority for the EPA to consider costs shares [Section] 109(b)(1)'s prominence in the overall statutory scheme." *Id.* at 469 n.1 (citing, *e.g.*, *Michigan*, 213 F.3d at 678-679). As explained above, Section 316(b)'s single sentence concerning the *intake* of water is by no means the centerpiece of the CWA.

Rather, it is "something of an afterthought, having been added by the conference committee without substantive comment," *Riverkeeper I*, 358 F.3d at 186 n.12, that addresses a unique issue separate and apart from the CWA's normal focus on the *discharge* of pollutants into waters of the United States. See p. 23, *supra*. Thus, there is no basis for applying a presumption against weighing of costs and benefits in this case.

b. Even if some presumption applied here, it would be overcome by the statutory text, context, and legislative history discussed above. The text of Section 316(b)'s BTA standard, combined with its cross-reference to Sections 301 and 306, provides a strong textual basis for concluding that cost-benefit analysis is permissible. Moreover, the terseness of the relevant statutory text, coupled with the circumstances of its enactment, make clear that Congress intended to confer especially broad authority on EPA to address the unique problems associated with intake of water by cooling towers. See pp. 22-23, *supra*. Thus, as the Second Circuit observed in *Riverkeeper I*, "[t]o the extent [Section 316(b)] is silent on issues to which other sections speak, [a court should] hesitate to draw the negative inference that the brevity of section 316(b) reflects an intention to limit the EPA's authority rather than a desire to delegate significant rulemaking authority to the Agency." 358 F.3d at 186 n.12. That understates the matter because such "hesitat[ion]" is, of course, compelled by *Chevron*. See 467 U.S. at 842-843.

E. EPA's Consideration Of Costs And Benefits In The Rulemaking At Issue Here Fell Well Within Its Discretion

In the rulemaking here, EPA explained that "the relationship of costs to environmental benefits is an important" consideration, because "EPA has long recognized that there should be some reasonable relationship between the cost of cooling water intake structure control technology and the environmental benefits associated with its use." Pet. App. 253a. EPA also made clear, however, that the relationship between costs and benefits was not, by itself, determinative. Instead, selecting BTA "encompasses consideration of effectiveness, costs, non-water quality environmental impacts, feasibility issues and a host of other considerations." *Id.* at 219a.

EPA then considered costs along with other factors in selecting national BTA performance standards. See Pet. App. 255a-261a, 368a-369a. In addition, EPA authorized individual facilities to seek site-specific BTA determinations if, on a facility-specific basis, the costs of compliance with the national standard would be significantly greater than the benefits. 40 C.F.R. 125.94(a)(5)(ii). In each instance, EPA's consideration of costs and benefits was reasonable and fell comfortably within its statutory authority.

1. EPA based the national performance standards on its weighing of multiple relevant factors

a. EPA determined BTA after analyzing the various options' "overall efficacy, availability, economic practicability, including economic impact and the relationship of costs with benefits, and non-water quality environmental impacts, including energy impacts." Pet. App. 253a.

EPA ultimately selected a combination of technologies to reflect BTA for existing large power plants. *Id.* at 224a-229a. Based on those technologies, EPA then established national performance standards for reducing impingement mortality (by 80%-95%) and entrainment (by 60%-90%), but did not require the use of any specific technology to achieve those standards. See 40 C.F.R. 125.94(b); Pet. App. 226a-227a.

EPA rejected closed-cycle cooling technology as BTA "based on its generally high costs (due to conversions), the fact that other technologies approach the performance of this option, concerns for energy impacts due to retrofitting existing facilities, and other considerations." Pet App. 255a. EPA had selected closed-cycle cooling technology as BTA for *new* facilities in the Phase I rulemaking, but the agency determined that "retrofit[ting] existing systems is not the most cost-effective approach and at many existing facilities, retrofits may be impossible or not economically practicable." *Ibid.* The agency explained that the cost of closed-cycle recirculating cooling towers for Phase II facilities was many times higher than for Phase I facilities—at least $130-$200 million per tower, and probably more than that, with additional annual operating costs of up to $20 million per facility, compared to annual costs as low as $170,000 for new facilities. *Id.* at 255a-256a.

In addition to considering costs, EPA stressed that mandatory closed-cycle cooling technology would impose an "energy penalty" because existing fossil-fuel power plants that installed that technology would produce between 2.4% and 4% less electricity while consuming the same amount of coal. Construction of 20 additional plants could be required to make up for the lost produc-

tion, thereby increasing both financial costs and air pollution. Pet. App. 257a-258a.

Finally, EPA compared the effectiveness of closed-cycle cooling technology with the option that it ultimately selected, and determined that, "[a]lthough not identical, the ranges of impingement and entrainment reduction are similar under both options." Pet. App. 260a. After "consider[ing] this similarity in efficacy," along with the other factors noted above, EPA determined that "the total capital cost investment and associated economic impact is simply too high * * * for EPA to be able to justify selecting cooling towers" as BTA. *Id.* at 261a; see *id.* at 260a, 368a-369a.

b. EPA's decisionmaking is fully consistent with its authority to consider costs and benefits under Section 316(b). As explained above, Section 316(b) permits EPA to consider the relationship between costs and benefits. Moreover, the agency's analysis ultimately turned on the fact that its chosen option produces similar results to closed-cycle cooling technology at much lower cost and with less harm to the Nation's energy supply and air quality. See Pet. App. 260a-261a, 368a-369a.

Thus, the agency's analysis may be permissible even under the cramped standard fashioned by the court of appeals. The court of appeals held that EPA may undertake what the court referred to as "cost-effectiveness" analysis by "choos[ing] [a] cheaper technology" even if that technology is somewhat less effective than a significantly more costly technology. Pet. App. 27a. The court also acknowledged that EPA may consider "energy efficiency or environmental impact." *Id.* at 26a n.12. As discussed above, EPA undertook that type of analysis. While it is not clear whether the court of appeals would conclude that EPA had considered cost-effectiveness

only within a sufficiently "narrowly bounded range," *id.* at 28a, or whether the court of appeals would ultimately agree with EPA's balancing of the various other relevant factors, those matters fall well within EPA's discretion, not the court of appeals'. Cf. *id.* at 32a-37a (remanding for EPA to provide a further explanation of the basis for its decision).[2]

Indeed, *Riverkeeper I* strongly suggested as much. In the Phase I Rule, EPA rejected a technology, known as dry cooling, that "dramatically reduc[ed] impingement and entrainment" by "virtually eliminat[ing] the need for cooling water." *Riverkeeper I*, 358 F.3d at 194. EPA determined that, among other things, "dry cooling costs more than ten times as much per year as closed-cycle wet cooling, but it is estimated to reduce water intake by only an additional 5 percent relative to once-through cooling." *Id.* at 194 (footnotes omitted). EPA also considered a variety of other factors, including energy consumption and air emissions. *Id.* at 195. Recognizing that EPA's weighing of relevant factors falls within the agency's "considerable discretion," the court noted that it was "not well equipped * * * to meaningfully weigh a 95 percent reduction in entrainment against .027 percent of new generating capacity, 300 pounds of mercury, and $443 million dollars." *Id.* at 196.

[2] The court of appeals' definition of the term "cost-effective" sows confusion because it differs from EPA's use of that term. The court defined cost-effectiveness to refer to the least expensive method of achieving a narrowly bounded level of benefit. See Pet. App. 23a, 28a. In the rulemaking below, however, EPA's cost-effectiveness analysis compared the *incremental* cost of a technology to its *incremental* benefits. Thus, while EPA explained that its decision was based in part on cost-effectiveness considerations, the agency also made clear that its cost-effectiveness analysis looked to the relationship between costs and benefits. See, *e.g.*, *id.* at 260a-261a.

In reviewing EPA's determination of BAT and BADT limitations under Sections 301 and 306, other courts of appeals have likewise observed that, because "Congress did not mandate any particular structure or weight for the many [relevant] factors," *Weyerhaeuser Co.* v. *Costle*, 590 F.2d 1011, 1045 (D.C. Cir. 1978), EPA has "considerable discretion in evaluating the relevant factors and determining the weight to be accorded to each." *Texas Oil & Gas Ass'n* v. *United States EPA*, 161 F.3d 923, 928 (5th Cir. 1998); see *NWF* v. *EPA*, 286 F.3d 554, 570 (D.C. Cir. 2002); *BP Exploration*, 66 F.3d at 796.[3]

2. EPA permissibly authorized site-specific determinations in circumstances where costs significantly exceed benefits

In addition to establishing nationwide performance standards, EPA authorized the operator of an individual facility to apply for a site-specific determination of BTA if the facility's costs of complying with the national performance standards "would be significantly greater than the benefits." 40 C.F.R. 125.94(a)(5)(ii). If the operator makes that showing with "reliable, scientifically valid" data, "[t]he [agency] must establish site-specific alternative requirements * * * that achieve an efficacy that, in the judgment of the [agency], is as close as practicable to the applicable performance standards * * * without resulting in costs that are significantly greater

[3] The court of appeals upheld EPA's authority to express BTA as a range, but remanded EPA's chosen ranges based on its view that Section 316(b) requires "as much reduction of adverse environmental impacts as is technologically possible." Pet. App. 43a. Because that holding is based on the court's erroneous construction of the Act, it should be reversed as well.

than the benefits at [the] facility." *Ibid.*; see Pet. App. 222a-224a.[4]

That provision, which is consistent with the historic practice of determining BTA on a facility-specific, best-professional-judgment basis, recognizes that site-specific differences among facilities might warrant different results. The agency explained that its "comparison of national costs to national benefits may not be applicable to a specific site due to variations in (1) the performance of intake technologies and (2) characteristics of the waterbody in which the intake(s) are sited." Pet. App. 250a. "For example, there may be some facilities where the absolute numbers of fish and shellfish impinged and entrained is so minimal that the cost to achieve the required percentage reductions would be significantly greater than the benefits of achieving the required reductions at that particular site." *Ibid.*; see *id.* at 355a-356a.

The court of appeals invalidated that provision based on its view that cost-benefit analysis is impermissible. Pet. App. 56a-60a. As explained above, that was error. The court underscored its error by taking particular exception to EPA's determination that a cost-benefit variance might be appropriate if very few aquatic organisms were subject to impingement or entrainment in a particular waterbody, such that there would be little benefit in that waterbody from the use of more costly

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[4] EPA also authorized an application for a site-specific determination of BTA if a particular facility's compliance costs "would be significantly greater than the costs considered by the Administrator * * * in establishing the applicable performance standards." 40 C.F.R. 125.94(a)(5)(i). The court of appeals remanded that provision for procedural reasons that are distinct from the question presented here. Pet. App. 49a-56a.

technology. See *id.* at 58a-60a. The court determined that EPA may not consider water quality, and thus may not consider whether or to what extent a technology would have greater environmental benefits than a less expensive alternative. See *ibid.* As discussed above, however, Section 316(b) requires BTA for "minimizing adverse environmental impact," and thus makes the environmental benefit to be achieved an important consideration. See pp. 29-30, *supra*. Especially considering that EPA authorized a site-specific BTA only when the costs of complying with the nationwide performance standards would be "significantly greater" than the benefits, and that the agency nonetheless required a site-specific BTA to "achieve an efficacy that * * * is as close as practicable to the applicable performance standards" consistent with the significantly-greater test, 40 C.F.R. 125.94(a)(5)(ii), EPA did not exceed its broad discretion under Section 316(b).[5]

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[5] In the context of facility-specific BTA determinations, EPA's longstanding view has been that it would be unreasonable to select as BTA a technology whose costs are wholly disproportionate to its benefits. See pp. 27-28, *supra*. For purposes of the site-specific variance provision, EPA used a less stringent "significantly greater than" test in this rulemaking. 40 C.F.R. 125.94(a)(5)(ii). EPA's legal interpretations have been consistent because the agency has not taken the position that the "wholly disproportionate" standard is the *only* permissible way to consider the relationship between costs and benefits; instead, EPA has opined that it would be unreasonable to ignore a disproportionality of that degree. See p. 27, *supra*. In addition, permit writers considered the "wholly disproportionate" test in conjunction with other factors as part of an overall best-professional-judgment determination. Whether to permit a variance from the new nationwide performance standards presents a different question, and EPA has long stressed the need for flexibility in determining BTA for any particular facility. *E.g.*, Pet. App. 250a-251a; J.A. 42-45. The need for flexibility is particularly great for existing (Phase II) facilities, because owners of newer facilities have far

CONCLUSION

The judgment of the court of appeals should be reversed with respect to the performance standards and the site-specific cost-benefit provision and the case remanded.

Respectfully submitted.

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JULY 2008

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more flexibility in building new technology into the initial design. J.A. 309; 68 Fed. Reg. 13,541 (2003); 67 Fed. Reg. 17,145 (2002). In addition, EPA determined that the more flexible "significantly greater than" standard was needed in this context to avoid unwarranted energy impacts, because the Phase II rule affects approximately 55% of the Nation's electric-generating capacity. 68 Fed. Reg. at 13,541; 67 Fed. Reg. at 17,145-17,146; J.A. 309. In any event, the court of appeals' decision does not rest on the difference between the "wholly disproportionate" and "significantly greater than" standards; instead, the court erroneously insisted on its own, distinct "cost effectiveness" test. See Pet. App. 26a; cf. *id.* at 55a-56a n.25 (noting the court's "discomfort" with the "significantly greater than" test).

APPENDIX

1. 33 U.S.C. 1311 provides in pertinent part:

Effluent limitations

(a) Illegality of pollutant discharges except in compliance with law

Except as in compliance with this section and sections 1312, 1316, 1317, 1328, 1342, and 1344 of this title, the discharge of any pollutant by any person shall be unlawful.

(b) Timetable for achievement of objectives

In order to carry out the objective of this chapter there shall be achieved—

(1)(A) not later than July 1, 1977, effluent limitations for point sources, other than publicly owned treatment works, (i) which shall require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 1314(b) of this title, or (ii) in the case of a discharge into a publicly owned treatment works which meets the requirements of subparagraph (B) of this paragraph, which shall require compliance with any applicable pretreatment requirements and any requirements under section 1317 of this title; and

(B) for publicly owned treatment works in existence on July 1, 1977, or approved pursuant to section 1283 of this title prior to June 30, 1974 (for which construction must be completed within four years of approval), effluent limitations based upon secondary treatment as defined by the Administrator pursuant to section 1314(d)(1) of this title; or,

(C) not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 1370 of this title) or any other Federal law or regulation, or required to implement any applicable water quality standard established pursuant to this chapter.

(2)(A) for pollutants identified in subparagraphs (C), (D), and (F) of this paragraph, effluent limitations for categories and classes of point sources, other than publicly owned treatment works, which (i) shall require application of the best available technology economically achievable for such category or class, which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(2) of this title, which such effluent limitations shall require the elimination of discharges of all pollutants if the Administrator finds, on the basis of information available to him (including information developed pursuant to section 1325 of this title), that such elimination is technologically and economically achievable for a category or class of point sources as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(2) of this title, or (ii) in the case of the introduction of a pollutant into a publicly owned treatment works which meets the requirements of subparagraph (B) of this paragraph, shall require compliance with any applicable pretreatment re-

quirements and any other requirement under section 1317 of this title;

(B) Repealed. Pub. L. 97-117, § 21(b), Dec. 29, 1981, 95 Stat. 1632.

(C) with respect to all toxic pollutants referred to in table 1 of Committee Print Numbered 95-30 of the Committee on Public Works and Transportation of the House of Representatives compliance with effluent limitations in accordance with subparagraph (A) of this paragraph as expeditiously as practicable but in no case later than three years after the date such limitations are promulgated under section 1314(b) of this title, and in no case later than March 31, 1989;

(D) for all toxic pollutants listed under paragraph (1) of subsection (a) of section 1317 of this title which are not referred to in subparagraph (C) of this paragraph compliance with effluent limitations in accordance with subparagraph (A) of this paragraph as expeditiously as practicable, but in no case later than three years after the date such limitations are promulgated under section 1314(b) of this title, and in no case later than March 31, 1989;

(E) as expeditiously as practicable but in no case later than three years after the date such limitations are promulgated under section 1314(b) of this title, and in no case later than March 31, 1989, compliance with effluent limitations for categories and classes of point sources, other than publicly owned treatment works, which in the case of pollutants identified pursuant to section 1314(a)(4) of this title shall require application of the best conventional pollutant control

technology as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(4) of this title; and

(F) for all pollutants (other than those subject to subparagraphs (C), (D), or (E) of this paragraph) compliance with effluent limitations in accordance with subparagraph (A) of this paragraph as expeditiously as practicable but in no case later than 3 years after the date such limitations are established, and in no case later than March 31, 1989.

(3)(A) for effluent limitations under paragraph (1)(A)(i) of this subsection promulgated after January 1, 1982, and requiring a level of control substantially greater or based on fundamentally different control technology than under permits for an industrial category issued before such date, compliance as expeditiously as practicable but in no case later than three years after the date such limitations are promulgated under section 1314(b) of this title, and in no case later than March 31, 1989; and

(B) for any effluent limitation in accordance with paragraph (1)(A)(i), (2)(A)(i), or (2)(E) of this subsection established only on the basis of section 1342(a)(1) of this title in a permit issued after February 4, 1987, compliance as expeditiously as practicable but in no case later than three years after the date such limitations are established, and in no case later than March 31, 1989.

(c) Modification of timetable

The Administrator may modify the requirements of subsection (b)(2)(A) of this section with respect to any

point source for which a permit application is filed after July 1, 1977, upon a showing by the owner or operator of such point source satisfactory to the Administrator that such modified requirements (1) will represent the maximum use of technology within the economic capability of the owner or operator; and (2) will result in reasonable further progress toward the elimination of the discharge of pollutants.

(d) Review and revision of effluent limitations

Any effluent limitation required by paragraph (2) of subsection (b) of this section shall be reviewed at least every five years and, if appropriate, revised pursuant to the procedure established under such paragraph.

(e) All point discharge source application of effluent limitations

Effluent limitations established pursuant to this section or section 1312 of this title shall be applied to all point sources of discharge of pollutants in accordance with the provisions of this chapter.

(f) Illegality of discharge of radiological, chemical, or biological warfare agents, high-level radioactive waste, or medical waste

Notwithstanding any other provisions of this chapter it shall be unlawful to discharge any radiological, chemical, or biological warfare agent, any high-level radioactive waste, or any medical waste, into the navigable waters.

(g) Modifications for certain nonconventional pollutants

(1) General authority

The Administrator, with the concurrence of the State, may modify the requirements of subsection (b)(2)(A) of this section with respect to the discharge from any point source of ammonia, chlorine, color, iron, and total phenols (4AAP) (when determined by the Administrator to be a pollutant covered by subsection (b)(2)(F) of this section) and any other pollutant which the Administrator lists under paragraph (4) of this subsection.

(2) Requirements for granting modifications

A modification under this subsection shall be granted only upon a showing by the owner or operator of a point source satisfactory to the Administrator that—

(A) such modified requirements will result at a minimum in compliance with the requirements of subsection (b)(1)(A) or (C) of this section, whichever is applicable;

(B) such modified requirements will not result in any additional requirements on any other point or nonpoint source; and

(C) such modification will not interfere with the attainment or maintenance of that water quality which shall assure protection of public water supplies, and the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities, in and on the water and such modification will not

result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity or teratogenicity), or synergistic propensities.

(3) Limitation on authority to apply for subsection (c) modification

If an owner or operator of a point source applies for a modification under this subsection with respect to the discharge of any pollutant, such owner or operator shall be eligible to apply for modification under subsection (c) of this section with respect to such pollutant only during the same time period as he is eligible to apply for a modification under this subsection.

(4) Procedures for listing additional pollutants

(A) General authority

Upon petition of any person, the Administrator may add any pollutant to the list of pollutants for which modification under this section is authorized (except for pollutants identified pursuant to section 1314(a)(4) of this title, toxic pollutants subject to section 1317(a) of this title, and the thermal component of discharges) in accordance with the provisions of this paragraph.

(B) Requirements for listing

(i) Sufficient information

The person petitioning for listing of an additional pollutant under this subsection shall submit to the Administrator sufficient information to make the determinations required by this subparagraph.

(ii) Toxic criteria determination

The Administrator shall determine whether or not the pollutant meets the criteria for listing as a toxic pollutant under section 1317(a) of this title.

(iii) Listing as toxic pollutant

If the Administrator determines that the pollutant meets the criteria for listing as a toxic pollutant under section 1317(a) of this title, the Administrator shall list the pollutant as a toxic pollutant under section 1317(a) of this title.

(iv) Nonconventional criteria determination

If the Administrator determines that the pollutant does not meet the criteria for listing as a toxic pollutant under such section and determines that adequate test methods and sufficient data are available to make the determinations required by paragraph (2) of this subsection with respect to the pollutant, the Administrator shall add the pollutant to the list of pollutants specified in paragraph (1) of this subsection for which modifications are authorized under this subsection.

(C) Requirements for filing of petitions

A petition for listing of a pollutant under this paragraph—

(i) must be filed not later than 270 days after the date of promulgation of an applicable effluent guideline under Section 1314 of this title;

(ii) may be filed before promulgation of such guideline; and

(iii) may be filed with an application for a modification under paragraph (1) with respect to the discharge of such pollutant.

(D) Deadline for approval of petition

A decision to add a pollutant to the list of pollutants for which modifications under this subsection are authorized must be made within 270 days after the date of promulgation of an applicable effluent guideline under section 1314 of this title.

(E) Burden of proof

The burden of proof for making the determinations under subparagraph (B) shall be on the petitioner.

(5) Removal of pollutants

The Administrator may remove any pollutant from the list of pollutants for which modifications are authorized under this subsection if the Administrator determines that adequate test methods and sufficient data are no longer available for determining whether

or not modifications may be granted with respect to such pollutant under paragraph (2) of this subsection.

* * * * *

2. 33 U.S.C. 1314 provides in pertinent part:

Information and guidelines

(a) Criteria development and publication

* * * * *

(4) The Administrator shall, within 90 days after December 27, 1977, and from time to time thereafter, publish and revise as appropriate information identifying conventional pollutants, including but not limited to, pollutants classified as biological oxygen demanding, suspended solids, fecal coliform, and pH. The thermal component of any discharge shall not be identified as a conventional pollutant under this paragraph.

* * * * *

(b) Effluent limitation guidelines

For the purpose of adopting or revising effluent limitations under this chapter the Administrator shall, after consultation with appropriate Federal and State agencies and other interested persons, publish within one year of October 18, 1972, regulations, providing guidelines for effluent limitations, and, at least annually thereafter, revise, if appropriate, such regulations. Such regulations shall—

(1)(A) identify, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, the degree of effluent reduction attainable through the application of the best practicable control technology currently available

FOIA 2014-009508 Interim 2

for classes and categories of point sources (other than publicly owned treatment works); and

(B) specify factors to be taken into account in determining the control measures and practices to be applicable to point sources (other than publicly owned treatment works) within such categories or classes. Factors relating to the assessment of best practicable control technology currently available to comply with subsection (b)(1) of section 1311 of this title shall include consideration of the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application, and shall also take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate;

(2)(A) identify, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, the degree of effluent reduction attainable through the application of the best control measures and practices achievable including treatment techniques, process and procedure innovations, operating methods, and other alternatives for classes and categories of point sources (other than publicly owned treatment works); and

(B) specify factors to be taken into account in determining the best measures and practices available to comply with subsection (b)(2) of section 1311 of this title to be applicable to any point source

ED_000110PST_00003831-00061

(other than publicly owned treatment works) within such categories or classes. Factors relating to the assessment of best available technology shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, the cost of achieving such effluent reduction, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate;

(3) identify control measures and practices available to eliminate the discharge of pollutants from categories and classes of point sources, taking into account the cost of achieving such elimination of the discharge of pollutants; and

(4)(A) identify, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, the degree of effluent reduction attainable through the application of the best conventional pollutant control technology (including measures and practices) for classes and categories of point sources (other than publicly owned treatment works); and

(B) specify factors to be taken into account in determining the best conventional pollutant control technology measures and practices to comply with section 1311(b)(2)(E) of this title to be applicable to any point source (other than publicly owned treatment works) within such categories or classes. Factors relating to the assessment of best conventional pollutant control technology (including measures

FOIA 2014-009508 Interim 2

and practices) shall include consideration of the reasonableness of the relationship between the costs of attaining a reduction in effluents and the effluent reduction benefits derived, and the comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources, and shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate.

3. 33 U.S.C. 1316 provides:

National standards of performance

(a) Definitions

For purposes of this section:

(1) The term "standard of performance" means a standard for the control of the discharge of pollutants which reflect the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants.

(2) The term "new source" means any source, the construction of which is commenced after the publication of proposed regulations prescribing a standard of performance under this section which will be applicable to such

ED_000110PST_00003831-00063

source, if such standard is thereafter promulgated in accordance with this section.

* * * * *

(b) Categories of sources; Federal standards of performance for new sources

(1)(A) The Administrator shall, within ninety days after October 18, 1972, publish (and from time to time thereafter shall revise) a list of categories of sources, which shall, at the minimum, include:

pulp and paper mills;

paperboard, builders paper and board mills;

meat product and rendering processing;

dairy product processing;

grain mills;

canned and preserved fruits and vegetables processing;

canned and preserved seafood processing;

sugar processing;

textile mills;

cement manufacturing;

feedlots;

electroplating;

organic chemicals manufacturing;

inorganic chemicals manufacturing;

plastic and synthetic materials manufacturing;

soap and detergent manufacturing;

FOIA 2014-009508 Interim 2

fertilizer manufacturing;

petroleum refining;

iron and steel manufacturing;

nonferrous metals manufacturing;

phosphate manufacturing;

steam electric powerplants;

ferroalloy manufacturing;

leather tanning and finishing;

glass and asbestos manufacturing;

rubber processing; and

timber products processing.

(B) As soon as practicable, but in no case more than one year, after a category of sources is included in a list under subparagraph (A) of this paragraph, the Administrator shall propose and publish regulations establishing Federal standards of performance for new sources within such category. The Administrator shall afford interested persons an opportunity for written comment on such proposed regulations. After considering such comments, he shall promulgate, within one hundred and twenty days after publication of such proposed regulations, such standards with such adjustments as he deems appropriate. The Administrator shall, from time to time, as technology and alternatives change, revise such standards following the procedure required by this subsection for promulgation of such standards. Standards of performance, or revisions thereof, shall become effective upon promulgation. In establishing or revising Federal standards of performance for new sources under this section, the Administrator shall take into con-

ED_000110PST_00003831-00065

FOIA 2014-009508 Interim 2

sideration the cost of achieving such effluent reduction, and any non-water quality, environmental impact and energy requirements.

(2) The Administrator may distinguish among classes, types, and sizes within categories of new sources for the purpose of establishing such standards and shall consider the type of process employed (including whether batch or continuous).

(3) The provisions of this section shall apply to any new source owned or operated by the United States.

* * * * *

4. 33 U.S.C. 1326 provides:

Thermal discharges

(a) Effluent limitations that will assure protection and propagation of balanced, indigenous population of shellfish, fish, and wildlife

With respect to any point source otherwise subject to the provisions of section 1311 of this title or section 1316 of this title, whenever the owner or operator of any such source, after opportunity for public hearing, can demonstrate to the satisfaction of the Administrator (or, if appropriate, the State) that any effluent limitation proposed for the control of the thermal component of any discharge from such source will require effluent limitations more stringent than necessary to assure the projection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water into which the discharge is to be made, the Administrator (or, if appropriate, the State) may impose an effluent limitation under such sections for such plant, with respect to the thermal component of such discharge

ED_000110PST_00003831-00066

FOIA 2014-009508 Interim 2

(taking into account the interaction of such thermal component with other pollutants), that will assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on that body of water.

(b) Cooling water intake structures

Any standard established pursuant to section 1311 of this title or section 1316 of this title and applicable to a point source shall require that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact.

(c) Period of protection from more stringent effluent limitations following discharge point source modification commenced after October 18, 1972

Notwithstanding any other provision of this chapter, any point source of a discharge having a thermal component, the modification of which point source is commenced after October 18, 1972, and which, as modified, meets effluent limitations established under section 1311 of this title or, if more stringent, effluent limitations established under section 1313 of this title and which effluent limitations will assure protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in or on the water into which the discharge is made, shall not be subject to any more stringent effluent limitation with respect to the thermal component of its discharge during a ten year period beginning on the date of completion of such modification or during the period of depreciation or amortization of such facility for the purpose of section 167 or 169 (or both) of title 26, whichever period ends first.

ED_000110PST_00003831-00067

5. 33 U.S.C. 1362 provides in pertinent part:

Definitions

Except as otherwise specifically provided, when used in this chapter:

* * * * *

(13) The term "toxic pollutant" means those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring.

6. 40 C.F.R. 125.83 provides in pertinent part:

What special definitions apply to this subpart?

* * * * *

Minimize means to reduce to the smallest amount, extent, or degree reasonably possible.

* * * * *

7. 40 C.F.R. 125.94 provides in pertinent part:

How will requirements reflecting best technology available for minimizing adverse environmental impact be established for my Phase II existing facility?

(a) *Compliance alternatives*. You must select and implement one of the following five alternatives for establishing best technology available for minimizing adverse environmental impact at your facility:

(1)(i) You may demonstrate to the Director that you have reduced, or will reduce, your flow commensurate with a closed-cycle recirculating system. In this case, you are deemed to have met the applicable performance standards and will *not* be required to demonstrate further that your facility meets the impingement mortality and entrainment performance standards specified in paragraph (b) of this section. In addition, you are not subject to the requirements in §§ 125.95, 125.96, 125.97, or 125.98. However, you may still be subject to any more stringent requirements established under paragraph (e) of this section; or

(ii) You may demonstrate to the Director that you have reduced, or will reduce, your maximum through-screen design intake velocity to 0.5 ft/s or less. In this case, you are deemed to have met the impingement mortality performance standards and will not be required to demonstrate further that your facility meets the performance standards for impingement mortality specified in paragraph (b) of this section and you are not subject to the requirements in §§ 125.95, 125.96, 125.97, or 125.98 as they apply to impingement mortality. However, you are still subject to any applicable requirements for entrainment reduction and may still be subject to any

more stringent requirements established under paragraph (e) of this section.

(2) You may demonstrate to the Director that your existing design and construction technologies, operational measures, and/or restoration measures meet the performance standards specified in paragraph (b) of this section and/or the restoration requirements in paragraph (c) of this section.

(3) You may demonstrate to the Director that you have selected, and will install and properly operate and maintain, design and construction technologies, operational measures, and/or restoration measures that will, in combination with any existing design and construction technologies, operational measures, and/or restoration measures, meet the performance standards specified in paragraph (b) of this section and/or the restoration requirements in paragraph (c) of this section;

(4) You may demonstrate to the Director that you have installed, or will install, and properly operate and maintain an approved design and construction technology in accordance with § 125.99(a) or (b); or

(5) You may demonstrate to the Director that you have selected, installed, and are properly operating and maintaining, or will install and properly operate and maintain design and construction technologies, operational measures, and/or restoration measures that the Director has determined to be the best technology available to minimize adverse environmental impact for your facility in accordance with paragraphs (a)(5)(i) or (ii) of this section.

(i) If the Director determines that data specific to your facility demonstrate that the costs of compliance

under alternatives in paragraphs (a)(2) through (4) of this section would be significantly greater than the costs considered by the Administrator for a facility like yours in establishing the applicable performance standards in paragraph (b) of this section, the Director must make a site-specific determination of the best technology available for minimizing adverse environmental impact. This determination must be based on reliable, scientifically valid cost and performance data submitted by you and any other information that the Director deems appropriate. The Director must establish site-specific alternative requirements based on new and/or existing design and construction technologies, operational measures, and/or restoration measures that achieve an efficacy that is, in the judgment of the Director, as close as practicable to the applicable performance standards in paragraph (b) of this section, without resulting in costs that are significantly greater than the costs considered by the Administrator for a facility like yours in establishing the applicable performance standards. The Director's site-specific determination may conclude that design and construction technologies, operational measures, and/or restoration measures in addition to those already in place are not justified because of the significantly greater costs. To calculate the costs considered by the Administrator for a facility like yours in establishing the applicable performance standards you must:

(A) Determine which technology the Administrator modeled as the most appropriate compliance technology for your facility;

(B) Using the Administrator's costing equations, calculate the annualized capital and net operation and

FOIA 2014-009508 Interim 2

maintenance (O & M) costs for a facility with your design intake flow using this technology;

(C) Determine the annualized net revenue loss associated with net construction downtime that the Administrator modeled for your facility to install this technology;

(D) Determine the annualiz ed pilot study costs that the Administrator modeled for your facility to test and optimize this technology;

(E) Sum the cost items in paragraphs (a)(5)(i)(B), (C), and (D) of this section; and

(F) Determine if the performance standards that form the basis of these estimates (*i.e.*, impingement mortality reduction only or impingement mortality and entrainment reduction) are applicable to your facility, and if necessary, adjust the estimates to correspond to the applicable performance standards.

(ii) If the Director determines that data specific to your facility demonstrate that the costs of compliance under alternatives in paragraphs (a)(2) through (4) of this section would be significantly greater than the benefits of complying with the applicable performance standards at your facility, the Director must make a site-specific determination of best technology available for minimizing adverse environmental impact. This determination must be based on reliable, scientifically valid cost and performance data submitted by you and any other information the Director deems appropriate. The Director must establish site-specific alternative requirements based on new and/or existing design and construction technologies, operational measures, and/or restoration measures that achieve an efficacy that, in the

ED_000110PST_00003831-00072

FOIA 2014-009508 Interim 2

judgment of the Director, is as close as practicable to the applicable performance standards in paragraph (b) of this section without resulting in costs that are significantly greater than the benefits at your facility. The Director's site-specific determination may conclude that design and construction technologies, operational measures, and/or restoration measures in addition to those already in place are not justified because the costs would be significantly greater than the benefits at your facility.

(b) *National performance standards*.—

(1) *Impingement mortality performance standards*. If you choose compliance alternatives in paragraphs (a)(2), (a)(3), or (a)(4) of this section, you must reduce impingement mortality for all life stages of fish and shellfish by 80 to 95 percent from the calculation baseline.

(2) *Entrainment performance standards*. If you choose compliance alternatives in paragraphs (a)(1)(ii), (a)(2), (a)(3), or (a)(4) of this section, you must also reduce entrainment of all life stages of fish and shellfish by 60 to 90 percent from the calculation baseline if:

(i) Your facility has a capacity utilization rate of 15 percent or greater, and

(ii)(A) Your facility uses cooling water withdrawn from a tidal river, estuary, ocean, or one of the Great Lakes; or

(B) Your facility uses cooling water withdrawn from a freshwater river or stream and the design intake flow of your cooling water intake structures is greater than five percent of the mean annual flow.

ED_000110PST_00003831-00073

FOIA 2014-009508 Interim 2

(3) *Additional performance standards for facilities withdrawing from a lake (other than one of the Great Lakes) or a reservoir*. If your facility withdraws cooling water from a lake (other than one of the Great Lakes) or a reservoir and you propose to increase the design intake flow of cooling water intake structures it uses, your increased design intake flow must not disrupt the natural thermal stratification or turnover pattern (where present) of the source water, except in cases where the disruption does not adversely affect the management of fisheries. In determining whether any such disruption does not adversely affect the management of fisheries, you must consult with Federal, State, or Tribal fish and wildlife management agencies).

(4) *Use of performance standards for site-specific determinations of best technology available*. The performance standards in paragraphs (b)(1) through (3) of this section must also be used for determining eligibility for site-specific determinations of best technology available for minimizing adverse environmental impact and establishing site specific requirements that achieve an efficacy as close as practicable to the applicable performance standards without resulting in costs that are significantly greater than those considered by the Administrator for a facility like yours in establishing the performance standards or costs that are significantly greater than the benefits at your facility, pursuant to § 125.94(a)(5).

* * * * *

ED_000110PST_00003831-00074

Nos. 07-588, 07-589 and 07-597

In the Supreme Court of the United States

ENTERGY CORPORATION, PETITIONER

v.

RIVERKEEPER, INC., ET AL.

PSEG FOSSIL LLC, ET AL., PETITIONERS

v.

RIVERKEEPER, INC., ET AL.

UTILITY WATER ACT GROUP, PETITIONER

v.

RIVERKEEPER, INC., ET AL.

ON WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE SECOND CIRCUIT

REPLY BRIEF FOR THE FEDERAL PARTIES
AS RESPONDENTS SUPPORTING PETITIONERS

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TABLE OF CONTENTS

Page

A. The text of Section 316(b) does not unambiguously preclude consideration of the relationship between costs and benefits 2

B. The statutory structure, context, and history confirm that EPA may consider the relationship between costs and benefits in establishing water-intake standards under Section 316(b) 8

C. The court of appeals erroneously usurped EPA's discretion 14

D. EPA's consideration of costs and benefits in the rulemaking at issue here fell well within its discretion 18

TABLE OF AUTHORITIES

Cases:

Appalachain Power Co. v. *Train*, 566 F.2d 451 (4th Cir. 1977) 7, 16

Barnhart v. *Walton*, 535 U.S. 212 (2002) 14

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Chevron U.S.A. Inc. v. *NRDC*, 467 U.S. 837 (1984) . . . 2, 14

Consolidated Edison Co. v. *New York State Dep't of Envt'l Conservation*, 726 F. Supp. 1404 (S.D.N.Y. 1989) 19

EEOC v. *Commercial Office Prods. Co.*, 486 U.S. 107 (1988) 7

EPA v. *California*, 426 U.S. 200 (1976) 12

Cases—Continued: Page

Florida Power Corp. Crystal River Power Plant Units 1, 2, & 3, In re, NPDES Permit No. FL0000159 (EPA Region IV Sept. 1, 1988) 17

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Riverkeeper, Inc. v. *United States EPA*, 358 F.3d 174 (2d Cir. 2004) 12, 14, 17, 18

United States v. *Banks*, 540 U.S. 31 (2003) 6

Statutes and regulations:

Clean Water Act, 33 U.S.C. 1251 *et seq.*:

33 U.S.C. 1311 (§ 301) ..... *passim*

33 U.S.C. 1311(b)(1)(A) 10

33 U.S.C. 1311(b)(2)(E) 10

33 U.S.C. 1314(b)(1)(B) 9, 10

33 U.S.C. 1314(b)(2)(B) 9

33 U.S.C. 1314(b)(4)(B) 9, 10

33 U.S.C. 1316 (§ 306) ..... *passim*

33 U.S.C. 1316(a)(1) 10

33 U.S.C. 1326(a) (§ 316) 11, 12, 13, 19

33 U.S.C. 1326(b) (§ 316(b)) ..... *passim*

40 C.F.R.:

Section 125.83 6

Section 125.94(a)(5)(ii) 18

Miscellaneous: Page

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ON WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE SECOND CIRCUIT

REPLY BRIEF FOR THE FEDERAL PARTIES
AS RESPONDENTS SUPPORTING PETITIONERS

The court of appeals held that the Environmental Protection Agency (EPA) may take cost-effectiveness but not cost-benefit considerations into account under Section 316(b) of the Clean Water Act (CWA or Act), 33 U.S.C.

1326(b). The States assert that costs may be a secondary but not a primary consideration under Section 316(b). And Riverkeeper contends that costs may be taken into account only if the environmental consequences of adopting the less expensive technology are *de minimis*. Because nothing in the statute draws any of those distinctions or otherwise unambiguously precludes consideration of the relationship between costs and benefits in establishing appropriate water-intake standards under Section 316(b), EPA's determination of how best to consider costs and benefits is entitled to deference under the principles set forth in *Chevron U.S.A. Inc.* v. *NRDC*, 467 U.S. 837, 842 (1984).

Respondents lean heavily on the text, structure, and legislative history of *different* best-technology provisions that govern the discharge of pollutants. Some of those provisions, however, expressly *require* cost-benefit analysis. Those provisions confirm that Congress regarded a comparison of costs and benefits as potentially relevant to the determination of which technology is "best." Moreover, those discharge provisions are far more specific than Section 316(b)'s single terse sentence, which confers broad gap-filling authority on the agency to determine whether and how to consider the relationship between costs and benefits in addressing the distinct and unique issue of water intake. The court of appeals erred in depriving EPA of that statutory authority.

A. The Text Of Section 316(b) Does Not Unambiguously Preclude Consideration Of The Relationship Between Costs And Benefits

Section 316(b) requires that "the location, design, construction, and capacity of cooling water intake structures reflect the *best* technology *available* [(BTA)] for *minimizing* adverse environmental impact." 33 U.S.C. 1326(b) (em-

phases added). That standard does not unambiguously preclude EPA from considering the relationship between costs and benefits—especially considering that Congress did not define any of the key statutory terms or otherwise specify the factors the agency may or must consider. See Pet. App. 20a[1]; Gov't Br. 15-18.

1. Respondents observe that "best" often means "surpassing all others in excellence," and that Section 316(b) refers to the best technology available for the goal of "minimizing" adverse environmental impact. Riverkeeper Br. 24, 25 (quoting *American Heritage Dictionary of the English Language* 173 (4th ed. 2006)); see States Br. 19. Those observations do not respond to the government's point that, as a matter of common usage, the "best" way of pursuing a goal is not necessarily the one that most single-mindedly achieves that goal at all costs. Gov't Br. 15-16. For example, the "best" way to commute to and from work might not be the quickest and most direct route on a map. That route might be more dangerous than others, more prone to traffic jams, or more expensive (for example, it might require payment of a toll). Similarly, the "best" way to win a game does not typically entail violating the rules, even if cheating would improve one's odds of winning, because the rules and other values matter as well. And the "best" way to catch fish is not necessarily the one that nets the most fish in the shortest period of time; to many, fly fishing has offsetting advantages. *Ibid.*

The States (at 26) object to the first of those examples on the ground that, if one's objective is to commute as quickly or safely as possible, the quickest or safest route is necessarily the "best" method of achieving that goal. But even if speed is the stated objective, a commuter would not

[1] Citations to the Pet. App. refer to the appendix filed in No. 07-588.

ordinarily consider hiring a helicopter or professional race car driver or leaving home at 4:00 a.m. to be the "best" way to travel to work. And if safety is the ultimate goal, one would not ordinarily describe acquiring a tank or walking instead of driving ten miles as the "best" approach. Instead, even when a goal is defined as narrowly as commuting as quickly or safely as possible, additional practical considerations such as costs and other countervailing factors are often relevant, in daily life and ordinary English usage, to the selection of the "best" approach.

Moreover, the statute refers to the best technology "for," rather than the technology that is best "at," the achievement of the stated objective. 33 U.S.C. 1326(b). That choice of words reinforces the conclusion that EPA is authorized to take account of competing considerations in determining which technology is "best." For example, an individual regarded as the best person *at* his trade might not be the best person *for* a particular job, depending on a range of considerations. Gov't Br. 16. The States respond (at 28) that "if a particular job calls only for a person with superior skills *for* repairing shoes, then the best cobbler *at* his trade would also be the best person *for* the job." But that blinks the reality that other considerations, such as honesty and salary demands, normally matter as well.

2. In any event, Section 316(b) does not refer to the best technology for reducing adverse environmental impact "to the lowest level possible," as the States claim (at 24). Instead, the statute refers to "the best technology *available* for *minimizing* adverse environmental impact." 33 U.S.C. 1326(b) (emphases added). Even the court of appeals recognized that the availability of a particular technology depends in part on its cost. Pet. App. 24a. The court erred, however, in holding that the statute unambiguously restricts EPA to considering whether a technology's cost

could be "*reasonably borne* by the industry." *Ibid.* Even considering the term "available" in isolation, many people would not think of a luxury item as being "available" simply because its purchase would not bankrupt them. Gov't Br. 17; see Riverkeeper Br. 26 ("There is, to be sure, some potential ambiguity in terms of what the word 'available' means."). The States argue (at 28) that an item's cost is relevant to its availability only "if the person [is] not *required* to obtain the item." But that merely begs the question of what is required here.

The States also suggest (at 29) that, in determining availability, EPA might consider cost "at some secondary level," but not at "the forefront of its technology evaluation." The States' apparent recognition that costs may be considered to *some* degree, however, cannot be reconciled with their contention that Section 316(b) unambiguously precludes the approach that EPA has chosen. Section 316(b) does not distinguish, much less unambiguously distinguish, between consideration of cost as a "secondary" factor and consideration of cost as a "primary" decision-making criterion. And, absent contrary specification in the statutory text, the choice of the appropriate *degree* or *manner* of considering a permissible factor involves a classic exercise of agency discretion. See Gov't Br. 39.

Moreover, technology must be available for "minimizing" adverse environmental impact. 33 U.S.C. 1326(b). Respondents argue that "'minimize' means 'to reduce to the smallest possible number, degree, or extent.'" States Br. 19 (quoting *Webster's Third New Int'l Dictionary of the English Language* 1438 (1981)). As the government's opening brief explained (at 17), however, the terms "minimal" and "minimize" often refer to a lesser degree of reduction. Thus, if a person said that he was trying to minimize the risk of being hit by a car while crossing a street, he presum-

ably would not mean that he was staying inside his house at all times. Instead, the person presumably would mean that he was trying to reduce that risk consistent with other practical considerations—including economic ones such as the need to travel to work—and thus was taking lesser precautions such as looking both ways before crossing streets. *Ibid.*

While the States complain (at 29) that the government's opening brief cited only "a single source" for the proposition that "minimize" commonly refers to reductions that are not to the lowest possible level, that brief cited two perfectly authoritative sources: *American Heritage Dictionary* 123 (4th ed. 2006), and *Black's Law Dictionary* 1016 (8th ed. 2004). Gov't Br. 17. Another example is Riverkeeper's brief, which ultimately concedes (at 29) that "the Agency has some discretion (albeit not boundless) to determine that further differences in reduction would be so minor as to be unnecessary for compliance with the minimizing requirement." Riverkeeper thereby acknowledges that a particular technology can "minimiz[e]" environmental impacts, within the meaning of Section 316(b), even if it does not reduce those impacts to the smallest possible level.

The States also claim (at 19-20) that EPA's Phase I regulations adopt their definition of "minimize." In fact, those regulations define "minimize" to mean "to reduce to the smallest amount, extent, or degree *reasonably* possible." 40 C.F.R. 125.83 (emphasis added). Reasonableness, of course, depends on a range of considerations. See, *e.g.*, *United States* v. *Banks*, 540 U.S. 31, 35-36 (2003). Thus, EPA determined in the rulemaking below that the appro-

priate "degree" of reduction may depend in part on "the relationship between costs and benefits." Pet. App. 356a.[2]

3. The States suggest (at 22, 25) that the standard articulated in Section 316(b) is an "indivisible term of art" and that any ambiguities in the individual words are therefore irrelevant. The BTA standard, however, was by no means a term of art when Congress enacted it; instead, Congress appears to have articulated that standard for the first time in Section 316(b). And while Riverkeeper colorfully argues (at 23) that the government does not rely on "primary, secondary, or even tertiary definitions of the relevant terms," that is manifestly untrue, as discussed above. The fact that the critical statutory terms can and do take on different meanings in different contexts only underscores the statute's ambiguity. What matters, for *Chevron* deference purposes, is that nothing unambiguously compels the alternate usages proffered by respondents. See, *e.g.*, *EEOC* v. *Commercial Office Prods. Co.*, 486 U.S. 107, 115 (1988).

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[2] The States note (at 19-20) that EPA's preamble to a 1976 rule treated the term "minimizing" as referring to "reducing to the smallest possible amount or degree." J.A. 41. That rule was vacated, however, on judicial review. See *Appalachian Power Co.* v. *Train*, 566 F.2d 451 (4th Cir. 1977). The following year, EPA issued a permitting decision and a General Counsel opinion making clear the agency's view that it would *not* be "reasonable to interpret Section 316(b) as requiring use of technology whose cost is wholly disproportionate to the environmental benefit to be gained." *In re Pub. Serv. Co. of N.H. (Seabrook Station, Units 1 & 2)*, No. 76-7, 1977 WL 22370 (EPA June 10, 1977), remanded on other grounds *sub nom. Seacoast Anti-Pollution League* v. *Costle*, 572 F.2d 872 (1st Cir. 1978); accord *In re Cent. Hudson Gas & Elec. Corp., Op. EPA Gen. Counsel*, NPDES No. 63, 1977 WL 28250, at *8 (July 29, 1977); see p. 16, *infra*. And EPA's current regulatory definition of "minimize," which was established in the Phase I rule, is the one quoted in the text.

B. The Statutory Structure, Context, And History Confirm That EPA May Consider The Relationship Between Costs And Benefits In Establishing Water-Intake Standards Under Section 316(b)

1. Section 316(b) cross-references Sections 301 and 306 of the CWA by specifying that standards established pursuant to those sections, which govern the discharge of pollutants, must require that intake structures reflect BTA. 33 U.S.C. 1326(b). Sections 301 and 306 include numerous other best-technology standards. For all of those standards, Congress expressly *required* EPA to consider costs in determining what technologies are "best." And for two of those standards, Congress specifically required EPA to consider the *relationship* between costs and benefits in identifying the "best" technologies. Gov't Br. 19-21.

Those express statutory mandates strongly support EPA's determination that consideration of the relationship between costs and benefits is *permissible* under Section 316(b). In particular, those provisions refute Riverkeeper's notion (at 21) that a comparison between costs and benefits is generally inconsistent with the application of a best-technology standard. And Congress's decision to specify the factors that EPA must consider under the various best-technology standards that govern the discharge of pollutants under Sections 301 and 306, but not under the different best-technology standard that governs the intake of water under Section 316(b), confirms that Congress intended to grant broad gap-filling authority to the agency to interpret and implement Section 316(b)'s terse and unique provision governing water intake. Gov't Br. 18-26.

Respondents fail to articulate a coherent and consistent theory as to the relevance of the cross-referenced sections to the proper interpretation of Section 316(b). They insist that, "[b]ecause section 316(b) addresses intake structures,

not effluent [discharges], it stands apart from the statutory provisions elsewhere in the Act that govern effluent limitations." States Br. 5; see *id.* at 32; Riverkeeper Br. 37 n.19; *id.* at 40 (suggesting that the Section 301 standards are "unrelated" to Section 316(b)). But they nonetheless argue at length (*e.g.*, States Br. 34-36) that, by expressly *requiring* consideration of the relationship between costs and benefits under two of the cross-referenced standards, Congress unambiguously *prohibited* such consideration under Section 316(b).

Neither of those conclusions logically follows from a comparison between Section 316(b) and the cross-referenced provisions of the Act. Each of the cross-referenced best-technology standards in Sections 301 and 306 identifies specific lists of factors that EPA must consider. And as noted, those lists expressly require cost-benefit analysis as one of multiple mandated considerations for some but not all of those standards. See 33 U.S.C. 1314(b)(1)(B), (2)(B) and (4)(B); see also Gov't Br. 19-21.

For intake restrictions, however, Congress enacted only the one-sentence Section 316(b), and it conspicuously declined to provide an additional list of factors that EPA is required, permitted, or forbidden to consider. Respondents are therefore incorrect in stating that "[t]hroughout the CWA, Congress told EPA when and how it could consider costs." States Br. 16. For water-intake limitations—unlike pollutant-discharge restrictions—Congress provided no specific direction *either way* beyond the ambiguous BTA standard. The only reasonable conclusion from that statutory scheme is that Congress thereby delegated *broader* gap-filling and interpretive authority to EPA for water-intake limitations under Section 316(b) than for pollutant-discharge restrictions under Sections 301 and 306. Gov't Br. 22-23.

The States nonetheless argue (at 35) that "the reference in section 316(b) to section 306 (the section applicable to new rather than existing facilities) confirms Congress' intent to eliminate EPA's authority to make cost-benefit comparisons when it sets new source performance standards." There is no textual basis whatsoever for treating Section 316(b)'s BTA standard for intake limits as being coextensive with Section 306's best available demonstrated control technology (BADT) standard for the discharge of pollutants from new sources. See 33 U.S.C. 1316(a)(1). Indeed, the States elsewhere acknowledge (at 33) that, in selecting different standards for the various limitations under Sections 301, 306, and 316, Congress obviously "intended to give each standard different meaning in its application." Especially considering that Section 316(b) addresses a different subject matter than Sections 301 and 306 (intake of water as opposed to discharge of pollutants) and establishes a different standard, there is no reason to believe that Congress intended to equate BTA with any one of the Section 301 or 306 standards.

There is even less basis for construing Section 316(b) as unambiguously mirroring BADT as opposed to one of the other cross-referenced standards, such as the best practicable control technology (BPT) or best conventional pollution control technology (BCT) standards—standards under which Congress expressly *required* consideration of the relationship between costs and benefits. See 33 U.S.C. 1311(b)(1)(A) and (2)(E); 33 U.S.C. 1314(b)(1)(B) and (4)(B); see also Gov't Br. 19, 20. The States contend (at 36) that Congress did not evince an "unambiguous intent" to pat-

tern BTA on BCT. But that is the government's point—the statute is ambiguous on this issue.[3]

The States also contend (at 36-37) that Section 316(*a*) does not permit consideration of the relationship between costs and benefits. That provision states that, if a Section 301 or 306 discharge limitation on heat would otherwise be "more stringent than necessary to assure the pro[t]ection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife," a permitting authority "may impose" a Section 301 or 306 limitation "that will assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife." 33 U.S.C. 1326(a). Section 316(a) thereby authorizes EPA and state permitting authorities to grant variances from Section 301 and 306 limitations on discharges of heat. While it is true that Section 316(a) variances are not based on cost considerations, that hardly means that Section 316(b)—which sets forth a different standard for regulating a different matter and does not cross-reference Section 316(a)—unambiguously precludes cost-benefit analysis.

2. Nor (even assuming that legislative history could ever resolve statutory ambiguity for purposes of *Chevron*) does the legislative history unambiguously demonstrate a congressional intent to preclude consideration of the relationship between costs and benefits under Section 316(b). The States argue (at 38) that "[t]he legislative history of

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[3] Because the statute does not equate BTA with BAT or BADT, there is no need to decide in this case whether EPA may consider the relationship between costs and benefits in determining BAT or BADT. Riverkeeper correctly argues (at 35-37) that EPA is not *required* to consider that relationship in making those determinations, and that BAT standards are intended to be stricter than BPT standards. But it does not necessarily follow that *no* cost-benefit consideration is *permitted* for either BAT or BADT. See Gov't Br. 23-24.

section 316(b) is sparse and undeserving of any significant weight." The government generally agrees. Section 316(b) was "added by the conference committee without substantive comment." *Riverkeeper, Inc.* v. *United States EPA*, 358 F.3d 174, 186 n.12 (2d Cir. 2004) (*Riverkeeper I*). And while the only floor statement concerning Section 316(b) supports EPA's interpretation, that statement reflects the views of a single legislator, Representative Clausen. See Gov't Br. 23; 118 Cong. Rec. 33,762 (1972).

Like the States, Riverkeeper (at 47) also disclaims reliance on legislative history, but then goes on to discuss at length the legislative history of *other* provisions of the CWA. Riverkeeper's basic argument (at 6-12, 47-49) is that, by choosing to rely primarily on technology-based discharge standards rather than water-quality standards, Congress rejected cost-benefit analysis in the CWA. But Congress's reasons for generally preferring technology-based discharge standards (which directly address discharges as opposed to water bodies) to water-quality standards (which directly address water bodies as opposed to individual discharges), see generally *EPA* v. *California*, 426 U.S. 200, 202-203 (1976), do not imply any particular view as to whether EPA should consider the relationship between costs and benefits in formulating appropriate standards. That is evident on the face of the BCT and BPT standards, which are technology-based discharge standards that expressly *require* consideration of the relationship between costs and benefits. See p. 10, *supra*.

Moreover, the legislative history proffered by respondents relates almost entirely to discharges of pollutants governed by Sections 301, 306, and 316(a), not to water intakes governed by Section 316(b). The States are clear on that point: after discounting the legislative history of Section 316(b) on the ground that it consists of only a floor

statement, the States go on to rely on legislative history—mostly floor statements, ironically—concerning other provisions of the Act. States Br. 38-41. Going even farther afield, Riverkeeper searched the National Archives for various notes, memoranda, and correspondence that, it claims, show that the conferees decided to address thermal discharges with a water-quality based variance (in Section 316(a)) and water intake through a best-technology standard (in Section 316(b)). Riverkeeper Br. 10 n.6, 13 n.8. That much is obvious on the face of the statute. But none of the materials on which respondents rely tackles the question presented here, which is whether Section 316(b)'s best-technology standard precludes, permits, or (like BPT and BCT) requires consideration of the relationship between costs and benefits. And even if the assorted materials relied on by Riverkeeper were on point, and even if they were considered reliable and relevant sources of legislative history, they could hardly establish an *unambiguous* congressional intent—especially considering that Representative Clausen's floor statement, which is at least a more conventional form of legislative history, supports EPA's interpretation.

Respondents' discussion shows only that Section 316(b)'s intake provision received very little consideration in the legislative debates, especially compared to the Section 301, 306, and 316(a) discharge restrictions. But, if anything, that undercuts respondents' position because the gravamen of their argument is that Congress in enacting Section 316(b) specifically "determined the relationship between the costs and benefits." States Br. 44. If that were true, one would expect at least *some* indication that Congress had actually considered the question and had determined that the benefits of applying respondents' proposed water-intake standard justified the costs. As the

Second Circuit explained in *Riverkeeper I*, however, the "brevity" of Section 316(b), combined with the "paucity of legislative history, when measured against the volumes of drafts and speeches devoted to other aspects of the 1972 amendments," suggests that Congress "desire[d] to delegate significant rulemaking authority to the Agency." 358 F.3d at 186 n.12.

C. The Court Of Appeals Erroneously Usurped EPA's Discretion

Because Section 316(b) does not "directly sp[eak] to the precise question at issue," EPA's reasonable interpretation of the ambiguous statutory text is entitled to deference. *Chevron*, 467 U.S. at 842; see Gov't Br. 26-30.

1. The court of appeals turned normal principles of *Chevron* deference on their head by relying on an artificial presumption that cost-benefit analysis is forbidden unless Congress clearly authorizes it. See Pet. App. 22a-23a. Respondents do not appear to defend that presumption, see Riverkeeper Br. 41-42; States Br. 43, and for good reason: Congress's *silence* on whether an agency may consider the relationship between costs and benefits provides no basis for inferring an unambiguous legislative *prohibition* against such consideration. Gov't Br. 30-34. "[S]ilence, after all, normally creates ambiguity. It does not resolve it." *Barnhart* v. *Walton*, 535 U.S. 212, 218 (2002). The court of appeals' presumption is especially unwarranted because, far from being aberrational, cost-benefit analysis instead is a routine feature of private and governmental decision-making. See Gov't Br. 13-14.

2. The extent of the court of appeals' departure from normal deference principles is further underscored by its attempt to micro-manage EPA's decisionmaking through rules that cannot be found in the Act. The court concluded,

for example, that EPA may consider costs as part of "cost-effectiveness" but not "cost-benefit" analysis—terms that appear nowhere in Section 316(b). See Pet. App. 24a, 26a. Based on that atextual distinction, the court would have allowed EPA to adopt a significantly cheaper technology that would save 99-101 fish instead of 100-103 fish. *Id.* at 22a-23a & n.10, 27a. By permitting the agency to weigh costs against at least one or two fish (and perhaps more, though the number is unclear), the court of appeals essentially permitted EPA to consider the relationship between costs and benefits, but only in the most extreme cases. Even on its own terms, therefore, the court of appeals' decision lacks a principled basis in the statutory text. Moreover, the court of appeals agreed that EPA could consider other practical factors such as energy efficiency that, while important, are no more grounded in explicit statutory text than the relationship between costs and benefits. See *id.* at 26a n.12.

While respondents do not directly address those points, their own positions rest on similar errors. The States (at 16, 21, 29) repeatedly assert that costs can be a "secondary" but not a "primary" consideration under Section 316(b). That approach has no more grounding in the statute than the court of appeals' cost-benefit/cost-effectiveness distinction. And as noted above, the States' embrace of cost as a secondary factor only underscores that EPA is entitled to deference, because the precise manner or extent of considering a permissible factor is a textbook matter for agency discretion. See p. 5, *supra*.

Similarly, Riverkeeper concedes (at 29), in the course of assuring this Court that its position would not produce absurd results, that "the Agency has some discretion (albeit not boundless) to determine that further differences in reduction would be so minor as to be unnecessary for compli-

ance with the minimizing requirement." But there is no more principled basis for cabining EPA's conceded discretion to "minor" (*ibid.*) matters than for limiting it to cost-effectiveness or "secondary" considerations. Congress expressed no unambiguous intent to draw any of those proffered distinctions.

3. Riverkeeper argues (at 43-44) that the agency's interpretation is not entitled to *Chevron* deference because, in the preamble to a 1976 rulemaking that was vacated on judicial review, EPA initially construed Section 316(b) to preclude cost-benefit analysis. That characterization is neither correct nor relevant (especially considering that the rule was vacated, see *Appalachian Power Co.* v. *Train*, 566 F.2d 451 (4th Cir. 1977)). EPA determined in the 1976 preamble that cost-benefit analysis is not "required," but it did not squarely address whether consideration of the relationship between costs and benefits is permitted. Instead, in a portion of the preamble that Riverkeeper does not discuss, the agency emphasized that "economic practicability" is an important consideration that should be analyzed on a case-by-case basis. J.A. 42.

The following year, in a permitting decision and a General Counsel opinion, EPA explained that, while Section 316(b) does not require a formal cost-benefit analysis, it would *not* be "reasonable to interpret Section 316(b) as requiring use of technology whose cost is wholly disproportionate to the environmental benefit to be gained." *In re Pub. Serv. Co. of N.H. (Seabrook Station, Units 1 & 2)*, No. 76-7, 1977 WL 22370 (EPA June 10, 1977) (*Pub. Serv. Co. of N.H.*), remanded on other grounds *sub nom. Seacoast Anti-Pollution League* v. *Costle*, 572 F.2d 872 (1st Cir. 1978); accord *In re Cent. Hudson Gas & Elec. Corp., Op. EPA Gen. Counsel*, NPDES No. 63, 1977 WL 28250, at *8 (July 29, 1977). Ever since, permitting authorities in imple-

menting Section 316(b) have considered the relationship between costs and benefits to at least that extent. Gov't Br. 27-28.

Riverkeeper contends (at 45) that EPA, in applying the "wholly disproportionate" test, has considered only whether the benefits of additional protective measures would be *de minimis*. That gloss, however, is flatly inconsistent with the test as EPA has articulated it: EPA directed permitting authorities to determine whether "*cost* is wholly *disproportionate* to the environmental *benefit* to be gained," not whether the benefit is *de minimis*. *Public Serv. Co. of N.H.*, 1977 WL 22370 (emphases added). The court of appeals' decision is thus incompatible with more than 30 years of settled agency practice. See also, *e.g.*, *In re Florida Power Corp. Crystal River Power Plant Units 1, 2, & 3*, NPDES Permit No. FL0000159, at 7-8 (EPA Region IV Sept. 1, 1988) (determining that closed-cycle cooling towers were not BTA because their extremely high cost was "wholly disproportionate" to benefits at a particular plant, even though that technology would reduce entrainment by 85% and there were no other technologically practical alternatives to reduce entrainment "to an acceptable level" at the plant).

Riverkeeper is likewise incorrect in contending (at 45-46) that EPA recognized during the Phase I rulemaking for new sources that "it lacked authority to compare costs and benefits under Section 316(b)." As the government's opening brief explained (at 38-39), the Phase I rule rejected a technology known as dry cooling because, among other things, dry cooling "costs more than ten times as much per year as closed-cycle wet cooling, but it is estimated to reduce water intake by only an additional 5 percent relative to once-through cooling." *Riverkeeper I*, 358 F.3d at 194 (footnotes omitted). The Second Circuit upheld EPA's con-

sideration of the relationship between costs and benefits, along with other factors, as falling within the agency's "considerable discretion." *Id.* at 195. Riverkeeper makes no effort to reconcile its characterization of the Phase I rulemaking with those facts.

D. EPA's Consideration Of Costs And Benefits In The Rulemaking At Issue Here Fell Well Within Its Discretion

Because EPA acted within the scope of its statutory authority in promulgating the performance standards and site-specific cost-benefit variance provision at issue here, this Court should reverse the judgment of the court of appeals and reinstate those portions of the rule. Although respondents dispute EPA's authority to give any weight to the relationship between costs and benefits, they raise no substantial challenge to the specific manner in which EPA considered that relationship here.

Nor could they. EPA did not select the performance standards based only on a cost-benefit analysis. Instead, the agency rejected closed-cycle cooling technology as BTA "based on its generally high costs (due to conversions), the fact that other technologies approach the performance of this option, concerns for energy impacts due to retrofitting existing facilities, and other considerations." Pet. App. 255a; see Gov't Br. 35-37. The cost-benefit variance provision likewise does not turn on a strict cost-benefit comparison. Instead, it permits the operator of an individual facility to apply for a site-specific determination of BTA—which itself would be based on a permitting authority's discretionary consideration and balancing of all relevant factors—only if the facility's cost of complying with the national performance standards "would be *significantly* greater than the benefits." 40 C.F.R. 125.94(a)(5)(ii) (emphasis added); see Gov't Br. 39-41. As the government's

opening brief explained (at 14), agencies' consideration of the relationship between costs and benefits may take a number of different forms. EPA's consideration of various relevant factors in the rulemaking below was by no means among the more robust types of cost-benefit analysis.[4]

Riverkeeper observes (at 52) that EPA "assigned no dollar value" to many of the relevant benefits "because it was too difficult to determine a meaningful [monetary] value for them." The agency did, however, undertake a "qualitative[]" analysis of the benefits that were not quantified. Pet. App. 485a; see *id.* at 482a-515a. EPA ultimately concluded that, "[a]lthough not identical, the ranges of impingement and entrainment reduction are similar under both" the cooling-towers option and the selected option, while the costs of the former far exceed those of the latter. *Id.* at 260a. Far from reflecting a defect in EPA's analysis, the agency's conclusion that it would make little sense to try to compare all relevant considerations in purely *monetary* terms demonstrates the flexibility and common-sense nature of cost-benefit analysis.

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[4] The States assert (at 8) that EPA has found closed-cycle cooling to be BTA "at more than a dozen existing power plants." That is incorrect. In both of the examples cited by the States, power plants were retrofitted with closed-cycle cooling technology to reduce thermal discharges pursuant to Section 316(*a*). See *Consolidated Edison Co.* v. *New York State Dep't of Envt'l Conservation*, 726 F. Supp. 1404, 1406 (S.D.N.Y. 1989); *California's Coastal Power Plants: Alternative Cooling System Analysis* 6-2 (visited Oct. 27, 2008) <http://www. resources. ca.gov/copc/OTC/Chapter_6_Retrofit_and_Repower_Examples_ 28121840.pdf>. Some other facilities have been retrofitted for operational, not pollution-related, reasons. See *id.* at 6-2, 6-3, 6-4. The States' reliance (at 7) on the preamble to the vacated 1976 rule is likewise misplaced, not only because the rule was vacated, but also because that preamble explained that closed-cycle cooling is *not* "universally and necessarily the best technology available," and that BTA should instead be determined on a facility-specific basis. J.A. 43.

Respondents do not appear to dispute that the validity of the cost-benefit variance depends entirely on the resolution of the question presented. See Gov't Br. 40-41. Riverkeeper contends (at 53 n.24), however, that the court of appeals' invalidation of the performance standards rests on the alternative ground that EPA did not adequately explain the basis for its decisionmaking. But what the court considered unclear is whether the agency "based its decision on permissible cost-effectiveness analysis or exceeded its authority by relying impermissibly upon a cost-benefit analysis." Pet. App. 36a. Because that conclusion rests entirely on the court of appeals' erroneous holding that EPA may not consider the relationship between costs and benefits, it does not provide an independent basis for a remand to the agency.

Riverkeeper further contends (at 31 n.16) that the court of appeals invalidated EPA's performance standards on the (assertedly) separate ground that they allowed facilities that could comply with the upper end of a range to comply with the lower end instead, and that the validity of the ranges is not fairly included in the question presented. As the government's opening brief explained (at 39 n.3), however, the court remanded EPA's chosen ranges based on its view that Section 316(b) requires "as much reduction of adverse environmental impacts as is technologically possible." Pet. App. 43a. Because that holding rests on the court's erroneous resolution of the question presented, and Riverkeeper acknowledges (at 31 n.16) that ranges are otherwise permissible, the court's invalidation of the ranges is fairly encompassed in the question presented and should be reversed.

* * * * *

For the foregoing reasons and those stated in the government's opening brief, the judgment of the court of appeals should be reversed with respect to the performance standards and the site-specific cost-benefit provision, those provisions should be reinstated, and the case should be remanded.

Respectfully submitted.

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OCTOBER 2008

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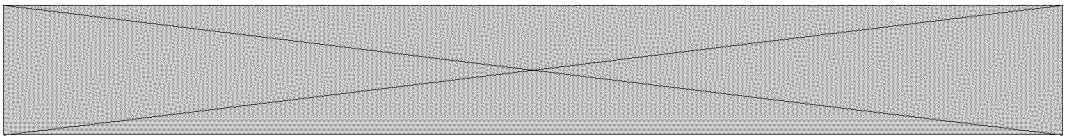

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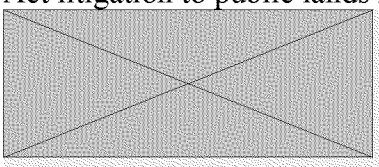

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From: Neugeboren, Steven
Sent: Sun 10/27/2013 7:25:34 PM
Subject: FW: UWAG letter to EPA, NMFS, and FWS re ESA consultation on EPA 316(b) rulemaking
UWAG letter to EPA, NMFS, and FWS re ESA consultation on EPA 316(b) rulemaking-c.pdf

please forward on as needed

Steven Neugeboren
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From: Campbell, Sharon [scampbell@hunton.com]
Sent: Friday, October 25, 2013 3:37 PM
To: Neugeboren, Steven; barry.roth@sol.doi.gov; adam.issenberg@noaa.gov
Cc: Bulleit, Kristy; Turner, Andrew
Subject: UWAG letter to EPA, NMFS, and FWS re ESA consultation on EPA 316(b) rulemaking

Dear Messrs. Neugeboren, Roth and Issenberg:

Today the attached letter was placed in overnight mail to The Honorable Regina McCarthy, Administrator, U.S. Environmental Protection Agency; Ms. Donna Wieting, Director, Office of Protected Resources, National Marine Fisheries Service; and Mr. Gary D. Frazer, Assistant Director, Endangered Species, U.S. Fish and Wildlife Service. The letter addresses concerns with the ongoing Endangered Species Act consultation over the U.S. Environmental Protection Agency's proposed restrictions for cooling water intake structures at existing facilities. The letter is submitted on behalf of the Utility Water Act Group.

Thank you,

On behalf of Kristy A. N. Bulleit

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FILE NO: 29142.060024

October 25, 2013

Via Overnight Mail

The Honorable Regina McCarthy
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Ms. Donna Wieting
Director, Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway, F/PR3
Silver Spring, MD 20910

Mr. Gary D. Frazer
Assistant Director, Endangered Species
U.S. Fish and Wildlife Service
4401 North Fairfax Drive
Arlington, VA 22203

Re: Endangered Species Act Consultation on EPA Rulemaking to Establish Additional Restrictions on Cooling Water Intake Structures at Existing Facilities

Dear Administrator McCarthy, Ms. Wieting, and Mr. Frazer:

We submit this letter on behalf of the Utility Water Act Group ("UWAG") to express our concerns with ongoing Endangered Species Act ("ESA") consultation over the U.S. Environmental Protection Agency's ("EPA") proposed restrictions for cooling water intake structures ("CWISs") at existing facilities.

UWAG members operate power plants and other facilities that generate, transmit, and distribute electricity to residential, commercial, industrial, and institutional customers. Many of UWAG's members operate facilities with cooling water intake structures that will be subject to the "Final Regulations to Establish Requirements for Cooling Water Intake Structures at Existing Facilities and Amend Requirements at Phase I Facilities" ("section 316(b) rule") scheduled to be signed by EPA by November 4, 2013.

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When final, the section 316(b) rule will place new restrictions on cooling water intake structures at existing power plants and manufacturing facilities. The creation and operation of those intake structures already have been authorized under other state and federal laws. The proposed rule,[1] which does not authorize the creation of any new intake structure but instead only places restrictions on cooling water intake structures at existing facilities, is designed to minimize adverse environmental impacts by protecting aquatic organisms (including but not limited to ESA-listed species) from entrainment and impingement. Thus, the proposed rule will have only beneficial effects on listed species. Indeed, EPA determined that the proposed section 316(b) rule will "reduce impacts to listed species from cooling water intake structures" and "will not cause adverse effects and will benefit affected species whether threatened, endangered or otherwise."[2] The proposed rule also contains a provision specifically requiring permit writers to impose more stringent requirements, as necessary, to ensure compliance with requirements of State law, Tribal law, or other Federal law, including but not limited to the ESA, Marine Mammal Protection Act, the Coastal Zone Management Act, and the Magnuson-Steven Fishery Conservation and Management Act.

EPA correctly observed in its biological evaluation that formal ESA section 7 consultation is not required if EPA determines, and the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (FWS) (jointly, the Services) concur, that the proposed rule is not likely to adversely affect listed species. Yet there is no indication that the Services concurred in EPA's determination that the rule is not likely to adversely affect listed species. Instead, EPA and the Services have now engaged in an unnecessary formal consultation process that is delaying and increasing the costs of the rulemaking, and occurring with no public scrutiny or involvement.

We urge the Services and EPA to account for the concerns set forth in this letter.

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[1] 76 Fed. Reg. 22,174 (Apr. 20, 2011).

[2] Letter from Robert K. Wood, Dir., EPA, to Donna Wieting, Dir., NMFS, and Gary Frazer, Assistant Dir., FWS (June 18, 2013), *available at* http://insideepa.com/iwpfile.html?file=jul2013%2Fepa2013_1247a.pdf (Initiation of Formal Consultation on the EPA's Final Regulations to Establish Requirements for Cooling Water Intake Structures at Existing Facilities and Amend Requirements at Phase I Facilities) (hereinafter, "EPA Consultation Letter").

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First, during consultation, the agencies must base their determinations of the effects of the proposed section 316(b) rule on effects to species that will occur as a result of the proposed section 316(b) rule in relation to *existing baseline conditions* today. The agencies' determinations with respect to jeopardy, adverse modification or other effects may not be based on additional restrictions that the agencies may believe that EPA *could* impose in the new rule. Potential or hypothetical future regulations do not form the baseline for determining effects.

Second, because the proposed section 316(b) rule will have only beneficial effects on listed species, the Services should conclude consultation with either a "not likely to adversely affect" concurrence, or a biological opinion finding that no jeopardy or adverse modification will occur as a result of the rule.

Third, any analysis of baseline environmental conditions or the effects of the proposed section 316(b) rule must be based on "scientific data." The ESA requires use of the "best scientific and commercial data available," 16 U.S.C. § 1536(a)(2), which precludes reliance on speculation or surmise as a substitute for scientifically derived, verifiable data. As EPA acknowledges in its biological evaluation, there is a high degree of uncertainty regarding the possible overlap of facilities that may be subject to the proposed action with the habitat of listed species.

Finally, ESA consultation procedures provide no basis for the imposition of additional restrictions where only beneficial effects will occur. Thus, the consultation process should not result in the imposition of new restrictions in the final section 316(b) rule. In fact, any new restriction that arises not from the rulemaking process, but from closed-door consultation procedures, would violate public notice and comment rulemaking requirements of the Administrative Procedure Act ("APA").

For the reasons more fully set forth below, formal consultation on the section 316(b) rule should be promptly concluded with a not likely to adversely affect concurrence. 50 C.F.R. § 402.14(l)(3). If the agencies nonetheless continue with formal consultation, they must evaluate the effects of the proposed section 316(b) rule based on changes to current baseline conditions today. Because the proposed rule will have only beneficial effects, the Services should conclude consultation with a "not likely to adversely affect" concurrence or a

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biological opinion finding that no jeopardy or adverse modification will occur as a result of the rule.

I. Formal Consultation on the Section 316(b) Rule is Not Warranted.

Formal section 7 consultation was not required and should not have been initiated for the section 316(b) rule. The administrative record demonstrates that the rule will have "purely beneficial" effects on threatened or endangered species. In these circumstances, the Services' regulations, Endangered Species Consultation Handbook, and case law all support a "not likely to adversely affect" determination,[3] which negates the need for formal consultation.

A. Section 7 Requirements for Consultation.

Under ESA section 7(a)(2), federal agencies consult with FWS and/or NMFS, when required, to insure that agency actions are not likely to jeopardize the continued existence of a threatened or endangered species, or cause destruction or adverse modification of the species' designated critical habitat. 16 U.S.C. § 1536(a)(2). If an agency determines that its action has "no effect," consultation is not required. 50 C.F.R. §402.14(a).[4] Otherwise, if an agency determines that its action "may affect" listed species or critical habitat, it may either initiate informal consultation with the Services to determine whether formal consultation is required, or it may proceed directly to formal consultation with the Services.

If informal consultation is undertaken, and the action agency determines with the Service's concurrence that the action is "not likely to adversely affect" listed species or designated habitat, consultation concludes without formal consultation. The Handbook explains that a "not likely to adversely affect" determination is appropriate "when effects on listed species are expected to be discountable, insignificant, or completely beneficial." Handbook at 3-12. Formal consultation is required only if a "may affect" determination is made and the Service does not concur in a "not likely to adversely affect" determination. 50 C.F.R. § 402.14(b)(1).

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[3] FWS, Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act at E-11, E-12 (Mar. 1998) (hereinafter "Handbook").

[4] According to the Services, a "no effect" determination is not appropriate when an effect may occur, including discountable, insignificant, or completely beneficial effects. *See* Handbook at 3-12.

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B. The Section 316(b) Rule Will Have Purely Beneficial Effects.

In the proposed section 316(b) rule, EPA has included technology-based requirements to restrict impingement and entrainment of aquatic organisms at all existing power generating, manufacturing, and industrial facilities with cooling water intake structures withdrawing more than two million gallons per day. 76 Fed. Reg. 22,174 (Apr. 20, 2011). For impingement (organisms pinned against intake screens), EPA proposed to set performance standards based on use of advanced traveling screens with fish returns, which EPA finds are available for all facilities and achieve performance comparable to wet recirculating cooling at a cost ten times lower than recirculating cooling. 76 Fed. Reg. 22,204-05. For entrainment (organisms drawn through intake screens), EPA proposed that requirements be established by National Pollutant Discharge Elimination System ("NPDES") permit authorities (either EPA or states with delegated permit authority) on a site-specific basis based on factors including costs, benefits, and environmental side-effects of available technologies. 76 Fed. Reg. at 22,207. EPA considered the establishment of performance standards based on closed-cycle cooling systems (which cool and recirculate water for reuse), but found that installing closed-cycle cooling systems was not "practically feasible" at all sites based on factors related to energy reliability, air emissions permits, land availability, and remaining useful life of the facilities. *Id.*

EPA appropriately determined that the proposed section 316(b) rule for existing facilities is not likely to adversely affect listed species. In its June 18, 2013 letter on initiation of formal consultation, EPA states:

> Because the section 316(b) rule will reduce impacts to listed species from cooling water [in]take structures, the Agency continues to believe that it will not cause adverse effects and will benefit affected species . . . . Nonetheless, the EPA has decided to request formal consultation to ensure full and expeditious consideration of the impacts to listed species under section 7(a)(2).[5]

In addition, although the available copy of EPA's biological evaluation ("BE") for the section 316(b) rule is redacted, that copy indicates that EPA concluded that the rule will have only beneficial effects on listed species, although the "nature and magnitude of beneficial effects will be dependent" on a variety of factors.[6] EPA explained that the proposed section 316(b)

[5] *See* EPA Consultation Letter.
[6] EPA, ESA Biological Evaluation for CWA Section 316(b) Rulemaking at 90 (June 18, 2013).

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rule "reduces the adverse environmental impacts ("AEI") to aquatic biota and communities caused by withdrawals of water from streams, rivers, estuaries and coastal marine waters by CWISs."[7]

We agree that EPA's proposed section 316(b) rule for existing facilities will not cause adverse effects to listed species. Indeed, there is no evidence in the administrative record that the rule is likely to cause adverse effects. Rather, the administrative record demonstrates that the effects of the proposed rule will be "completely beneficial." Handbook at 3-12. Therefore, the proposed rule should not be subject to formal consultation under section 7. *Id.*[8]

C. The Services Should Have Concluded Informal Consultation by Issuing a Not Likely to Adversely Affect Concurrence.

The regulations, the Handbook, and case law all support issuance of a "not likely to adversely affect" concurrence for EPA's proposed section 316(b) rule because, as EPA determined, the proposed section 316(b) rule will have only beneficial effects on listed species. A "not likely to adversely affect" determination is appropriate "when effects on listed species are expected to be discountable, or insignificant, or completely beneficial." Handbook at 3-12; *see Friends of the Wild Swan v. U.S. Forest Serv.*, 875 F. Supp. 2d 1199, 1209 (D. Mont. 2012). Thus, the Services should have issued a "not likely to adversely affect" determination for the proposed section 316(b) rule, thereby concluding informal consultation.

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[7] *Id.* at 1.

[8] EPA has not previously engaged in formal consultation on any prior section 316(b) rulemakings, nor was it required to do so. In fact, during the Phase I rulemaking EPA stated, "The regulation does not authorize any activity that may have an effect on listed species. Rather, it sets minimum, technology-based standards for the location, design, construction and capacity of intake structures that must be met in NPDES permits issued to facilities that withdraw water for cooling purposes." EPA, Response to Public Comment, National Pollutant Discharge Elimination System -- Regulations Addressing Cooling Water Intake Structures for New Facilities, at 120 (Jan. 2, 2002) (briefly referred to by EPA as "Response to Public Comment: CWA Section 316(b) New Facility Rule – Final").

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II. The Only Effects of the Section 316(b) Rule on Listed Species or Critical Habitat Are Incremental Impacts of the Rule in Relation to Existing Baseline Conditions.

Congress plainly stated in ESA section 7(a)(2) that the purpose of consultation is to determine whether "*action authorized, funded, or carried out*" by an agency is likely to cause jeopardy or adverse modification. 16 U.S.C. § 1536(a)(2). Likewise, Congress specified that a biological opinion must "detail[] how the agency action affects the species or its critical habitat." *Id.* § 1536(b)(3)(A). The statute makes plain that the focus of consultation is on the effects to species *that result from an agency's action*. Correspondingly, the consultation regulations specify that the "effects of the action" are the "direct and indirect effects of an action . . . that will be *added to the environmental baseline*." 50 C.F.R. § 402.02 (emphasis added). The baseline is comprised of "*past and present*" impacts of activities as well as anticipated impacts of other actions "that have *already undergone*" consultation. *Id.*

Although EPA correctly concluded that the section 316(b) rule will have only beneficial effects on listed species, EPA confused the analysis by stating that the section 316(b) rule "may allow as many as 215 [threatened and endangered] species and 30 critical habitats of [threatened and endangered species] to continue to be affected." *See* EPA Consultation Letter. EPA's statements with respect to effects that will "continue" and the Services' apparent refusal to concur in a "not likely to adversely affect" determination point to a crucial flaw in the agencies' analysis that must not be allowed to misdirect the consultation process.

Baseline effects that exist prior to and "continue" after an action are not effects of the action. Rather, the effects of an action are those effects caused by a specific agency action (here the proposed section 316(b) rule), and which are "added to the environmental baseline." 50 C.F.R. § 402.02. The effects of the proposed section 316(b) rule manifestly will be to reduce baseline effects to listed species, not add to those effects. To the extent that EPA's statement may be interpreted to treat "continued" baseline effects as effects of the proposed section 316(b) rule, that interpretation must be rejected as inconsistent with the statute and regulations. EPA otherwise maintains in its letter that the rule will "reduce impacts to listed species from cooling water [in]take structures" and "will not cause adverse effects." EPA Consultation Letter. Indeed, in its BE for the proposed section 316(b) rule, EPA states, "The implementation of the proposed action does not authorize any new activities or increased discharge of pollutants that would increase effects on ESA listed species. In fact, this action is likely to reduce or minimize the potential effects of CWIS-related [impingement and

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entrainment mortality] on ESA-listed species whose habitat overlap with the withdrawal and discharge zones of these facilities." BE at 77.

As the statute, regulations and Handbook make plain, the effects of the section 316(b) rule are to be determined based on changes to current baseline conditions today, and not based on whether baseline conditions continue or on additional restrictions that the agencies may believe that EPA *could* impose in the new rule. Thus, agencies must determine the effects of the rule based on the reductions in impingement and entrainment that would result from EPA's proposed rule.

A. A "May Affect" or "Adversely Affect" Determination Must Be Based on the Incremental Impact Resulting From the Proposed Action.

It is essential for the Services to recognize that a "may affect" or "adversely affect" determination must be based on the incremental impact to listed species or critical habitat that results from the proposed section 316(b) rule, not from baseline conditions, and not based on whether the section 316(b) standard could have been *more protective* of listed species.

Effects are determined based on changes that result from the specific agency action in relation to baseline conditions without the agency action. The regulations define "effects of the action" as the "direct and indirect effects of an action . . . that will be added to the environmental baseline." 50 C.F.R. § 402.02. The environmental baseline includes "past and present impacts of all Federal, State, or private actions and other human activities in the action area," as well as "anticipated impacts" of other proposed federal agency actions "that have already undergone" consultation. *Id.*

The Handbook explains that the baseline is a "snapshot" of "the current status of the species" and "does not include the effects of the action under review." Handbook at 4-22. Accordingly, a "may affect" or "adversely affect" determination should be based on the incremental impact on listed species that result from the agency action under consultation, not on impacts attributable to other past, present, or future actions. *See Nat'l Wildlife Fed'n v. NMFS*, 524 F.3d 917, 929-930 (9th Cir. 2007); *In re Consolidated Salmonid Cases*, 791 F. Supp. 2d 802, 932 (E.D. Cal. 2011).

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In *National Wildlife Federation*, the U.S. Court of Appeals for the Ninth Circuit addressed what effects should be considered in the environmental baseline when analyzing a plan for the continuing operation of an existing federal dam system. *Nat'l Wildlife Fed'n,* 524 F.3d at 930. The agency had assessed the effects of the proposed plan in comparison to a "reference operation" consisting of a hypothetical regime of operating the dams that "was the most beneficial to listed fishes of any possible operating regime." *Id.* at 926. The court rejected the "reference operation" approach, finding that the analysis must focus on the action's effects "when added to the underlying baseline conditions." *Id.* at 929. The court distinguished the effect of the agency's proposed *operation* of the dams, which was at issue in the rulemaking and would be considered in the "effects of the action," from the effects on listed species of "[t]he current *existence* of the FCRPS dams," which "must be included in the environmental baseline" as an existing human activity. *Id.* at 930 (emphasis added). *National Wildlife Federation* demonstrates that the effects of an action (in this case the section 316(b) rule for existing sources) must be determined based on changes that result from that action in relation to baseline conditions without the agency action, focusing on the additional harm or benefit caused by the action.

B. <u>The Effects of the Proposed Section 316(b) Rule Are the Beneficial Impacts on Listed Species of Imposing the New Requirements for Cooling Water Intake Structures</u>.

In the context of the section 316(b) rulemaking, the "effects of the action" (to the extent the rule can be said to have any effect at all) are the effects on listed species of establishing the new requirements for cooling water intake structures that will be promulgated in the section 316(b) rule. The intake structures subject to this regulation already exist. This rule does not authorize the creation of any new intake structure, nor does the rule authorize the continued operation of existing structures. Allocating and authorizing the withdrawal of water by specific users from specific waters is largely the prerogative of the states or other federal agencies. And the United States Army Corps of Engineers is separately responsible for permitting the placement of structures or other work in navigable waters or waters of the United States. This rule does not authorize any of these activities, nor does it purport to authorize the take of any listed species. Rather, EPA's action is the imposition of new restrictions on existing cooling water intake structures that will reduce impacts related to impingement and entrainment. Therefore, to the extent that EPA's section 316(b) rule can be said to have any effect on listed species or critical habitat, any such effects would be limited

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to reductions in effects of previously authorized intake structures as a result of proposed impingement mortality performance standard and site-specific entrainment requirements. The only effects of the rule on listed species or critical habitat would be purely beneficial. The current status of listed species, and any harms they may face from ongoing cooling water intake structure operations, are part of the environmental baseline and are not caused by the section 316(b) rulemaking.

EPA's finding that its proposed section 316(b) rule would not adversely affect listed species is well grounded and supported by the administrative record. EPA found that the proposed rule "will reduce the current mortality of aquatic organisms," and that only the "magnitude of mortality reduction" is still in question. EPA Consultation Letter. Thus, the effects will be completely beneficial, and while there may be some question *how* beneficial those effects will be, a biological opinion is not needed to determine the degree of benefits nor do comparative benefits provide a basis for regulation under the auspices of formal consultation. The fact that the only expected effects will be beneficial justifies a "not likely to adversely affect" determination.

While perhaps inadvertent, we are however troubled by EPA's statement in its Consultation Letter that "the rule may *allow* as many as 215 [listed] species and 30 critical habitats of [listed] species to *continue to be affected*." EPA Consultation Letter (emphasis added). This statement could be read to suggest that EPA has adopted a faulty analysis of ESA section 7 requirements that attributes any adverse baseline effects that remain after an agency action to the agency action.[9] By such reasoning, any protective agency rulemaking would be required to either eliminate all adverse baseline environmental effects, or be deemed the cause of those

[9] In joint comments submitted by environmental groups including Riverkeeper, Sierra Club, and NRDC, the groups assert that EPA was required to consult on the effect of the rule's "authoriz[ation of] continued operation of existing cooling water intake structures in a manner that EPA claims will at best 'minimize' over an extremely extended schedule – and, significantly, will not end – the killing of fish and other aquatic organisms, as well as the wholesale degradation of aquatic ecosystems by CWISs." Riverkeeper, et al., Comments on National Pollutant Discharge Elimination System, Cooling Water Intake Structures at Existing Facilities and Phase I Facilities, 76 fed. Reg. 22,174 (April 20, 2011), Docket No. EPA-HQ-OW-2008-0667 at 136 (Aug. 18, 2011), *available at* http://insideepa.com/iwpfile.html?file=jul2013%2Fepa2013_1247b.pdf (hereinafter, "Riverkeeper, et al., Comments"). The groups cite *Defenders of Wildlife v. EPA*, 882 F.2d 1294, 1300 (8th Cir. 1989), but that decision is inapposite. *Defenders* involved allegations that EPA was liable for incidental takes caused by granting FIFRA registrations for use of strychnine pesticides, not failure to consult. Moreover, here EPA is not authorizing activity but rather is placing restrictions on activity (CWIS operations).

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effects. Such an approach is not only unworkable, it is unsupported by the legislative history and inconsistent with the ESA.[10] That approach would remove the operation of existing cooling water structures from the environmental baseline, with no lawful basis for doing so. Thus, EPA and the Services should not hold private discussions to devise potential requirements *more protective* of listed species under the guise of section 7 consultation, but must instead focus on whether the proposed rule is likely to cause jeopardy or adverse modification. Under the Act, the Services' regulations, and the Handbook, the continuing operations of cooling water intake structures (which predate the proposed section 316(b) rule) form the baseline, and the effects of the rule must be measured against that baseline. *See* 50 C.F.R. § 402.02; Handbook at 4-22.

Consulting on whether an alternative version of the proposed rule could be even more beneficial to listed species, rather than on the effects of the rule as proposed, would result in an unworkable, precedent-setting standard for section 7 consultation. For every protective regulation, the action agency would have to consult with the Services on what more could be done to protect listed species, and any adverse effects that would remain *after* the rule would be attributed to the rule even though not caused *by* the rule. Such an approach is not supported by precedent or law. The ESA consultation procedures do not require agencies to take actions that maximize benefits to listed species: they prohibit agencies from jeopardizing species. *Sw. Ctr. for Biological Diversity v. U.S. Bureau of Reclamation*, 143 F.3d 515, 523 (9th Cir. 1998) (ESA section 7 does not require FWS to "pick the best alternative or the one that would most effectively protect the Flycatcher from jeopardy.").

In sum, the agencies are required to treat the continued operation of regulated cooling water intake structures as currently regulated as part of the environmental baseline and may not attribute ongoing baseline effects to the section 316(b) rulemaking. Moreover, under ESA section 7(a)(2), the agencies must consult to ensure that the agency action is "not likely to jeopardize the continued existence of any [endangered or threatened] species or result in the destruction or adverse modification of habitat." 16 U.S.C. § 1536(a)(2). It is inconsistent

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[10] 16 U.S.C. § 1536(a)(2) (agency shall consult on "action authorized, funded or carried out *by such agency*") (emphasis added); S. Rep. No. 95-874 at 6 (May 15, 1978) Federal agencies have a responsibility to identify activities and programs *which they undertake* that may affect listed species or their critical habitat and to request consultation with the Services concerning those activities or programs. Thus, the consultation process must be initiated at that point in the implementation of the action where the Federal agency first recognizes that *the activity* may have a detrimental effect on a species or its critical habitat.) (emphasis added).

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with and unsupported by the ESA for the agencies to "consult" on whether the action agency could further increase the benefits of an action.

C. Any Analysis of Baseline Environmental Conditions or the Effects of the Proposed Rule Must Be Based on Scientific Data.

As explained above, the baseline includes the potential effects to threatened and endangered species and critical habitat of the continued operation of intake structures as currently regulated. The scope of the consultation on the effects of EPA's new section 316(b) rule is limited to effects of only that action, namely reduced impingement and entrainment resulting from the proposed impingement mortality performance standard and site-specific entrainment requirements. When analyzing baseline effects and any effects of the proposed rule to be added to the baseline, EPA must use the "best scientific and commercial data available." *Id.* The Supreme Court emphasized, in *Bennett v. Spear*, that the "obvious purpose of the requirement that each agency 'use the best scientific and commercial data available' is to ensure that the ESA not be implemented haphazardly, on the basis of speculation or surmise." *Bennett v. Spear*, 520 U.S. 154, 176 (1997).

We are concerned that, despite the plain requirement to use scientific data rather than rely upon speculation or surmise, the BE is characterized by a lack of such data. The BE repeatedly notes uncertainty as to locations of facilities with intake structures, and a "dearth of [impingement and entrainment mortality] monitoring data." BE at 8, 37. In particular, EPA lists eight main sources of uncertainty with respect to effects on individual species, including: lack of data on the universe of facilities to be regulated; uncertainty with respect to the location of facilities relative to associated listed species habitat; variability of facilities' intake structure water withdrawal volume; lack of data with respect to the location and depth of intake structures within receiving waters; variability with respect to the nature and degree of required intake structure modifications; variability with respect to the accuracy of habitat delineations; variability with respect to beneficial effects among functional groups; and uncertainty with respect to the size or importance of listed species habitat that may be affected. *See* BE at 89.

In an attempt to be "highly conservative" in its assessment of baseline effects or effects of the proposed rule, BE at 20, EPA appears to have resorted to speculation and surmise rather than scientific data. For example, EPA noted the "high degree of geographic uncertainty" as to the

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location of facilities that may be subject to the proposed action, and the unavailability of relevant data regarding possible overlap of these facilities with the habitat of listed species. *Id.* EPA acknowledged that, for many facilities, the "specific environmental settings, baseline technologies used to reduce the effects of CWIS, any prior consultation with the Services (through other permitting programs, for example) and characteristics of receiving waters are unknown." *Id.* EPA thus engaged in a "worst case analysis" when assessing the potential overlap of existing cooling water intake structures (baseline conditions) and listed species. *Id.* at 54. Worst case analyses, and other forms of speculation or surmise, are no substitute for the requirement to use the "best scientific and commercial data available" in analyzing effects of baseline conditions (much less effects of the proposed rule). 16 U.S.C. § 1536(a)(2).

III. The Agencies Should Conclude Consultation On the Section 316(b) Rule With a "Not Likely to Adversely Affect" Concurrence Or A "No Jeopardy" Biological Opinion.

The Services should issue a "not likely to adversely affect" concurrence for EPA's proposed section 316(b) rule because, as explained above, the proposed section 316(b) rule will have only "completely beneficial" effects on listed species. Notwithstanding the fact that informal section 7 consultation should have been the proper consultation avenue in this instance; when formal consultation is undertaken, as it has been for the section 316(b) rule, consultation may be similarly concluded with a "not likely to adversely affect" concurrence. 50 C.F.R. § 402.14(l)(3). Such an approach would save significant time and costs, and is the far more appropriate course of action here. Otherwise, the consultation must conclude with a "biological opinion" from FWS or NMFS, which states the opinion of the Service whether jeopardy to listed species or adverse modification of critical habitat is likely. *Id.* § 402.14(l)(1). If the Services choose to issue a biological opinion, based on the facts in the administrative record and the law, that biological opinion must find that no jeopardy or adverse modification will occur as a result of the section 316(b) rule.

If the Services conclude in a biological opinion that no jeopardy or adverse modification will occur, the action may proceed as proposed in compliance with section 7(a)(2). Only if a biological opinion concludes that the proposed action will result in jeopardy to one or more listed species or in adverse modification to designated critical habitat (both of which are prohibited by ESA section 7) is there a basis for the Services to suggest "reasonable and prudent alternatives" ("RPAs"). 16 U.S.C. § 1536(b)(3)(A).

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To "jeopardize" means to take action that would be expected to "reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." 50 C.F.R. § 402.02. Courts have made clear that distinguishing between the environmental baseline and the *new* effects of the agency action is essential to determine whether agency action will jeopardize listed species. Effects that pre-date the agency action are not a basis for jeopardy or adverse modification. "Agency action can only 'jeopardize' a species' existence if that agency action causes some deterioration in the species' pre-action condition." *Nat'l Wildlife Fed'n*, 524 F.3d at 930. The term jeopardize "implies causation, and thus some *new* risk of harm." *Id.* (emphasis added). Accordingly, even where a species is already in jeopardy, "[a]n agency may still take action that removes a species from jeopardy entirely, or that *lessens the degree* of jeopardy." *Id.* (emphasis added).

EPA explained during informal consultation that the proposed section 316(b) rule does not present any new risk of harm to listed species: its restrictions on cooling water intake structures result only in beneficial impacts. Even *if* the continued existence of some species were already in jeopardy and would remain in that state after the section 316(b) rule requirements take effect, the rule itself will not "jeopardize" those species because it would only "lessen[] the degree of jeopardy." *Id.*

Additionally, whether or not EPA could adopt a section 316(b) rule that is *more* protective of listed species does not alter the outcome of the jeopardy analysis in this case, because the rule itself does not result in jeopardy or adverse modification. Again, the ESA does not require agency actions to maximize benefits to listed species; it merely prohibits them from jeopardizing species. *See Sw. Ctr. for Biological Diversity*, 143 F.3d at 523. Thus, the Services must limit their jeopardy analysis to whether the incremental effect of the section 316(b) rule, considering the environmental baseline, jeopardizes the continued existence of listed species or adversely modifies critical habitat. Because the section 316(b) rule will have only beneficial effects, should the Services elect to prepare and issue a biological opinion (which, as explained above, is neither warranted nor required under 50 C.F.R. § 402.14(l)(3)), the biological opinion must conclude that no jeopardy or adverse modification will occur, and the section 316(b) rule must be allowed to proceed as proposed.

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IV. The Consultation Process Must Not Result in the Imposition of New Restrictions to the Final Section 316(b) Rule.

ESA consultation procedures provide no basis for the imposition of additional restrictions where, as here, only beneficial effects will occur. Thus, the consultation process should not result in the imposition of new restrictions in the final section 316(b) rule.

Even in cases (unlike here) where a proposed action will result in jeopardy or adverse modification (thus permitting the Services to suggest RPAs), the Services may not suggest alternatives that exceed the action agency's authority. Any RPA suggested in a biological opinion must be able to "be implemented in a manner consistent with the intended purpose of the action, . . . consistent with the scope of the Federal agency's legal authority and jurisdiction, [and] economically and technologically feasible . . . ." 50 C.F.R. § 402.02.[11] Thus, even if a jeopardy opinion could be reached in this case – which it could not – the Services would not have the authority to attempt to override EPA's determinations that, for example, performance standards based on closed-cycle cooling are not feasible. Thus, even in such a setting, EPA would be required to reject any approach to modify the draft rule to require existing facilities to meet closed-cycle cooling performance standards, and to "obtain the opinions of its sister federal agencies on the Proposed Rule's impact upon threatened and endangered species and the advisability of reasonable and prudent alternatives, such as a nationally uniform closed-cycle cooling standard."[12] "EPA concluded that closed-cycle cooling is not the best technology available for minimizing adverse environmental impact on a national basis. The record shows that closed-cycle cooling is not practically feasible in a number of circumstances." 76 Fed. Reg. at 72,207.

Nor can the agencies add restrictions to the final section 316(b) rule arising from closed-door consultation procedures, rather than public notice and comment rulemaking procedures, without violating the APA. Under the APA, "if the final rule deviates too sharply from the proposal, affected parties will be deprived of notice and an opportunity to respond to the

---

[11] The Handbook emphasizes cooperation with action agencies when determining RPAs, and acknowledges that action agencies have the "project expertise necessary to help identify reasonable and prudent alternatives." Handbook at 4-7. Accordingly, the Handbook provides that action agencies "should be given every opportunity to assist in developing" RPAs, and that "[o]ften they are the only ones who can determine if an alternative is within their legal authority and jurisdiction, and if it is economically and technologically feasible." Handbook at 4-43.

[12] Riverkeeper, et al., Comments at vii.

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proposal." *Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 547 (D.C. Cir. 1983). To comply with the APA, the final rule must be a "logical outgrowth" of the proposed rule. *United Steelworkers of America v. Marshall*, 647 F.2d 1189, 1315 (D.C. Cir. 1981).

V. Conclusion

In sum, formal consultation on the section 316(b) rule is unwarranted and should be promptly concluded with a not likely to adversely affect concurrence. 50 C.F.R. § 402.14(l)(3). If the agencies nonetheless continue with formal consultation, they must evaluate the effects of the proposed section 316(b) rule based on changes to current baseline conditions today, not based on whether baseline conditions continue or on additional restrictions that the Services may believe that EPA *could* impose in the new rule. Because the proposed rule will have only completely beneficial effects, the Services should conclude consultation with a "not likely to adversely affect" concurrence or a biological opinion finding that no jeopardy or adverse modification will occur as a result of the rule.

We hope that the agencies will work to address the issues set forth in this letter during the consultation. If you would like to discuss this matter further, please contact Kristy Bulleit at (202) 955-1547 or Andrew Turner at (202) 955-1658. Thank you for your attention to this matter.

Sincerely,

Andrew J. Turner
for Kristy A. N. Bulleit

29142.06024 EMF US 47338979.v15

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Shapiro, Mike[Shapiro.Mike@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Lape, Jeff[lape.jeff@epa.gov]; Best-Wong, Benita[Best-Wong.Benita@epa.gov]; Sawyers, Andrew[Sawyers.Andrew@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Grevatt, Peter[Grevatt.Peter@epa.gov]; Frace, Sheila[Frace.Sheila@epa.gov]; Bissonette, Eric[Bissonette.Eric@epa.gov]; Evans, David[Evans.David@epa.gov]
Cc: Telleen, Katherine[Telleen.Katherine@epa.gov]; Flaharty, Stephanie[Flaharty.Stephanie@epa.gov]; Zipf, Lynn[Zipf.Lynn@epa.gov]; Faller, Heidi[Faller.Heidi@epa.gov]; Peck, Gregory[Peck.Gregory@epa.gov]; Lousberg, Macara[Lousberg.Macara@epa.gov]; Evalenko, Sandy[Evalenko.Sandy@epa.gov]; Skane, Elizabeth[Skane.Elizabeth@epa.gov]; Ruf, Christine[Ruf.Christine@epa.gov]; Loop, Travis[Loop.Travis@epa.gov]; Scozzafava, MichaelE[Scozzafava.MichaelE@epa.gov]; Code, Tanya[Code.Tanya@epa.gov]; Ortiz, Agnes[Ortiz.Agnes@epa.gov]; Krieger, Andrew[Krieger.Andrew@epa.gov]; Lopez-Carbo, Maria[Lopez-Carbo.Maria@epa.gov]; Sanelli, Diane[Sanelli.Diane@epa.gov]; Peterson, Jeff[Peterson.Jeff@epa.gov]; Bathersfield, Nizanna[Bathersfield.Nizanna@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Nelson, Tomeka[Nelson.Tomeka@epa.gov]; Evalenko, Sandy[Evalenko.Sandy@epa.gov]
From: Evalenko, Sandy
Sent: Fri 10/25/2013 7:37:44 PM
Subject: 2-week review report
10 25 2013 OP Review Status Update and Planning.docx

Here's the latest 2-week report.

Sandy

To: Pieh, Luseni[Pieh.Luseni@epa.gov]
From: Pieh, Luseni
Sent: Thur 10/24/2013 10:32:18 PM
Subject: October 28th - Final Administrator's Report
EPA Weekly Administrator's Report 10 28 2013 Final.docx

Good evening,

Attached please find the Weekly Administrator's Report for the week of October 28th.

Thank you,

Lou

Lou Pieh

White House Liaison

Environmental Protection Agency

Direct: 202-564-3580

Cell: 202-365-8562

Pieh.Luseni@epa.gov

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Wade, Alexis[Wade.Alexis@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]
From: Levine, MaryEllen
Sent: Tue 10/22/2013 8:16:15 PM
Subject: RE: location for 4:15 call on 316(b)/ESA

We will call in so we can start now.

Mary Ellen

Mary Ellen Levine

Assistant General Counsel

Water Law Office

(202) 564-5487

Ariel Rios North Rm. 7510C

From: Stoner, Nancy
Sent: Tuesday, October 22, 2013 4:15 PM
To: Levine, MaryEllen; Neugeboren, Steven; Wade, Alexis; Witt, Richard
Subject: Re: location for 4:15 call on 316(b)/ESA

Sure -- come over

From: Levine, MaryEllen
Sent: Tuesday, October 22, 2013 3:52:06 PM
To: Neugeboren, Steven; Stoner, Nancy; Wade, Alexis; Witt, Richard
Subject: location for 4:15 call on 316(b)/ESA

Nancy – should Richard, Alexis and I come over to your office for the 4:15 meeting? Steve is going to be on the phone and we (Richard, Alexis and I) do not have a specific call in number for the meeting?

Alternatively, Richard, Alexis and I could just call from an office over here in OGC . . . .

Mary Ellen

Mary Ellen Levine

Assistant General Counsel

Water Law Office

(202) 564-5487

Ariel Rios North Rm. 7510C

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Kopocis, Ken
Sent: Tue 10/22/2013 4:03:16 PM
Subject: RE: 316B ESA

Ann Loomis of Dominion.

From: Stoner, Nancy
Sent: Tuesday, October 22, 2013 11:41 AM
To: Kopocis, Ken
Subject: Fw: 316B ESA

Who is Ann?

From: Feldt, Lisa
Sent: Tuesday, October 22, 2013 11:32:42 AM
To: Kopocis, Ken; Stoner, Nancy
Cc: Vaught, Laura; Goo, Michael
Subject: 316B ESA

Ken/Nancy, just left you vm on this. It may be helpful to listen to before meeting with Ann. Apologize up front especially to ken for long-winded message.

Lisa Feldt

Associate Deputy Administrator

Office of the Administrator

Environmental Protection Agency

office: 202-564-4711

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Neugeboren, Steven
Sent: Mon 10/21/2013 5:46:51 PM
Subject: RE: 316 (b) -- deliberative, atty-client

Nancy - is this a one on one or do you want staff?

-----Original Appointment-----
From: Stoner, Nancy
Sent: Monday, October 21, 2013 1:46 PM
To: Neugeboren, Steven
Subject: 316 (b) -- deliberative, atty-client
When: Tuesday, October 22, 2013 4:15 PM-4:45 PM (GMT-05:00) Eastern Time (US & Canada).
Where: Call Non-Responsive

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Shapiro, Mike[Shapiro.Mike@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Lape, Jeff[lape.jeff@epa.gov]; Best-Wong, Benita[Best-Wong.Benita@epa.gov]; Sawyers, Andrew[Sawyers.Andrew@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Grevatt, Peter[Grevatt.Peter@epa.gov]; Frace, Sheila[Frace.Sheila@epa.gov]; Bissonette, Eric[Bissonette.Eric@epa.gov]; Evans, David[Evans.David@epa.gov]
Cc: Telleen, Katherine[Telleen.Katherine@epa.gov]; Flaharty, Stephanie[Flaharty.Stephanie@epa.gov]; Zipf, Lynn[Zipf.Lynn@epa.gov]; Faller, Heidi[Faller.Heidi@epa.gov]; Peck, Gregory[Peck.Gregory@epa.gov]; Lousberg, Macara[Lousberg.Macara@epa.gov]; Evalenko, Sandy[Evalenko.Sandy@epa.gov]; Skane, Elizabeth[Skane.Elizabeth@epa.gov]; Ruf, Christine[Ruf.Christine@epa.gov]; Loop, Travis[Loop.Travis@epa.gov]; Scozzafava, MichaelE[Scozzafava.MichaelE@epa.gov]; Code, Tanya[Code.Tanya@epa.gov]; Ortiz, Agnes[Ortiz.Agnes@epa.gov]; Krieger, Andrew[Krieger.Andrew@epa.gov]; Lopez-Carbo, Maria[Lopez-Carbo.Maria@epa.gov]; Sanelli, Diane[Sanelli.Diane@epa.gov]; Peterson, Jeff[Peterson.Jeff@epa.gov]; Bathersfield, Nizanna[Bathersfield.Nizanna@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Nelson, Tomeka[Nelson.Tomeka@epa.gov]; Evalenko, Sandy[Evalenko.Sandy@epa.gov]
From: Evalenko, Sandy
Sent: Mon 10/21/2013 12:58:50 PM
Subject: 2-week review report
10.21.2013 OP Review Status Update and Planning.docx

Here's the latest 2-week report.

Sandy

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Penman, Crystal
Sent: Thur 10/17/2013 4:32:25 PM
Subject: RE: if 316(b) happens tomorrow (or even if it is rescheduled),

Will do.

From: Stoner, Nancy
Sent: Thursday, October 17, 2013 12:31 PM
To: Penman, Crystal
Subject: if 316(b) happens tomorrow (or even if it is rescheduled),

we should invite Betsy Southerland and Rob Wood to participate.

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Neugeboren, Steven
Sent: Thur 10/17/2013 3:48:18 PM
Subject: RE: 316B Discussion

Who is Kelley smith?

-----Original Appointment-----
From: Smith, Kelley
Sent: Thursday, October 17, 2013 11:34 AM
To: Stoner, Nancy; Kopocis, Ken; Garbow, Avi; Goo, Michael; Roberts, Martha; Feldt, Lisa; Neugeboren, Steven
Subject: 316B Discussion
When: Friday, October 18, 2013 1:00 PM-1:45 PM (GMT-05:00) Eastern Time (US & Canada).
Where: WJC North 3412A Call in: 866.299.3188 Code: Non-Responsive

CT: Kelley Smith

Call in: 866.299.3188
Code: Non-Responsive

Staff:

Lisa Feldt
Nancy Stoner
Ken Kopocis
Steve Neugeboren (for Avi Garbow who is out of the country)
Michael Goo

Optional:

Martha Roberts

Note: Kelley will open the call

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Feldt, Lisa
Sent: Thur 10/10/2013 2:27:23 PM
Subject: Read: 316(b) preamble and rule for your review

Your message

To: Feldt, Lisa
Subject: FW: 316(b) preamble and rule for your review
Sent: Thursday, October 10, 2013 10:26:27 AM (UTC-05:00) Eastern Time (US & Canada)

was read on Thursday, October 10, 2013 10:27:07 AM (UTC-05:00) Eastern Time (US & Canada).

DOC # 2

13 MISC 0334

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK
----------X

In re Stay of Certain Civil Cases Pending
the Restoration of Department of Justice Funding

----------X

ORDER

Upon the application of the United States Attorney for the Southern District of New York, in light of the lapse of funding to the United States Department of Justice, and to facilitate the management of the Court's docket, it is hereby ordered as follows:

(1) Absent other direction or order from the Court, all civil cases (other than civil forfeiture cases) in which the United States Attorney's Office for the Southern District of New York has appeared as counsel of record for the United States, its agencies, and/or its employees are hereby stayed until the business day after the President signs into law a budget appropriation that restores Department of Justice funding;

U.S. DISTRICT COURT
13 OCT 1 AM 9:44
S.D. OF N.Y.

(2) Absent other direction or order from the Court, all court deadlines, including scheduling order deadlines and seal deadlines in qui tam cases, in all civil cases (other than civil forfeiture cases) in which the United States Attorney's Office for the Southern District of New York has appeared as counsel of record for the United States, its agencies, and/or its employees are hereby tolled during the duration of the government shutdown and extended thereafter for a period of time equal to the number of calendar days between October 1, 2013, and the date the President signs into law a budget appropriation that restores Department of Justice funding;

(3) The United States Attorney's Office shall notify the Court immediately upon the restoration of Department of Justice funding.

SO ORDERED.

Loretta A. Preska

Loretta A. Preska
Chief Judge

Dated: New York, New York
October 1, 2013

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Mallory, Brenda
Sent: Thur 10/3/2013 7:45:55 PM
Subject: Read: 316(b) consultation and Ex. 5 - Deliberative settlement agreement deadline

Your message

To: Mallory, Brenda
Subject: FW: 316(b) consultation and Ex. 5 - Deliberative settlement agreement deadline
Sent: Thursday, October 03, 2013 3:4[illegible] (UTC-05:00) Eastern Time (US & Canada)

was read on Thursday, October 03, 2013 3:44:52 PM (UTC-05:00) Eastern Time (US & Canada).

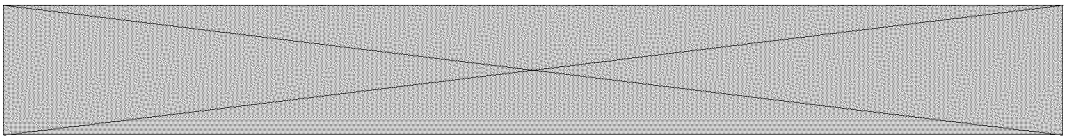
To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Garbow, Avi
Sent: Thur 10/3/2013 7:44:53 PM
Subject: Read: 316(b) consultation and Ex. 5 - Deliberative settlement agreement deadline

Your message

To: Garbow, Avi
Subject: FW: 316(b) consultation and Ex. 5 - Deliberative settlement agreement deadline
Sent: Thursday, October 03, 2013 3:40:24 PM (UTC-05:00) Eastern Time (US & Canada)

was read on Thursday, October 03, 2013 3:44:20 PM (UTC-05:00) Eastern Time (US & Canada).

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: E&E Publishing, LLC
Sent: Wed 10/2/2013 8:07:48 PM
Subject: October 2 -- E&ENews PM is ready



An E&E Publishing Service

E&ENews PM -- Wed., October 2, 2013 -- Read the full edition

1. GOVERNMENT SHUTDOWN: House GOP campaign team attacks 20 Dems who opposed stopgap bill to reopen parks

In the latest volley over the ongoing government shutdown, the campaign arm of House Republicans today is taking aim at 20 vulnerable Democrats after a stopgap measure to reopen national parks failed last night.

THIS AFTERNOON'S STORIES

2. GOVERNMENT SHUTDOWN: As residents swarm closed parks, Park Police say it's 'foolish' to stop them

3. YUCCA MOUNTAIN: More funding needed to complete repository permit review -- NRC staff

4. UTILITIES: States do shoddy permitting without EPA requirements for cooling water intakes -- enviros

5. BIOFUELS: Oil industry poll finds consumers concerned about ethanol

6. ENDANGERED SPECIES: Rare Ala. fish that lives near explosive growth gets new protected status

7. ADVOCACY: Hispanic leaders form sportsmen's group to urge public lands conservation

E&ETV's OnPoint

8. CLIMATE: Quebec's Environment Minister Blanchet discusses impact of EPA regulations on carbon markets

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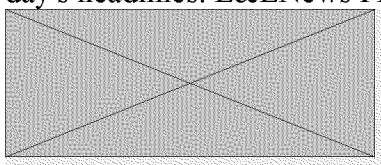

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www.eenews.net

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To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Kopocis, Ken
Sent: Tue 10/1/2013 4:36:24 PM
Subject: Read: 316(b) preamble and rule for your review

Your message

To: Kopocis, Ken
Subject: FW: 316(b) preamble and rule for your review
Sent: Tuesday, October 01, 2013 12:28:36 PM (UTC-05:00) Eastern Time (US & Canada)

was read on Tuesday, October 01, 2013 12:35:21 PM (UTC-05:00) Eastern Time (US & Canada).

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Lape, Jeff
Sent: Tue 10/1/2013 4:16:19 PM
Subject: Read: 316(b) consultation

Your message

To: Lape, Jeff
Subject: FW: 316(b) consultation
Sent: Tuesday, October 01, 2013 12:14:58 PM (UTC-05:00) Eastern Time (US & Canada)

was read on Tuesday, October 01, 2013 12:19:35 PM (UTC-05:00) Eastern Time (US & Canada).

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Kopocis, Ken
Sent: Tue 10/1/2013 4:11:03 PM
Subject: Read: 316(b) consultation

Your message

To: Kopocis, Ken
Subject: FW: 316(b) consultation
Sent: Tuesday, October 01, 2013 12:10:07 PM (UTC-05:00) Eastern Time (US & Canada)

was read on Tuesday, October 01, 2013 12:10:41 PM (UTC-05:00) Eastern Time (US & Canada).

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Shapiro, Mike[Shapiro.Mike@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Keehner, Denise[Keehner.Denise@epa.gov]; Lape, Jeff[lape.jeff@epa.gov]; Hill, Randy[Hill.Randy@epa.gov]; Best-Wong, Benita[Best-Wong.Benita@epa.gov]; Sawyers, Andrew[Sawyers.Andrew@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Grevatt, Peter[Grevatt.Peter@epa.gov]
Cc: Telleen, Katherine[Telleen.Katherine@epa.gov]; Flaharty, Stephanie[Flaharty.Stephanie@epa.gov]; Zipf, Lynn[Zipf.Lynn@epa.gov]; Faller, Heidi[Faller.Heidi@epa.gov]; Peck, Gregory[Peck.Gregory@epa.gov]; Lousberg, Macara[Lousberg.Macara@epa.gov]; Evalenko, Sandy[Evalenko.Sandy@epa.gov]; Skane, Elizabeth[Skane.Elizabeth@epa.gov]; Ruf, Christine[Ruf.Christine@epa.gov]; Loop, Travis[Loop.Travis@epa.gov]; Scozzafava, MichaelE[Scozzafava.MichaelE@epa.gov]; Code, Tanya[Code.Tanya@epa.gov]; Ortiz, Agnes[Ortiz.Agnes@epa.gov]; Krieger, Andrew[Krieger.Andrew@epa.gov]; Lopez-Carbo, Maria[Lopez-Carbo.Maria@epa.gov]; Sanelli, Diane[Sanelli.Diane@epa.gov]; Peterson, Jeff[Peterson.Jeff@epa.gov]; Bathersfield, Nizanna[Bathersfield.Nizanna@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]
From: Nelson, Tomeka
Sent: Fri 3/22/2013 6:31:36 PM
Subject: 2-week review report
3.22.2013.OP Review Status Update and Planning.docx

To: Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Penman, Crystal
Sent: Fri 3/22/2013 4:21:50 PM
Subject: Reminder 316(b) meeting now @ 1:15pm- 2:00pm ARN 3500 (Michael Goo's conference room)

Crystal Penman

EPA

1201 Constitution Ave, NW

Washington, DC 20004

202-564-3318

Penman.Crystal@EPA.gov

To: Wood, Robert[Wood.Robert@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Sussman, Bob[Sussman.Bob@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Goo, Michael[Goo.Michael@epa.gov]; Barron, Alex[Barron.Alex@epa.gov]
Cc: Maddox, Donald[Maddox.Donald@epa.gov]
From: Penman, Crystal
Sent: Fri 3/22/2013 4:17:59 PM
Subject: 316(b)

When: Friday, March 22, 2013 1:15 PM-2:00 PM (GMT-05:00) Eastern Time (US & Canada).
Where: ARN 3500

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

To: Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Goo, Michael
Sent: Fri 3/22/2013 1:36:42 PM
Subject: Re 316b meeting

My original conception was op (me and alex paull) and ow. (Ken nancy elllen rob and Julie)

Then someone in ow started forwarding the invite adding 4 ogc attorneys: sussman got in the act

I canceled the meeting because I could see where it was headed.

I'm ok to do the 145 and add sussman and avi and possibly one ogc person.

Any more and you get the drift.

Thanks for your help. ÿ

To: Garbow, Avi[Garbow.Avi@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Sussman, Bob[Sussman.Bob@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Barron, Alex[Barron.Alex@epa.gov]
Cc: Penman, Crystal[Penman.Crystal@epa.gov]; Maddox, Donald[Maddox.Donald@epa.gov]; Patrick, Monique[Patrick.Monique@epa.gov]
From: Poole, Jacqueline
Sent: Wed 3/20/2013 2:56:23 PM
Subject: 316 (b) Politicals Only

When: Friday, March 22, 2013 4:00 PM-4:45 PM (GMT-05:00) Eastern Time (US & Canada).
Where: DCRoomARN3500/OPEI

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]
Cc: Barron, Alex[Barron.Alex@epa.gov]; Balserak, Paul[Balserak.Paul@epa.gov]; Kime, Robin[Kime.Robin@epa.gov]; Poole, Jacqueline[Poole.Jacqueline@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Levine, MaryEllen[levine.maryellen@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]
From: Poole, Jacqueline
Sent: Wed 3/20/2013 1:53:41 PM
Subject: Canceled: 316 (B)

When: Friday, March 22, 2013 10:00 AM-10:45 AM (GMT-05:00) Eastern Time (US & Canada).
Where: DCRoomARN3500/OPEI

Note: The GMT offset above does not reflect daylight saving time adjustments.

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To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Shapiro, Mike[Shapiro.Mike@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Loop, Travis[Loop.Travis@epa.gov]
Cc: Bathersfield, Nizanna[Bathersfield.Nizanna@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Cash, Debbie[Cash.Debbie@epa.gov]
From: Altieri, Sonia
Sent: Wed 3/20/2013 12:38:18 AM
Subject: OW Industry Stakeholder Meeting - March 20, 9:00 a.m.
Industry agenda_mar2013.docx
INTERNAL.Industry agenda_mar2013.docx

Nancy,

Attached are the most recent agenda and the annotated version. Topics were added from the last version. Please let me know if you have any questions. Best, Sonia

To: Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Scozzafava, MichaelE[Scozzafava.MichaelE@epa.gov]
Cc: Penman, Crystal[Penman.Crystal@epa.gov]; Cash, Debbie[Cash.Debbie@epa.gov]
From: Bathersfield, Nizanna
Sent: Tue 3/19/2013 8:22:35 PM
Subject: Agenda for OW & Senior Policy Counsel Weekly
OW and Senior Policy Counsel Weekly_3_20_13.docx

Hi all-

Here are the items that I have for tomorrow's OW and Senior Policy Weekly. Please let me know if you have any additions. The agenda is attached to this message. I will bring copies to the meeting.

1. 316 (b)/ Stated Preference Survey
2.
3. **Ex. 5 - Deliberative**

****

Nizanna Bathersfield

Special Assistant

Office of Water

U.S. Environmental Protection Agency

1201 Constitution Avenue

Rm. 3311

Washington, DC 20004

Phone: 202.564.2258

****

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From: Altieri, Sonia
Sent: Tue 3/19/2013 6:03:34 PM
Subject: Industry Stakeholder Meeting - March 20, 9:00 a.m.
Industry agenda_mar2013.docx

Attached is the agenda for tomorrow's meeting. We look forward to seeing you tomorrow!

From: Altieri, Sonia [mailto:Altieri.Sonia@epa.gov]
Sent: Tuesday, February 19, 2013 5:33 PM
Subject: Next OW Industry Stakeholder Meeting is Wednesday, March 20, 9:00 a.m.

Your next coffee with the Office of Water is scheduled for Wednesday, March 20, 2013, 9:00 a.m. - 10:00 a.m. in EPA's Office of Water Conference Room 3233, EPA East Building, 1201 Constitution Avenue, N.W. The entrance to the Building is on Constitution Avenue closest to 12th Street, directly across from the National Museum of American History.

Please submit your agenda items to me by Monday, March 4, 2013. It's very helpful when the agenda items are specific and detailed as possible (including questions).

Also, please plan to arrive by 8:45 a.m. to allow enough time to get through security. After you have signed in and gone through security, please have the guard call 564-5700 for an escort.

Please let us know if you have any questions.

Best wishes,

Sonia Altieri
Director of Outreach
Office of Water
U.S. Environmental Protection Agency (4101M)
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Tel. (202) 564-0243

To: Mccarthy, Gina[McCarthy.Gina@epa.gov]; Kurlansky, Ellen[Kurlansky.Ellen@epa.gov]
Cc: Hewitt, Julie[Hewitt.Julie@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Penman, Crystal
Sent: Fri 3/15/2013 8:07:46 PM
Subject: FW: Gina McC would like to see 316b preamble/reg over the weekend and is leaving by 4:15
EO12866_CoolingWaterIntakes 2040-AE95 Final FRN 20130315.docx
316b EF Draft Reg Lang 20130220_clean (2) rtw comments 3 15 13.docx

I am sending this on Nancy Stoner's behalf given the time sensitivity of this request.

From: Hewitt, Julie
Sent: Friday, March 15, 2013 3:58 PM
To: Stoner, Nancy
Cc: Southerland, Elizabeth; Wood, Robert
Subject: Gina McC would like to see 316b preamble/reg over the weekend and is leaving by 4:15

We think this should come from you, so here are the documents; Rob and I are coming to join you for the Judith Enck call shortly.

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Shapiro, Mike[Shapiro.Mike@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Keehner, Denise[Keehner.Denise@epa.gov]; Lape, Jeff[lape.jeff@epa.gov]; Hill, Randy[Hill.Randy@epa.gov]; Best-Wong, Benita[Best-Wong.Benita@epa.gov]; Sawyers, Andrew[Sawyers.Andrew@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Grevatt, Peter[Grevatt.Peter@epa.gov]
Cc: Telleen, Katherine[Telleen.Katherine@epa.gov]; Flaharty, Stephanie[Flaharty.Stephanie@epa.gov]; Zipf, Lynn[Zipf.Lynn@epa.gov]; Faller, Heidi[Faller.Heidi@epa.gov]; Peck, Gregory[Peck.Gregory@epa.gov]; Lousberg, Macara[Lousberg.Macara@epa.gov]; Evalenko, Sandy[Evalenko.Sandy@epa.gov]; Skane, Elizabeth[Skane.Elizabeth@epa.gov]; Ruf, Christine[Ruf.Christine@epa.gov]; Loop, Travis[Loop.Travis@epa.gov]; Scozzafava, MichaelE[Scozzafava.MichaelE@epa.gov]; Code, Tanya[Code.Tanya@epa.gov]; Ortiz, Agnes[Ortiz.Agnes@epa.gov]; Krieger, Andrew[Krieger.Andrew@epa.gov]; Lopez-Carbo, Maria[Lopez-Carbo.Maria@epa.gov]; Sanelli, Diane[Sanelli.Diane@epa.gov]; Peterson, Jeff[Peterson.Jeff@epa.gov]; Bathersfield, Nizanna[Bathersfield.Nizanna@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]
From: Nelson, Tomeka
Sent: Fri 3/15/2013 7:35:07 PM
Subject: 2-week review report
3.15.2013.OP Review Status Update and Planning.docx

To: Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Scozzafava, MichaelE[Scozzafava.MichaelE@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Bathersfield, Nizanna[Bathersfield.Nizanna@epa.gov]
From: Penman, Crystal
Sent: Fri 3/15/2013 1:01:11 PM
Subject: FW: OW & Senior Policy Counsel Weekly
OW and Senior Policy Counsel Weekly_3_13_13.docx

When: Friday, March 15, 2013 3:30 PM-4:00 PM (GMT-05:00) Eastern Time (US & Canada).
Where: ARN 3309

Note: The GMT offset above does not reflect daylight saving time adjustments.

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-----Original Appointment-----
From: Maddox, Donald **On Behalf Of** Sussman, Bob
Sent: Wednesday, January 09, 2013 8:55 AM
To: Sussman, Bob; Gilinsky, Ellen; Kopocis, Ken; Scozzafava, MichaelE; Stoner, Nancy; Bathersfield, Nizanna
Subject: OW & Senior Policy Counsel Weekly
When: Friday, March 15, 2013 3:30 PM-4:00 PM (GMT-05:00) Eastern Time (US & Canada).
Where: ARN 3309

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Shapiro, Mike[Shapiro.Mike@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Lape, Jeff[lape.jeff@epa.gov]; Best-Wong, Benita[Best-Wong.Benita@epa.gov]; Sawyers, Andrew[Sawyers.Andrew@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Grevatt, Peter[Grevatt.Peter@epa.gov]; Frace, Sheila[Frace.Sheila@epa.gov]; Bissonette, Eric[Bissonette.Eric@epa.gov]; Evans, David[Evans.David@epa.gov]
Cc: Telleen, Katherine[Telleen.Katherine@epa.gov]; Flaharty, Stephanie[Flaharty.Stephanie@epa.gov]; Zipf, Lynn[Zipf.Lynn@epa.gov]; Faller, Heidi[Faller.Heidi@epa.gov]; Peck, Gregory[Peck.Gregory@epa.gov]; Lousberg, Macara[Lousberg.Macara@epa.gov]; Evalenko, Sandy[Evalenko.Sandy@epa.gov]; Skane, Elizabeth[Skane.Elizabeth@epa.gov]; Ruf, Christine[Ruf.Christine@epa.gov]; Loop, Travis[Loop.Travis@epa.gov]; Scozzafava, MichaelE[Scozzafava.MichaelE@epa.gov]; Code, Tanya[Code.Tanya@epa.gov]; Ortiz, Agnes[Ortiz.Agnes@epa.gov]; Krieger, Andrew[Krieger.Andrew@epa.gov]; Lopez-Carbo, Maria[Lopez-Carbo.Maria@epa.gov]; Sanelli, Diane[Sanelli.Diane@epa.gov]; Peterson, Jeff[Peterson.Jeff@epa.gov]; Bathersfield, Nizanna[Bathersfield.Nizanna@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Nelson, Tomeka[Nelson.Tomeka@epa.gov]
From: Nelson, Tomeka
Sent: Thur 9/26/2013 7:21:50 PM
Subject: 2-week review report
9.26.2013 OP Review Status Update and Planning.docx

Tomeka Nelson

OW Water Policy Staff (Detail)

202-566-1291

3226C - WJC East

To: Feldt, Lisa[Feldt.Lisa@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Goo, Michael[Goo.Michael@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Smith, Kelley[Smith.Kelley@epa.gov]
From: Smith, Kelley
Sent: Wed 9/18/2013 9:00:17 PM
Subject: 316B-ESA

I will open the line for this meeting shortly, but this meeting will start a few min behind schedule.ÿ

To: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]
Cc: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Kopocis, Ken
Sent: Wed 9/18/2013 3:51:10 PM
Subject: FW: Follow-up to September 5 316(b) Meeting
316b McCarthy Letter 091713 final.pdf

Here is the signed copy of the letter.

From: Bozek, Richard [mailto:RBozek@eei.org]
Sent: Wednesday, September 18, 2013 11:17 AM
To: Kopocis, Ken
Subject: FW: Follow-up to September 5 316(b) Meeting

Ken:

In case you haven't already seen this. If you have any questions, don't hesitate to call. Thank you.

From: Kuhn, Thomas
Sent: Tuesday, September 17, 2013 5:26 PM
To: McCarthy.gina@Epa.gov
Cc: perciasepe.bob@epa.gov
Subject: Follow-up to September 5 316(b) Meeting

Gina: Thank you for taking the time to meet with a group of our CEO's regarding the Clean Water Act § 316(b) cooling water intake structures rule. Attached is a letter outlining our perspective on several of the most critical remaining issues. If you have any questions, please contact me or have your staff contact Quin Shea (qshea@eei.org; 202-508-5027) or Rich Bozek (rbozek@eei.org; 202-508-5641).

701 Pennsylvania Avenue, N.W. | Washington, D.C. 20004-2696 | 202.508.5000 | www.eei.org

Power by Association℠

Edison Electric Institute

September 17, 2013

The Honorable Regina A. McCarthy
Administrator
U.S. Environmental Protection Agency
William Jefferson Clinton Federal Building
1200 Pennsylvania Ave., NW
Washington, DC 20460-0001

Dear Administrator McCarthy:

On behalf of the Board of Directors and member companies of the Edison Electric Institute (EEI), as well as our partners at the Nuclear Energy Institute (NEI), Clean Energy Group (CEG), and Utility Water Act Group (UWAG), we want to extend our sincere thanks to you and your team for the productive meeting on September 5 regarding industry issues with the Clean Water Act (CWA) § 316(b) cooling water intake structures rulemaking for existing facilities. As you know, this rulemaking, which will impact almost half of the existing U.S. generation capacity, is expected to be completed by November 4. We believe the rule can be designed to achieve important environmental benefits with cost-effective technology solutions, while avoiding inappropriate energy and reliability impacts and without imposing unnecessary costs on consumers.

Our September 5 meeting demonstrated that a constructive relationship among you, your staff, and the electric power sector can be mutually beneficial in charting a path toward environmentally protective and cost-effective regulation. Maintaining an open dialogue leads to more reasonable results, as already evidenced by the flexibility we understand EPA has incorporated into the draft final rule based on the comments addressing the Impingement Mortality Notice of Data Availability published in 2012.

During our meeting, you and your team asked for feedback on several issues of profound importance to the electric power industry. We are writing to address your questions and to offer our recommendations on how best to craft an acceptable final rule.

Use of Cost-Benefit Analysis as a Basis for Best Technology Available (BTA) Selection for Entrainment

EPA's proposed BTA standard for entrainment establishes a process for site-specific determination of entrainment requirements at individual facilities. This reflects EPA's determination that there is no single technology that qualifies as entrainment BTA for all facilities nationwide. EPA's proposal appropriately requires permitting authorities to consider nine factors, including costs and benefits, when making a BTA determination.

We understand that EPA's most recent thinking alters this requirement by making consideration of costs and benefits in BTA determinations optional. If cost/benefit balancing is optional, then

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a permitting authority could require a cooling tower retrofit simply because it is technically feasible regardless of the huge costs and questionable benefits created by reducing impacts to life stages that typically have very high natural mortality rates. For many plants, the only realistic option would be either to install towers at a very high cost to the customers or shutter the facility.

We support site-specific entrainment BTA determinations. However, EPA should require permitting authorities to consider all nine factors, including costs and benefits, set out in the proposed rule in making entrainment decisions.

Stated Preference Survey (Willingness-to-Pay)

We understand that EPA will not rely on its national and regional stated preference survey results to justify the rulemaking, though EPA is continuing to evaluate the usefulness of the methodology to measure non-use benefits.

Use of Survey Results

For the same reasons that EPA is not using the survey results to justify the rulemaking, EPA should make clear that states cannot rely on the results in evaluating benefits in site-specific permitting decisions. There has not been any determination that the results are scientifically sound.

EPA can address this concern by stating explicitly that: (1) EPA's stated preference survey and its results have no relevance to any future application of the § 316(b) rule, including in permitting decisions and future guidance or other decisions by EPA or state permit writers; and (2) the results of EPA's national and regionally conducted survey should not be used to quantify the non-use benefits for a site-specific decision.

Use of Survey Methodology

We are also concerned about the inappropriate use of the willingness-to-pay (WTP) survey methodology in the § 316(b) context, especially since both the proposed rule and, as we understand it, the draft final rule implicitly require permittees to use this controversial methodology. For instance, as discussed in 40 C.F.R. § 125.98(e)(3), the proposed rule requires states to consider non-use benefits by requiring permitting directors to determine quantified and qualitative social benefits and social costs of available entrainment technologies, **including ecological benefits** and benefits to any threatened or endangered species. The proposed rule also requires at 40 C.F.R. § 122.21(r)(11) that the permittee conduct a *Benefits Valuation Study* that is to identify the "basis for any monetized values … assigned to changes in commercial and recreational species, forage fish, and shellfish, and to any other ecosystem or non-use benefits." It is our understanding that the draft final rule may go even further by precluding permitting directors from rejecting an entrainment technology based on the comparison of the costs and benefits if the information on benefits is inadequate, which EPA has suggested will be true if non-use benefits are not quantified. Further, it is our understanding that the draft final rule also incorporates the principle of WTP into the definition of social benefits.

Given EPA's decision to seek further review of its own WTP survey, EPA should not include any language in the final rule that might be interpreted to encourage or require states to pursue the use of such surveys, which are likely to inflate benefits and skew decision-making toward

closed-cycle cooling, in conflict with the Agency's own recognition that closed-cycle cooling is not BTA. Instead, the treatment of non-use benefits should be left to the states' discretion.

EPA can address our concerns by stating explicitly that quantification of non-use benefits is not required in site-specific decisions by state permitting authorities.

Definition of New and Existing Units at Existing Facilities

In what would be a significant change in definition, it is our understanding that EPA intends to treat units that replace the turbine and the condenser as "new units," and to require these units to install closed-cycle cooling except where the permittee has installed a high-efficiency unit. This would be true even where the modification or replacement results in no change in the capacity of an existing intake structure. However, EPA's authority under § 316(b) extends only to the *cooling water intake structure.* In the absence of a significant modification to the existing cooling water intake structure (beyond those undertaken expressly to comply with the impingement mortality and entrainment requirements of this final regulation), there is no statutory basis for regulating a modified or replacement unit any differently than an original or unmodified unit. Such a change in the definition of existing units is analogous to EPA creating a first of its kind new source review program for existing cooling water intake structures under the Clean Water Act without the legislative authority to do so. We believe that "repowered, rebuilt and replaced" units should be subject to the same impingement mortality and entrainment requirements as the rule applies to other units at existing facilities. Imposing a "cooling tower only" requirement on such units would be a disincentive to upgrade or repower facilities, which otherwise would lead to environmental benefits.

On a separate but related issue, uprates of existing nuclear facilities should not artificially be classified as "new units," thereby imposing a cooling tower requirement. Construction is presently underway at several of the nation's nuclear plants to install equipment and to increase the emissions-free electricity from these plants. These uprates have been approved by the Nuclear Regulatory Commission and involve billions of dollars of expenses that did not anticipate that the units would have to install closed-cycle cooling. The final rule language would jeopardize these current uprate projects and prevent future uprates.

The electric power sector strongly believes that EPA should define a new unit in the final rule the same way it did in its proposal—by expressly excluding "repowered, rebuilt or replaced" units from being defined as "new" units. The rule should also specify that nuclear plant uprates do not constitute a "new unit," and, therefore, do not trigger a requirement to install cooling towers. Facilities will need to replace turbines and/or condensers or component parts during the expected life of the facility. Requiring cooling towers upon replacement of these parts would prematurely close facilities and create disincentives to investments that otherwise would lead to environmental benefits.

Definition of Closed-Cycle Cooling and Waters of the United States (WOUS)

EPA has asked whether industry would find workable a rule that precludes impoundments classified as WOUS from qualifying as part of a closed-cycle cooling system as long as the Agency assures that it will not use this rule or revised WOUS guidance or rules to change the status quo as to the current exemption for waste treatment systems.

We do not think that approach would meet the concerns we discussed because EPA has not consistently recognized that waste treatment systems lawfully created in or by impounding waters of the United States are not themselves WOUS. Although EPA has acknowledged in regulations and guidance governing EPA's jurisdiction that waste treatment systems created in WOUS before passage of the CWA, and waste treatment systems lawfully created after passage of the CWA implementing regulations should not be disqualified from the waste treatment exemption, in practice the Regions have sometimes failed to abide by this policy. As a result, relying solely on the waste treatment system exemption could preclude the continued use of some impoundments specifically designed primarily for closed-cycle cooling. Such a result would be unfair, costly, and environmentally unnecessary.

In addition to maintaining the current regulatory exemption for waste treatment systems, EPA should specify that cooling ponds or impoundments lawfully created principally to serve as part of a closed-cycle cooling system can continue to serve that purpose and will satisfy § 316(b) for both impingement and entrainment.

Endangered Species Act and Section 7 Consultation

EPA and the U.S. Fish and Wildlife Service and National Marine Fisheries Service (Services) have now commenced formal consultation under Section 7 of the Endangered Species Act (ESA). In our September 5 meeting, EPA acknowledged that the consultation process should not blur the lines between the statutory authorities of the ESA and the CWA, and, further, that no new regulatory authority is envisioned for the Services.

It is our understanding, however, that EPA has added provisions in the draft final rule requiring permittees to submit permit application materials directly to the Services, and to coordinate directly with the Services for purposes of determining whether any more stringent impingement and entrainment control requirements are warranted at individual facilities. The provisions reportedly require States to impose any more stringent requirements deemed necessary by the Services.

However, EPA should remove from the rule any provisions inserting the Services directly into the § 316(b) compliance determination process. Neither the CWA nor the ESA provides the Services with any direct role in the National Pollutant Discharge Elimination System (NPDES) permitting process. Although the Services, like other federal and state agencies, are entitled to comment on draft permits, neither statute gives them any role in setting or implementing § 316(b) or determining NPDES permit provisions. The Services have ample authority to protect their interests in permit-based § 316(b) implementation by following customary procedures under the CWA and by using their enforcement authorities. Nothing further is authorized or required.

Low Capacity Utilization Units

EPA has recognized in other regulations that some low capacity utilization units (often peakers) are needed for grid reliability and local load balancing needs, and that such units are unable to economically bear the same compliance costs as baseload and other higher capacity units. Given how infrequently such facilities operate, there is little risk that any short-term impact from such units would have a material and adverse long-term impact on the environment. Therefore, EPA should specify a capacity factor or flow rate below which the final rule's requirements will not

FOIA 2014-009508 Interim 2

apply, thus recognizing the limitations of these facilities to cost-effectively install impingement and entrainment controls.

EPA should adopt a provision similar to that found in the Mercury and Air Toxics Standards (MATS) rule, which provides a limited use subcategory for certain facilities with an annual capacity factor limit of no more than 8 percent measured over a 24-month block. Alternatively, a flow rate limit of approximately 15 percent of the maximum possible withdrawal volume on an annual basis could be used. It is vital that such a provision apply to units operated for grid reliability reasons, such as units dispatched to meet seasonal peak demand and situations where fuel flexibility is necessary to offset supply restrictions in a specific geographic region. Limiting such a provision to only units used for emergency purposes would not adequately address the fundamental need to allow peaking units to continue to operate.

Again, we thank you for your continued focus on this most important utility issue and for the prior work to address a number of our concerns. We look forward to working with you and your team to satisfactorily address the remaining issues and ensure that EPA promulgates a reasonable and environmentally protective final regulation.

Sincerely,

Michael W. Yackira
President & CEO, NV Energy
EEI Chair

Lewis Hay, III
Executive Chairman, NextEra Energy, Inc.
Immediate Past EEI Chair

Thomas F. Farrell
Chairman, President & CEO
Dominion

Christopher M. Crane
President & CEO, Exelon Corp.
316(b) Issue Leader

Gerry Anderson
Chairman, President & CEO
DTE Energy Company
EEI Policy Committee on Environment Co-Chair

Ralph Izzo
Chairman, President & CEO
Public Service Enterprise Group, Inc.
EEI Policy Committee on Environment Co-Chair

cc: The Hon. Robert Perciasepe, EPA

ED_000110PST_00004206-00005

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]
Cc: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Smith, Kelley[Smith.Kelley@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]
From: Wood, Robert
Sent: Tue 9/17/2013 10:52:53 PM
Subject: Re: 316B-ESA

I'll make 8 or 5.

Robert Wood
Director,
Engineering and Analysis Division
202-566-1822

From: Stoner, Nancy
Sent: Tuesday, September 17, 2013 6:14:32 PM
To: Feldt, Lisa; Kopocis, Ken; Gilinsky, Ellen
Cc: Wood, Robert; Southerland, Elizabeth; Smith, Kelley; Penman, Crystal
Subject: RE: 316B-ESA

Sounds good – adding Crystal

From: Feldt, Lisa
Sent: Tuesday, September 17, 2013 6:13 PM
To: Stoner, Nancy; Kopocis, Ken; Gilinsky, Ellen
Cc: Wood, Robert; Southerland, Elizabeth; Smith, Kelley
Subject: RE: 316B-ESA

It might be as quick as 15 minutes but I want to make sure I give Rob and Betsy time to get clarity here. Maybe we can set it up for 30 minutes with goal of completing in 15 and then if Rob and/or Betsy need more time, I can continue with them. I'm sensitive to everyones' time so I suggest it be one of you (Nancy/Ken/Ellen) and Rob/Betsy. If this sounds like a plan, Kelley will set up. Kelley if this does get scheduled, please ask Martha Roberts and Michael Goo.

Lisa Feldt

Associate Deputy Administrator

Office of the Administrator

Environmental Protection Agency

office: 202-564-4711

From: Stoner, Nancy
Sent: Tuesday, September 17, 2013 6:05 PM
To: Feldt, Lisa; Kopocis, Ken; Gilinsky, Ellen
Cc: Wood, Robert; Southerland, Elizabeth; Smith, Kelley
Subject: RE: 316B-ESA

If it is a short meeting, I can do 5.

From: Feldt, Lisa
Sent: Tuesday, September 17, 2013 6:03 PM
To: Stoner, Nancy; Kopocis, Ken; Gilinsky, Ellen
Cc: Wood, Robert; Southerland, Elizabeth; Smith, Kelley
Subject: 316B-ESA

Per a request of a few of you after the meeting yesterday, I talked with Bob P to try to get a bit more clarity on next steps. It would be hard to communicate this through e-mail so I would like to chat with a few of you. Unfortunately all of our calendars are probably tight but I could do 8 to 8:30 tomorrow of at 5. Just let me know

Lisa Feldt

Associate Deputy Administrator

Office of the Administrator

Environmental Protection Agency

office: 202-564-4711

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]
Cc: Wood, Robert[Wood.Robert@epa.gov]; Smith, Kelley[Smith.Kelley@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]
From: Southerland, Elizabeth
Sent: Tue 9/17/2013 10:21:59 PM
Subject: Re: 316B-ESA

I will also send you a draft note on next steps tomorrow morning.

From: Stoner, Nancy
Sent: Tuesday, September 17, 2013 6:14:32 PM
To: Feldt, Lisa; Kopocis, Ken; Gilinsky, Ellen
Cc: Wood, Robert; Southerland, Elizabeth; Smith, Kelley; Penman, Crystal
Subject: RE: 316B-ESA

Sounds good – adding Crystal

From: Feldt, Lisa
Sent: Tuesday, September 17, 2013 6:13 PM
To: Stoner, Nancy; Kopocis, Ken; Gilinsky, Ellen
Cc: Wood, Robert; Southerland, Elizabeth; Smith, Kelley
Subject: RE: 316B-ESA

It might be as quick as 15 minutes but I want to make sure I give Rob and Betsy time to get clarity here. Maybe we can set it up for 30 minutes with goal of completing in 15 and then if Rob and/or Betsy need more time, I can continue with them. I'm sensitive to everyones' time so I suggest it be one of you (Nancy/Ken/Ellen) and Rob/Betsy. If this sounds like a plan, Kelley will set up. Kelley if this does get scheduled, please ask Martha Roberts and Michael Goo.

Lisa Feldt

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Office of the Administrator

Environmental Protection Agency

office: 202-564-4711

From: Stoner, Nancy
Sent: Tuesday, September 17, 2013 6:05 PM
To: Feldt, Lisa; Kopocis, Ken; Gilinsky, Ellen
Cc: Wood, Robert; Southerland, Elizabeth; Smith, Kelley
Subject: RE: 316B-ESA

If it is a short meeting, I can do 5.

From: Feldt, Lisa
Sent: Tuesday, September 17, 2013 6:03 PM
To: Stoner, Nancy; Kopocis, Ken; Gilinsky, Ellen
Cc: Wood, Robert; Southerland, Elizabeth; Smith, Kelley
Subject: 316B-ESA

Per a request of a few of you after the meeting yesterday, I talked with Bob P to try to get a bit more clarity on next steps. It would be hard to communicate this through e-mail so I would like to chat with a few of you. Unfortunately all of our calendars are probably tight but I could do 8 to 8:30 tomorrow of at 5. Just let me know

Lisa Feldt

Associate Deputy Administrator

Office of the Administrator

Environmental Protection Agency

office: 202-564-4711

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]
Cc: Wood, Robert[Wood.Robert@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Smith, Kelley[Smith.Kelley@epa.gov]
From: Feldt, Lisa
Sent: Tue 9/17/2013 10:12:44 PM
Subject: RE: 316B-ESA

It might be as quick as 15 minutes but I want to make sure I give Rob and Betsy time to get clarity here. Maybe we can set it up for 30 minutes with goal of completing in 15 and then if Rob and/or Betsy need more time, I can continue with them. I'm sensitive to everyones' time so I suggest it be one of you (Nancy/Ken/Ellen) and Rob/Betsy. If this sounds like a plan, Kelley will set up. Kelley if this does get scheduled, please ask Martha Roberts and Michael Goo.

Lisa Feldt

Associate Deputy Administrator

Office of the Administrator

Environmental Protection Agency

office: 202-564-4711

From: Stoner, Nancy
Sent: Tuesday, September 17, 2013 6:05 PM
To: Feldt, Lisa; Kopocis, Ken; Gilinsky, Ellen
Cc: Wood, Robert; Southerland, Elizabeth; Smith, Kelley
Subject: RE: 316B-ESA

If it is a short meeting, I can do 5.

From: Feldt, Lisa
Sent: Tuesday, September 17, 2013 6:03 PM
To: Stoner, Nancy; Kopocis, Ken; Gilinsky, Ellen
Cc: Wood, Robert; Southerland, Elizabeth; Smith, Kelley
Subject: 316B-ESA

Per a request of a few of you after the meeting yesterday, I talked with Bob P to try to get a bit more clarity on next steps. It would be hard to communicate this through e-mail so I would like to chat with a few of you. Unfortunately all of our calendars are probably tight but I could do 8 to 8:30 tomorrow of at 5. Just let me know

Lisa Feldt

Associate Deputy Administrator

Office of the Administrator

Environmental Protection Agency

office: 202-564-4711

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]
Cc: Wood, Robert[Wood.Robert@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Smith, Kelley[Smith.Kelley@epa.gov]
From: Feldt, Lisa
Sent: Tue 9/17/2013 10:03:24 PM
Subject: 316B-ESA

Per a request of a few of you after the meeting yesterday, I talked with Bob P to try to get a bit more clarity on next steps. It would be hard to communicate this through e-mail so I would like to chat with a few of you. Unfortunately all of our calendars are probably tight but I could do 8 to 8:30 tomorrow of at 5. Just let me know

Lisa Feldt

Associate Deputy Administrator

Office of the Administrator

Environmental Protection Agency

office: 202-564-4711

To: Sawyers, Andrew[Sawyers.Andrew@epa.gov]; Grevatt, Peter[Grevatt.Peter@epa.gov]; Burneson, Eric[Burneson.Eric@epa.gov]; Downing, Donna[Downing.Donna@epa.gov]; Lape, Jeff[lape.jeff@epa.gov]; Shapiro, Mike[Shapiro.Mike@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Fontaine, Tim[Fontaine.Tim@epa.gov]; Frithsen, Jeff[Frithsen.Jeff@epa.gov]
Cc: Loop, Travis[Loop.Travis@epa.gov]; Achimore, Ian[Achimore.Ian@epa.gov]; Faller, Heidi[Faller.Heidi@epa.gov]; Skane, Elizabeth[Skane.Elizabeth@epa.gov]; Lopez-Carbo, Maria[Lopez-Carbo.Maria@epa.gov]
From: Lousberg, Macara
Sent: Tue 9/17/2013 2:20:39 PM
Subject: Final annotated agenda for tomorrow's Industry Stakeholder coffee
Industry annotated agenda_September 18.2013.docx

Sharing the final annotated (internal) agenda for tomorrow's 9:00am coffee with the industry stakeholder group. If you have any questions please let me know.

Macara

Industry Stakeholder Coffee

Wednesday, September 18, 2013
9:00 - 10:00 a.m.
Room 3233 EPA East, 1201 Constitution Avenue, N.W.
Call-in Number: Non-Responsive conference code: Non-Responsive

ANNOTATED AGENDA

IO (Mike Shapiro will represent the IO, with support from ODs)

1. Status report on the CWA/SRF budget differences between the House and Senate Bills and impact on Agency initiatives.
   Requested by: Paul Gruber

OWOW (Jeff Frithsen from ORD will address this topic; Donna Downing will represent OWOW)

2. Waters of the U.S. Science Report
   Requested by: Nancy Stoner

OWM (Andrew Sawyers will represent OWM)

3. Ballast Water: Has EPA responded to the NWF's court petition to review the final rule?
   Requested by: Dawn Kristof Champney, President, Water and Wastewater Equipment Manufacturers Association (WWEMA)

4. Status/update on Stormwater Rule
   Requested by: Dawn Kristof Champney, President, WWEMA

OGWDW (Peter Grevatt and Eric Burneson will represent OGWDW)

5. What is the status of the final FAQs on implementation of the Reduction of Lead in Drinking Water Act?
   Requested by: Kristine Heine; Executive Vice President, Global Communicators; on behalf of Kohler

6. What proposed regulatory revisions to the Lead and Copper Rule will be discussed by the National Drinking Water Advisory Council at the October 9-10 meeting?
Requested by: Kristine Heine; Executive Vice President, Global Communicators; on behalf of Kohler; and Dawn Kristof Champney, President, WWEMA

7. What is the timing to finalize/implement the cVOC group contaminant rule? Has BACT been designated for this rule?
Requested by: Jack Adams; Director, Government Affairs, Calgon Carbon Corporation

8. What is the status of the nDBP group contaminant rule, and what is the timing to finalize it?
Requested by: Jack Adams; Director, Government Affairs, Calgon Carbon Corporation

9. What is the timing to finalize/implement the perchlorate rule?
Requested by: Jack Adams; Director, Government Affairs, Calgon Carbon Corporation; and Dawn Kristof Champney, President, WWEMA

10. What is the timing to finalize/implement the chromium (VI) rule? Does EPA have a new schedule for completing its risk assessment and does California's proposed MCL of 10 ppb have any bearing on EPA's thinking/efforts?
Requested by: Jack Adams; Director, Government Affairs, Calgon Carbon Corporation; and Dawn Kristof Champney, President, WWEMA

<u>OST (Jeff Lape will represent OST)</u>

11. Update on the chloride water quality criteria.
Requested by: Colin Enssle, General Electric Power & Water

12. Status/update on 316(b) Cooling Water Intake Rule
Requested by: Dawn Kristof Champney, President, WWEMA

13. Steam Electric Power Plants Effluent Guidelines: Anything new to report

about reaction to the proposed rule? Is the May 22, 2014 deadline for final issuance still viable?
Requested by: Dawn Kristof Champney, President, WWEMA

To: Goo, Michael[Goo.Michael@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]
Cc: Poole, Jacqueline[Poole.Jacqueline@epa.gov]; Clark, Donetta[Clark.Donetta@epa.gov]
From: Penman, Crystal
Sent: Thur 3/14/2013 3:19:07 PM
Subject: 316B

When: Thursday, March 14, 2013 5:00 PM-5:45 PM (GMT-05:00) Eastern Time (US & Canada).
Where: 3219A EPA EAST (Nancy's Office)

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

To: Wood, Robert[Wood.Robert@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]
Cc: Clark, Donetta[Clark.Donetta@epa.gov]
From: Penman, Crystal
Sent: Thur 3/14/2013 3:17:33 PM
Subject: Canceled: 316B

When: Thursday, March 14, 2013 5:00 PM-5:45 PM (GMT-05:00) Eastern Time (US & Canada).
Where: 3219A EPA EAST (Nancy's Office)

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

To: Mccarthy, Gina[McCarthy.Gina@epa.gov]; Hooks, Craig[Hooks.Craig@epa.gov]; Bennett, Barbara[Bennett.Barbara@epa.gov]; Frank, Joyce[Frank.Joyce@epa.gov]; Jones, Jim[Jones.Jim@epa.gov]; Giles-AA, Cynthia[Giles-AA.Cynthia@epa.gov]; Jackson, Malcolm[jackson.malcolm@epa.gov]; Mallory, Brenda[Mallory.Brenda@epa.gov]; DePass, Michelle[DePass.Michelle@epa.gov]; Elkins, Arthur[Elkins.Arthur@epa.gov]; Kadeli, Lek[Kadeli.Lek@epa.gov]; Stanislaus, Mathy[Stanislaus.Mathy@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Spalding, Curt[Spalding.Curt@epa.gov]; Enck, Judith[Enck.Judith@epa.gov]; Garvin, Shawn[garvin.shawn@epa.gov]; KeyesFleming, Gwen[KeyesFleming.Gwendolyn@epa.gov]; Hedman, Susan[hedman.susan@epa.gov]; Curry, Ron[Curry.Ron@epa.gov]; Brooks, Karl[brooks.karl@epa.gov]; Cantor, Howard[cantor.howard@epa.gov]; BLUMENFELD, JARED[BLUMENFELD.JARED@EPA.GOV]; McLerran, Dennis[mclerran.dennis@epa.gov]
Cc: Perciasepe Bob[Perciasepe.Bob@epamail.epa.gov]; Thompson, Diane[Thompson.Diane@epa.gov]; Monger, Jon[Monger.Jon@epa.gov]; Sussman, Bob[Sussman.Bob@epa.gov]; Imohiosen, Charles[Imohiosen.Charles@epa.gov]; Gilfillan, Brendan[Gilfillan.Brendan@epa.gov]; Ganesan, Arvin[Ganesan.Arvin@epa.gov]; Garcia, Lisa[Garcia.Lisa@epa.gov]; Dietrich, Debbie[Dietrich.Debbie@epa.gov]; Pallone, Sarah[Pallone.Sarah@epa.gov]; Woodka, Janet[Woodka.Janet@epa.gov]; Dickenson, Denise[DICKENSON.DENISE@EPA.GOV]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Foos, Brenda[Foos.Brenda@epa.gov]; Bittleman, Sarah[Bittleman.Sarah@epa.gov]; Kime, Robin[Kime.Robin@epa.gov]; Kenny, Shannon[Kenny.Shannon@epa.gov]; Barron, Alex[Barron.Alex@epa.gov]; Cristofaro, Alexander[Cristofaro.Alexander@epa.gov]; Schaaff, Lesley[Schaaff.Lesley@epa.gov]; Balserak, Paul[Balserak.Paul@epa.gov]; Cummings, Evangeline[Cummings.Evangeline@epa.gov]; Pritchard, Eileen[Pritchard.Eileen@epa.gov]; Schillo, Bruce[Schillo.Bruce@epa.gov]; Geller, Michael[Geller.Michael@epa.gov]; Hanley, Mary[Hanley.Mary@epa.gov]; Martin, KarenL[Martin.KarenL@epa.gov]; Shaw, Nena[Shaw.Nena@epa.gov]; Scozzafava, MichaelE[Scozzafava.MichaelE@epa.gov]; DAA[DAA@epa.gov]; Coleman, Sam[Coleman.Sam@epa.gov]
From: Goo, Michael
Sent: Thur 3/14/2013 2:58:49 PM
Subject: Final March-April 60 Day List
Chron 60 Day List March-April 2013.docx
60 Day List March-April 2013.docx

Based on your input, attached is a final 60-Day List for March and April 2013. The list, organized by program office and region, contains brief descriptions and timelines of EPA actions upcoming between now and the end of April. Also included are some priority policy actions, which are included without regard to the projected date of their next milestone. Also attached is a shorter, chronological version of this list.

I hope you and your immediate staff find this to be of use. Please feel free to contact me or Alex Cristofaro with any comments or questions.

Thanks

Michael

To: Mccarthy, Gina[McCarthy.Gina@epa.gov]; Hooks, Craig[Hooks.Craig@epa.gov]; Bennett, Barbara[Bennett.Barbara@epa.gov]; Frank, Joyce[Frank.Joyce@epa.gov]; Giles-AA, Cynthia[Giles-AA.Cynthia@epa.gov]; Jackson, Malcolm[jackson.malcolm@epa.gov]; Mallory, Brenda[Mallory.Brenda@epa.gov]; DePass, Michelle[DePass.Michelle@epa.gov]; Elkins, Arthur[Elkins.Arthur@epa.gov]; Jones, Jim[Jones.Jim@epa.gov]; Kadeli, Lek[Kadeli.Lek@epa.gov]; Stanislaus, Mathy[Stanislaus.Mathy@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Spalding, Curt[Spalding.Curt@epa.gov]; Enck, Judith[Enck.Judith@epa.gov]; Garvin, Shawn[garvin.shawn@epa.gov]; KeyesFleming, Gwen[KeyesFleming.Gwendolyn@epa.gov]; Hedman, Susan[hedman.susan@epa.gov]; Curry, Ron[Curry.Ron@epa.gov]; Brooks, Karl[brooks.karl@epa.gov]; Martin, James[martin.james@epa.gov]; BLUMENFELD, JARED[BLUMENFELD.JARED@EPA.GOV]; McLerran, Dennis[mclerran.dennis@epa.gov]
Cc: Cristofaro, Alexander[Cristofaro.Alexander@epa.gov]; Schaaff, Lesley[Schaaff.Lesley@epa.gov]; Munis, Ken[Munis.Ken@epa.gov]; Pritchard, Eileen[Pritchard.Eileen@epa.gov]; Schillo, Bruce[Schillo.Bruce@epa.gov]; Kime, Robin[Kime.Robin@epa.gov]; Barron, Alex[Barron.Alex@epa.gov]; Kenny, Shannon[Kenny.Shannon@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; DAA[DAA@epa.gov]; DRA[DRA@epa.gov]
From: Goo, Michael
Sent: Mon 3/4/2013 2:38:41 PM
Subject: Draft March-April 60-day List for Your Review and Comment
draft 60 Day List March-April 2013.docx

OP has prepared a draft 60-Day List report for March-April 2013. This document contains brief descriptions and timelines of EPA actions upcoming between now and the end of April. It also contains descriptions and timelines for some priority policy actions regardless of the projected date of their next milestone. Major active IRIS assessments and high-profile NEPA reviews are also included regardless of next milestone date. The report is generated using the Scout database and is intended to be used you and your immediate office staff.

As before, I'd appreciate your help in finalizing the attached report. In particular, I would like to make sure that:

(1) all relevant actions/milestones for your office are listed;

(2) the associated dates are as up-to-date as possible; and

(3) the associated descriptions are adequate and accurate.

If milestone dates need to be revised, those changes should be made directly in Scout (or in ADP Tracker for tiered actions) by your staff. Suggested changes to the 60-Day List titles and descriptions can be made in Scout by your staff using instruction previously provided them, or can be e-mailed to Lesley Schaaff and Bruce Schillo.

Please make any changes in Scout or provide us with any additional information by COB, Thursday, March 7.

If you or your staff have Scout related questions, please contact Bruce Schillo at 564-6552. If you have any other questions, please let me or Bruce Schillo know.

Thanks very much

- Michael

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Shapiro, Mike[Shapiro.Mike@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Keehner, Denise[Keehner.Denise@epa.gov]; Lape, Jeff[lape.jeff@epa.gov]; Hill, Randy[Hill.Randy@epa.gov]; Best-Wong, Benita[Best-Wong.Benita@epa.gov]; Sawyers, Andrew[Sawyers.Andrew@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Grevatt, Peter[Grevatt.Peter@epa.gov]
Cc: Telleen, Katherine[Telleen.Katherine@epa.gov]; Flaharty, Stephanie[Flaharty.Stephanie@epa.gov]; Zipf, Lynn[Zipf.Lynn@epa.gov]; Faller, Heidi[Faller.Heidi@epa.gov]; Peck, Gregory[Peck.Gregory@epa.gov]; Lousberg, Macara[Lousberg.Macara@epa.gov]; Evalenko, Sandy[Evalenko.Sandy@epa.gov]; Skane, Elizabeth[Skane.Elizabeth@epa.gov]; Ruf, Christine[Ruf.Christine@epa.gov]; Loop, Travis[Loop.Travis@epa.gov]; Scozzafava, MichaelE[Scozzafava.MichaelE@epa.gov]; Code, Tanya[Code.Tanya@epa.gov]; Ortiz, Agnes[Ortiz.Agnes@epa.gov]; Krieger, Andrew[Krieger.Andrew@epa.gov]; Lopez-Carbo, Maria[Lopez-Carbo.Maria@epa.gov]; Sanelli, Diane[Sanelli.Diane@epa.gov]; Peterson, Jeff[Peterson.Jeff@epa.gov]; Bathersfield, Nizanna[Bathersfield.Nizanna@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]
From: Nelson, Tomeka
Sent: Fri 3/1/2013 9:08:28 PM
Subject: 2-week review report
3.1.2013.OP Review Status Update and Planning.docx

To: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Born, Tom[Born.Tom@epa.gov]; Lewis, Samantha[Lewis.Samantha@epa.gov]; Biddle, Lisa[Biddle.Lisa@epa.gov]; Hoffman, Wendy[Hoffman.Wendy@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]; Wade, Alexis[Wade.Alexis@epa.gov]; Nelson, Tomeka[Nelson.Tomeka@epa.gov]; Evalenko, Sandy[Evalenko.Sandy@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]
Cc: Cash, Barbara[cash.barbara@epa.gov]
From: Penman, Crystal
Sent: Thur 2/28/2013 7:16:52 PM
Subject: Status Update prior to Final Agency Review 316(b) C ooling Water Intake Existing Facilities Rule (SAN 5210)
2013_02_28_14_05_53.pdf

When: Tuesday, March 12, 2013 1:30 PM-2:30 PM (GMT-05:00) Eastern Time (US & Canada).
Where: 3233 EPA EAST

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

To: Kopocis, Ken[Kopocis.Ken@epa.gov]
Cc: Penman, Crystal[Penman.Crystal@epa.gov]
From: Loop, Travis
Sent: Wed 2/27/2013 3:04:42 AM
Subject: edison electric background
TALKING POINTS Edison Electric 2.28.13.docx

Ken

I provided this info for the Edison Electric talk, but heard Betsy was looking for 316b info for you. I've asked them to triple check the content in here and to update Wednesday if needed.

Travis Loop
Director of Communications
Office of Water
U.S. Environmental Protection Agency
202-870-6922

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Shapiro, Mike[Shapiro.Mike@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Keehner, Denise[Keehner.Denise@epa.gov]; Lape, Jeff[lape.jeff@epa.gov]; Hill, Randy[Hill.Randy@epa.gov]; Best-Wong, Benita[Best-Wong.Benita@epa.gov]; Sawyers, Andrew[Sawyers.Andrew@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Grevatt, Peter[Grevatt.Peter@epa.gov]
Cc: Telleen, Katherine[Telleen.Katherine@epa.gov]; Flaharty, Stephanie[Flaharty.Stephanie@epa.gov]; Zipf, Lynn[Zipf.Lynn@epa.gov]; Faller, Heidi[Faller.Heidi@epa.gov]; Peck, Gregory[Peck.Gregory@epa.gov]; Lousberg, Macara[Lousberg.Macara@epa.gov]; Evalenko, Sandy[Evalenko.Sandy@epa.gov]; Skane, Elizabeth[Skane.Elizabeth@epa.gov]; Ruf, Christine[Ruf.Christine@epa.gov]; Loop, Travis[Loop.Travis@epa.gov]; Scozzafava, MichaelE[Scozzafava.MichaelE@epa.gov]; Code, Tanya[Code.Tanya@epa.gov]; Ortiz, Agnes[Ortiz.Agnes@epa.gov]; Krieger, Andrew[Krieger.Andrew@epa.gov]; Lopez-Carbo, Maria[Lopez-Carbo.Maria@epa.gov]; Sanelli, Diane[Sanelli.Diane@epa.gov]; Peterson, Jeff[Peterson.Jeff@epa.gov]; Bathersfield, Nizanna[Bathersfield.Nizanna@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Nelson, Tomeka[Nelson.Tomeka@epa.gov]
From: Nelson, Tomeka
Sent: Fri 2/22/2013 8:54:52 PM
Subject: 2-week review report
2.22.2013.OP Review Status Update and Planning.docx

Tomeka Nelson,
OW Water Policy Staff (Detail)
202-566-1291
Room 3226C EPA East

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Shapiro, Mike[Shapiro.Mike@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Keehner, Denise[Keehner.Denise@epa.gov]; lape, jeff[lape.jeff@epa.gov]; Hill, Randy[Hill.Randy@epa.gov]; Best-Wong, Benita[Best-Wong.Benita@epa.gov]; Sawyers, Andrew[Sawyers.Andrew@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Grevatt, Peter[Grevatt.Peter@epa.gov]
Cc: Telleen, Katherine[Telleen.Katherine@epa.gov]; Nelson, Tomeka[Nelson.Tomeka@epa.gov]; Flaharty, Stephanie[Flaharty.Stephanie@epa.gov]; Zipf, Lynn[Zipf.Lynn@epa.gov]; Faller, Heidi[Faller.Heidi@epa.gov]; Peck, Gregory[Peck.Gregory@epa.gov]; Lousberg, Macara[Lousberg.Macara@epa.gov]; Evalenko, Sandy[Evalenko.Sandy@epa.gov]; Skane, Elizabeth[Skane.Elizabeth@epa.gov]; Ruf, Christine[Ruf.Christine@epa.gov]; Loop, Travis[Loop.Travis@epa.gov]; Scozzafava, MichaelE[Scozzafava.MichaelE@epa.gov]; Code, Tanya[Code.Tanya@epa.gov]; Ortiz, Agnes[Ortiz.Agnes@epa.gov]; Krieger, Andrew[Krieger.Andrew@epa.gov]; Lopez-Carbo, Maria[Lopez-Carbo.Maria@epa.gov]; Sanelli, Diane[Sanelli.Diane@epa.gov]; Peterson, Jeff[Peterson.Jeff@epa.gov]; Bathersfield, Nizanna[Bathersfield.Nizanna@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]
From: Nelson, Tomeka
Sent: Fri 2/15/2013 8:19:06 PM
Subject: 2-week review report
2.15.2013.OP Review Status Update and Planning.docx

Tomeka Nelson,
OW Water Policy Staff (Detail)
202-566-1291
Room 3226C EPA East

To: Mccarthy, Regina[McCarthy.Gina@epa.gov]; Hooks, Craig[Hooks.Craig@epa.gov]; Bennett, Barbara[Bennett.Barbara@epa.gov]; Frank, Joyce[Frank.Joyce@epa.gov]; Jones, Jim[Jones.Jim@epa.gov]; Giles-AA, Cynthia[Giles-AA.Cynthia@epa.gov]; Jackson, Malcolm[jackson.malcolm@epa.gov]; Mallory, Brenda[Mallory.Brenda@epa.gov]; DePass, Michelle[DePass.Michelle@epa.gov]; Elkins, Arthur[Elkins.Arthur@epa.gov]; Kadeli, Lek[Kadeli.Lek@epa.gov]; Stanislaus, Mathy[Stanislaus.Mathy@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Spalding, Curt[Spalding.Curt@epa.gov]; Enck, Judith[Enck.Judith@epa.gov]; Garvin, Shawn[garvin.shawn@epa.gov]; KeyesFleming, Gwen[KeyesFleming.Gwendolyn@epa.gov]; Hedman, Susan[hedman.susan@epa.gov]; Curry, Ron[Curry.Ron@epa.gov]; Brooks, Karl[brooks.karl@epa.gov]; Martin, Jim[Martin.Jim@epa.gov]; BLUMENFELD, JARED[BLUMENFELD.JARED@EPA.GOV]; McLerran, Dennis[mclerran.dennis@epa.gov]; Foos, Brenda[Foos.Brenda@epa.gov]; Reed, Khesha[Reed.Khesha@epa.gov]
Cc: Jackson, Lisa P.[Jackson.LisaP@epa.gov]; Bob Perciasepe[Perciasepe.Bob@epa.gov]; Thompson, Diane[Thompson.Diane@epa.gov]; Monger, Jon[Monger.Jon@epa.gov]; Sussman, Bob[Sussman.Bob@epa.gov]; Imohiosen, Charles[Imohiosen.Charles@epa.gov]; Ganesan, Arvin[Ganesan.Arvin@epa.gov]; Elworth, Lawrence[Elworth.Lawrence@epa.gov]; Garcia, Lisa[Garcia.Lisa@epa.gov]; Dietrich, Debbie[Dietrich.Debbie@epa.gov]; Pallone, Sarah[Pallone.Sarah@epa.gov]; Woodka, Janet[Woodka.Janet@epa.gov]; Dickenson, Denise[DICKENSON.DENISE@EPA.GOV]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Foos, Brenda[Foos.Brenda@epa.gov]; Kime, Robin[Kime.Robin@epa.gov]; Kenny, Shannon[Kenny.Shannon@epa.gov]; Barron, Alex[Barron.Alex@epa.gov]; Cristofaro, Alexander[Cristofaro.Alexander@epa.gov]; Schaaff, Lesley[Schaaff.Lesley@epa.gov]; Balserak, Paul[Balserak.Paul@epa.gov]; Munis, Ken[Munis.Ken@epa.gov]; Cummings, Evangeline[Cummings.Evangeline@epa.gov]; Pritchard, Eileen[Pritchard.Eileen@epa.gov]; Schillo, Bruce[Schillo.Bruce@epa.gov]; Geller, Michael[Geller.Michael@epa.gov]; Hanley, Mary[Hanley.Mary@epa.gov]; Martin, KarenL[Martin.KarenL@epa.gov]; Shaw, Nena[Shaw.Nena@epa.gov]; Scozzafava, MichaelE[Scozzafava.MichaelE@epa.gov]; DAA[DAA@epa.gov]; DRA[DRA@epa.gov]; Bergman, Shawna[Bergman.Shawna@epa.gov]
From: Kime, Robin
Sent: Tue 2/12/2013 12:24:39 PM
Subject: Final February-March 60 Day List
60 Day List February-March 2013.docx
Chron 60 Day List February-March 2013.docx

Based on your input, attached is a final 60-Day List for February and March 2013. The list, organized by program office and region, contains brief descriptions and timelines of EPA actions upcoming between now and the end of March. Also included are some priority policy actions, which are included without regard to the projected date of their next milestone. Also attached is a shorter, chronological version of this list.

I hope you and your immediate staff find this to be of use. Please feel free to contact me or Alex Cristofaro with any comments or questions.

Thanks
Michael

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Shapiro, Mike[Shapiro.Mike@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Keehner, Denise[Keehner.Denise@epa.gov]; lape, jeff[lape.jeff@epa.gov]; Hill, Randy[Hill.Randy@epa.gov]; Best-Wong, Benita[Best-Wong.Benita@epa.gov]; Sawyers, Andrew[Sawyers.Andrew@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Grevatt, Peter[Grevatt.Peter@epa.gov]
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From: Nelson, Tomeka
Sent: Fri 2/8/2013 7:39:15 PM
Subject: 2-week review report
2.8.2013.OP Review Status Update and Planning.docx

Tomeka Nelson,
OW Water Policy Staff (Detail)
202-566-1291
Room 3226C EPA East

To: Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Kiat, Elizabeth
Sent: Mon 2/4/2013 9:11:58 PM
Subject: FW: Request for Meeting on Tuesday, March 26th
EPA's Proposed Rule on Cooling Water Intake.pdf

Dear Mr. Kopocis

By way of introduction I am a colleague of Hugh Wynne, Sanford C. Bernstein's Senior U.S. Utilities Analyst. I am assisting Mr. Wynne to arrange a trip to Washington on Tuesday, March 26th where he will be hosting a group of institutional clients for a deep dive on environmental and energy regulation issues.

I am following up on an email Mr. Wynne sent to you on Friday January 25, 2013 (see below) inviting you or your designee to discuss the EPA's approach to the regulation of cooling water intake and power plant effluents.

We hope that we can interest you in this opportunity to address these critical issues with key investors in the power industry.

Please let us know if you will be available to meet on Tuesday, March 26th, 2013?

Warm regards,

Liz Kiat

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SAVE THE DATE: ***Sanford C. Bernstein's 29th Annual Strategic Decisions Conference*** *will be held* ***May 29-31, 2013*** *in New York, NY. Please contact me for further information.*

From: Wynne, Hugh N
Sent: Friday, January 25, 2013 2:08 PM
To: 'Kopocis.ken@Epa.gov'
Subject: Request for Meeting on Tuesday, March 26th

Dear Mr. Kopocis:

I am an equity research analyst at Sanford C. Bernstein & Co., an institutional brokerage with a reputation for in-depth industry research. I have been covering the power industry for the last decade, and have focused much of my recent research on environmental issues. To give you a flavor for this research, I've attached a copy of the report we wrote on the potential impact of the EPA's proposed cooling water intake rule on the nation's coal and nuclear power plants.

Given the potential consequences for U.S. utilities, both debt and equity investors in the industry have an ongoing interest in the evolution of the EPA's cooling water intake rule as well as regulations governing power plant effluents. In an effort to shed light on these and other environmental issues, I am arranging a trip to Washington for institutional clients of Sanford C. Bernstein on Tuesday, March 26th. On previous such visits, participants have included representatives of some of the largest and most influential institutional investors in the country, including Blackrock, Capital, Fidelity, JP Morgan, Lord Abbett, Oppenheimer, TIAA/CREF and Wellington. On behalf of this group of institutional investors, I would to like to request a meeting with you or your designee to discuss the EPA's approach to the regulation of cooling water intake and power plant effluents. I hope I can interest you in this opportunity to address these critical issues with key investors in the power industry.

Sincerely,

Hugh Wynne

Senior Research Analyst

Sanford C. Bernstein & Co.

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http://www.alliancebernstein.com/disclaimer/email/disclaimer.html

March 29, 2011

BERNSTEINRESEARCH

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U.S. Utilities: EPA Proposes Regulations Governing Cooling Water Intake by Power Plants; Who Is at Risk?

Ticker	Rating	CUR	28 Mar 2011 Closing Price	Target Price	TTM Rel. Perf.	EPS 2010A	EPS 2011E	EPS 2012E	P/E 2010A	P/E 2011E	P/E 2012E	Yield
AEP	M	USD	34.69	39.00	-10.6%	3.03	3.26	3.19	11.4	10.6	10.9	4.8%
D	M	USD	44.23	38.00	-3.4%	3.34	3.10	2.88	13.2	14.3	15.4	4.1%
DUK	M	USD	17.86	18.00	-3.5%	1.43	1.35	1.39	12.5	13.2	12.8	5.5%
EIX	M	USD	36.14	40.00	-6.1%	3.48	2.75	2.15	10.4	13.1	16.8	3.5%
EXC	M	USD	40.19	37.00	-19.3%	4.06	4.08	2.98	9.9	9.9	13.5	5.2%
FE	M	USD	36.25	35.00	-18.9%	3.62	3.06	3.14	10.0	11.8	11.5	6.1%
PCG	O	USD	43.88	50.00	-10.2%	3.42	3.68	3.91	12.8	11.9	11.2	4.2%
SPX			1310.19			85.35	97.35	111.20	15.4	13.5	11.8	1.9%

O – Outperform, M – Market-Perform, U – Underperform, N – Not Rated

Highlights

Late Thursday, the EPA issued a proposed rule governing cooling water intake by existing power plants under Section 316(b) of the Clean Water Act. Critically, the proposed rule would not require the universal deployment of closed loop cooling systems (cooling towers). Rather, it directs the nation's largest thermal power plants to collaborate with state environmental authorities to determine what controls may be required to limit entrainment of aquatic organisms in cooling water. By allowing site-specific analyses (which may include an assessment of benefits against costs) and delegating decision making to the local level, the EPA's approach is likely to minimize the industry's cost of compliance.

- Specifically, the proposed rule would impose three principal requirements:
  - Existing power plants that draw at least 125 million gallons per day of cooling water would be required to conduct studies to help state environmental authorities determine what controls, if any, are required to reduce the number of aquatic organisms sucked into cooling water systems (entrainment). We estimate that this requirement will affect 307 large thermal power plants, including all 104 of the nation's operating nuclear facilities, with a combined capacity of 297 GW (29% of U.S. capacity).
  - Existing power plants that have a design intake flow greater than 2 million gallons per day and draw at least 25% of their cooling water from an adjacent water body (a category the EPA estimates will include 670 power plants, including all nuclear and the bulk of coal-fired plants) would be subject to an upper limit on how many fish can be killed by being pinned against intake screens (impingement).
  - New units that add generation capacity at an existing facility would be required to deploy cooling towers or such other designs as achieve equivalent reductions in cooling water intake.
- The proposed rule will be subject to public comment for 90 days and is scheduled to be issued in final form by July 27, 2012. Compliance deadlines vary across the three requirements:
  - The first category of power plants – those drawing more than 125 million gallons per day of cooling water -- would face compliance deadlines set by state environmental authorities in light of the site-specific environmental analyses mandated by the new rule.

U.S. Utilities

See Disclosure Appendix of this report for important disclosures and analyst certifications.

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- The second category of power plants – those drawing more than 2 million gallons per day -- must deploy technologies to reduce impingement within eight years of the final rule becoming effective. The EPA estimates, however, that more than half of the facilities covered by the proposed rule already employ impingement mitigation technologies that put them in compliance with the new standard.
- Finally, new units at an existing facility would have to comply by the time they begin operation.

Investment Conclusion

The EPA's proposed cooling water intake regulations would require existing power plants drawing at least 125 million gallons per day of cooling water to conduct studies to help state environmental authorities determine what controls, if any, are required to limit entrainment of aquatic organisms in cooling water. We estimate that this requirement will affect 307 large thermal power plants, including all 104 of the nation's operating nuclear facilities, with a combined capacity of 297 GW (29% of U.S. capacity).

Our analysis estimates the minimum impact of the EPA's proposed rule by focusing on those of the 307 power plants that are likely to have the greatest adverse environmental impact. We believe these to be those plants that draw their cooling water from ocean bays and estuaries (tidal rivers), as such water bodies often constitute important spawning grounds for fish and thus would have the highest rates of mortality from entrainment. We assume, therefore, that state environmental authorities will require cooling towers to be installed at those power plants with cooling water intake in excess of 125 million gallons per day and which take their cooling water from ocean bays or estuaries.

Our analysis suggests that certain unregulated generators may be forced to retire generation capacity because it is uneconomic to install cooling towers. As can be seen in **Exhibit 8**, however, ***retirements of unregulated generation capacity are estimated to be limited, and to affect primarily two companies, NRG Energy (NRG), and Entergy (ETR), each of which may find that approximately 4% of its total generation capacity is at risk. Among regulated utilities, we estimate that Progress Energy (PGN) and Dominion Resources (D) could face the largest plant retirements as a percentage of their installed capacity (9% and 5%, respectively)*** (see **Exhibit 9**). Because the affected facilities are regulated on a cost of service basis, however, the undepreciated value of these plants is likely to be recovered in regulated rates.

We have also estimated the capital cost likely to be incurred to comply with the new regulations. ***Among unregulated generators, the capital cost of retrofitting existing power plants to comply with the EPA's requirements is expected to be highest, relative to market capitalization, for Dynegy (DYN) (16%), Constellation (CEG) (12%), and Entergy (ETR) (8%)*** (see **Exhibit 10**). Among regulated utilities, we expect the capital expenditures required to comply with the EPA's requirements, relative to estimated rate base, to be relatively limited. ***The regulated utilities likely to be most affected, by our estimate, are TECO Energy (TE), NextEra Energy (NEE), PG&E (PCG), and Progress Energy (PGN)*** (see **Exhibit 11**).

The economic impact on individual utilities of complying with the EPA's requirement to install cooling towers will depend critically on their regulatory status. ***For regulated utilities, the capital expenditures and plant retirements required for compliance represent prudently incurred and therefore recoverable costs.*** Indeed, regulators may allow the capital expenditures for cooling towers and replacement capacity to be added to regulated rate base, potentially accelerating the growth of regulated earnings. Unregulated generators, by contrast, enjoy no such mechanism for the recovery of environmental capex, nor any offset to the loss of generation from retired plants. Only to the extent that this loss of generation capacity is reflected in higher wholesale power prices can unregulated generators expect relief.

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Details

Late Thursday, the EPA issued a proposed rule governing cooling water intake by existing power plants. The proposed rule would impose three principal requirements:

- Existing power plants that draw at least 125 million gallons per day of cooling water would be required to conduct studies to help state environmental authorities determine what controls, if any, are required to reduce the number of aquatic organisms sucked into cooling water systems. We estimate that this requirement will affect 307 large thermal power plants, including all 104 of the nation's operating nuclear facilities, with a combined capacity of 297 GW (approximately 29% of U.S. capacity).
- Existing power plants that have a design intake flow greater than 2 million gallons per day and draw at least 25% of their cooling water from an adjacent water body (a category the EPA estimates will include 670 power plants, including all nuclear and the bulk of coal-fired plants) would be subject to an upper limit on how many fish can be killed by being pinned against intake screens. To demonstrate compliance, power plants could conduct monitoring to show that the maximum mortality rates have been met, or they could reduce water intake velocity to less than 0.5 feet per second – slow enough that fish can swim away from the cooling water intake.
- New units that add generation capacity at an existing facility would be required to deploy cooling towers or such other designs as achieve equivalent reductions in cooling water intake.

The proposed rule will be subject to public comment for 90 days and is scheduled to be issued in final form by July 27, 2012. Compliance deadlines vary across the three requirements:

- Power plants drawing more than 125 million gallons per day of cooling water would face compliance deadlines set by their state environmental authorities in light of the site-specific environmental analyses mandated by the new rule.
- Power plants drawing more than 2 million gallons per day would be required to deploy technologies to reduce impingement within eight years of the date that the final rule becomes effective. The EPA estimates, however, that more than half of the facilities covered by the proposed rule already employ impingement mitigation technologies that would put them in compliance with the new standard.
- New units at an existing facility would have to comply by the time they begin operation.

Technical Background

Nuclear and coal-fired power plants use steam turbines to drive their power generators. In such plants, a boiler heated by a coal furnace or a nuclear reactor core produces steam to drive the turbine; exhaust steam from the turbine is then condensed and returned under pressure to the boiler. When equipped with "once-through" (or "open-loop") cooling systems, these plants will take in large amounts of water from a river, lake or ocean to condense the exhaust steam. The water is run through the condensers in a single pass and is discharged, a few degrees warmer, back into the river, lake or ocean.

The volume of cooling water used by such power plants is extremely large. The cooling water requirement of a single nuclear-generating unit, for example, can range from 300,000 to 1,100,000 gallons per minute. As a result, power plants account for one-half of U.S. water use.

Once-through cooling has a significant adverse environmental impact: as water flows into the cooling water intake structures of power plants, fish and shellfish are trapped against the screens that cover the structures (known as "impingement"), and smaller aquatic organisms and fish larvae are drawn into the cooling system ("entrainment"). In aggregate, the scale of this impact is huge: the EPA estimates that 2.1 billion fish, crabs and shrimp are killed annually by impingement and entrainment.

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To avoid these adverse environmental effects, power plants may limit the intake of cooling water by constructing a "closed-loop" system that re-uses the cooling water discharged from the plant's condenser. As it circulates through the condenser, the cooling water is heated by the exhaust steam; prior to re-use, it must be cooled in large, open air cooling towers. Poured from the top of the cooling tower and allowed to drip down over its internal surfaces, the water cools through contact with the air. While approximately 5% of the cooling water will be lost to evaporation, the remainder can be re-used in the condenser, limiting the need for additional water intake.

Legal Background

Cooling water intake by power plants is subject to federal regulation under Section 316(b) of the Clean Water Act, which requires that plants use "the best technology available for minimizing adverse environmental impact." Under the Clean Water Act, however, EPA manages the permitting of water intake structures in partnership with state environmental agencies, and the EPA has authorized 46 states to issue such permits directly.

The EPA has set national standards for compliance with Section 316(b), issuing regulations covering new onshore facilities (the "Phase I Rule," promulgated in 2001), regulations covering large existing power plants (the "Phase II Rule," promulgated in 2004), and regulations covering new offshore oil and gas extraction facilities (the "Phase III Rule," promulgated in 2006).

In January 2007, however, significant portions of the Phase II Rule governing existing power plants were set aside or remanded to the EPA by a decision of the Second Circuit Court of Appeals. The Phase II Rule had allowed power plants significant discretion in the choice of strategies to comply with Section 316(b), thereby seeking to limit the cost of compliance to the power industry. Thus, the Phase II Rule allowed power plants to design their cooling water intake structures so as to reduce the number of fish killed by impingement, or to replace fish killed in one water body by stocking another with fish. The Appeals Court determined that the provisions of the Phase II Rule that allowed plants to select among compliance options were not in accordance with the Clean Water Act. The court concluded that section 316(b), which requires plants to the use "the best technology available for minimizing adverse environmental impact" (BTA), "does not permit the EPA to choose the BTA on the basis of cost-benefit analysis."

On July 9, 2007, the EPA formally suspended the Phase II Rule, pending its preparation of new regulations stipulating how existing power plants must comply with Section 316(b) of the Clean Water Act.

On April 14, 2008, the U.S. Supreme Court granted a petition filed by affected utilities to review the key element of the Second Circuit Court's opinion — that Section 316(b) of the Clean Water Act does not authorize the EPA to compare costs with benefits in determining the best available technology to minimize adverse environmental effects. On April 1, 2009, the Supreme Court overturned the Appeals Court's ruling, finding that it was indeed permissible for the EPA to rely on cost-benefit analysis in setting national performance standards for compliance with Section 316(b) (*Entergy v. Riverkeeper).*

Until the EPA promulgates a final Phase II Rule, there are no applicable EPA standards for implementing Section 316(b) for existing power plants. Under the Clean Water Act, however, EPA manages the permitting of water intake structures in partnership with state environmental agencies, and the EPA has authorized 46 states to issue such permits directly. Until a final Phase II Rule is promulgated, therefore, the EPA has advised the state permitting agencies to use their best professional judgment in applying the requirement of the Clean Water Act that cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. As a result, states are implementing their own regulations to enforce Section 316(b).

On May 4, 2010, California's State Water Resources Control Board issued regulations governing the intake of river and ocean water by the state's power plants. The new regulations mandate a 93% reduction in water intake, effectively requiring steam turbine generators to replace their once-through cooling water systems

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with costly closed-loop cooling towers. California's decision follows a similar action by New York's Department of Environmental Conservation, which on March 10, 2010 proposed regulations that would also require cooling towers at the state's power plants. These decisions by New York and California, which together account for 8% of U.S. power output.

Four Major Cooling Methods

Four major cooling methods are commonly used by the power industry (see **Exhibit 1**).

Open-loop cooling. In open-loop cooling systems (also called "once-through systems"), the cooling water is withdrawn from a local body of water such as a lake, river or ocean, and the warm cooling water is subsequently discharged back to the same water body after passing through a surface condenser. Because cooling water is continuously withdrawn from the water source, plants equipped with once-through cooling systems have high volumes of water withdrawal and a commensurately high environmental impact.

Closed-loop. Closed-loop or recirculating cooling systems use wet cooling towers to dissipate heat into the atmosphere. Cooling water from the condenser is dropped from the top of a cooling tower, transferring heat to the ambient air through evaporation and releasing the heat in the water into the atmosphere. The water falls downward over surfaces in the tower, increasing the contact time between the water and the air. This helps maximize heat transfer between the two. Wet cooling towers are available in two basic designs: (1) natural draft wet process and (2) mechanical draft wet process. Natural draft towers rely on the difference in air density between the warm air in the tower and the cooler ambient air outside the tower to draw air up through the tower, while mechanical draft towers utilize a fan to move ambient air through the tower. Natural draft designs use very large concrete chimneys to introduce air through the water. Due to the tremendous size of these towers (500 feet high and 400 feet in diameter at the base), they are generally only used for large utility power stations. Mechanical draft cooling towers are much smaller in scale and utilize large fans to force air through circulated water.

Dry cooling. Also known as air cooling, dry cooling systems can use either a direct or indirect air cooling process. In direct dry cooling, exhaust steam from a power plant's steam turbines flows through tubes of an air-cooled condenser (ACC) where the steam is cooled directly via conductive heat transfer using a high flow rate of ambient air that is blown by fans across the outside surface of the tubes. Indirect air cooling uses a conventional water-cooled surface condenser to condense the turbine exhaust steam, but a dry cooling tower is used to transfer the heat from the cooling water to the ambient air. In a dry cooling tower, there is no direct contact between the heated water and the air; rather, as in an automobile radiator, air flows over pipes containing the heated water.

Hybrid cooling. Hybrid cooling systems use a combination of the above-mentioned cooling methods. For example, a plant may utilize both once-through and closed-loop technology. For example, in regions where the summer months see markedly reduced water flow in rivers and streams, a dry cooling system can be used to minimize water intake during these months, while the wet cooling system can be used during the remainder of the year.

Exhibit 1
Principal Cooling Methods Used by Power Plants

	Water cooling			
	Open loop	Closed loop	Dry cooling	Hybrid cooling
Water withdrawn	Largest	Small	None	Closed loop in summer
Cooling performance	Best	Good	Inconsistent	Okay
Environmental impact	Huge	Small	Smallest	Small
Capital costs	Low	High	Modest	High

Source: Bernstein analysis.

FOIA 2014-009508 Interim 2

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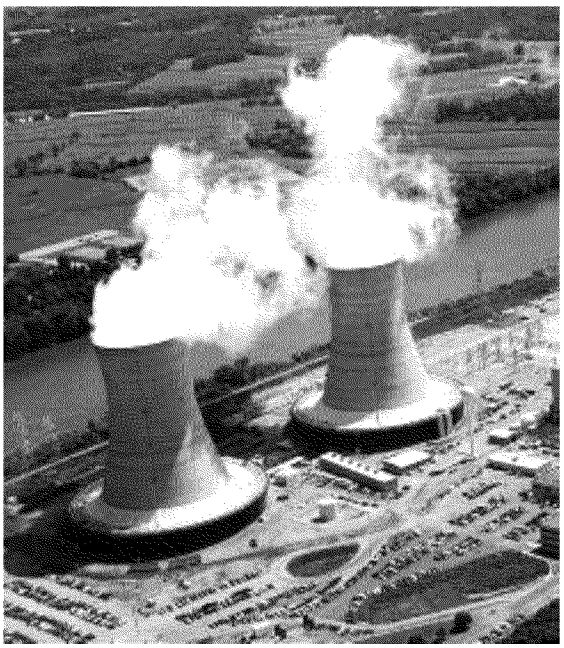
Potential future environmental regulations prohibiting once-through cooling systems would leave power plants with two compliance options: installing wet cooling towers or dry cooling technology. While dry cooling technology involves a lower capital cost than wet cooling towers, it is far less effective at cooling exhaust steam, resulting in reduced power generation output. This is particularly true during the hot summer months, when power prices are the highest. It is likely, therefore, that utilities will favor wet cooling towers for retrofitting existing power plants.

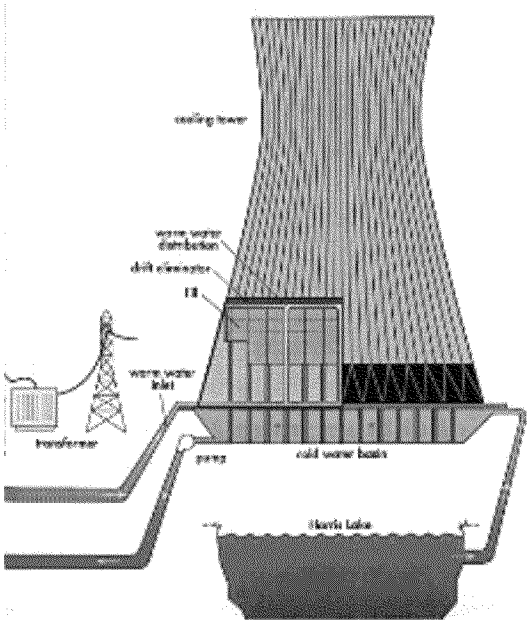
As noted above, there are two major types of wet process cooling towers: natural draft wet process cooling towers and mechanical draft wet process cooling towers. **Exhibit 2** and **Exhibit 3** shows two natural draft wet process cooling towers at the Three Mile Island nuclear plant and a simplified schematic of such cooling towers. **Exhibit 4** and **Exhibit 5** shows an array of mechanical draft wet process cooling towers and a simplified schematic of mechanical draft cooling towers.

Exhibit 2
Natural Draft Wet Process Cooling Towers at the Three **Mile Island Nuclear Plant**



Source: NuclearTourist.com.

Exhibit 3
Natural Draft Wet Process Cooling Tower Schematics



Source: NuclearTourist.com.

ED_000110PST_00004361-00006

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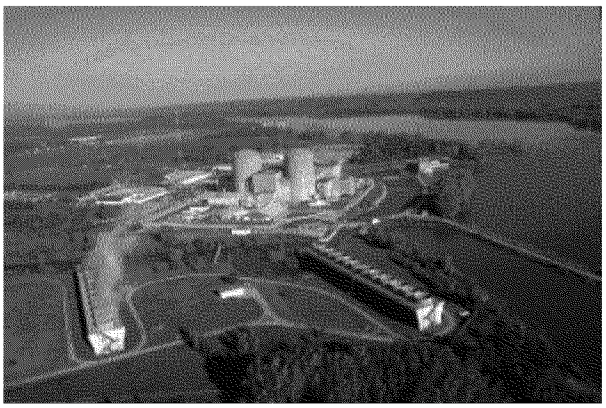
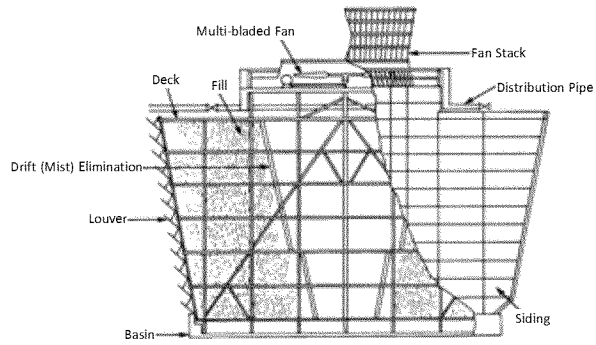
Exhibit 4
Mechanical Draft Wet Process Cooling Towers **(Foreground)**



Source: NuclearTourist.com.

Exhibit 5
Mechanical Draft Wet Process Cooling Tower **Schematics**



Source: gc3.com.

Estimating the Cost of Compliance: Methodology & Analysis

The objective of this analysis is first to identify those power plants that may be required by the EPA to adopt once-through cooling and second to estimate the cost of installing cooling towers at these facilities. We also assess the financial impact of these capital expenditures on individual utilities and the associated risk of plant closures in case the installation of a cooling tower is deemed uneconomic.

For unregulated generators, the cost of installing cooling towers at existing power plants may represent a significant claim on distributable cash flow and a future drag on earnings in the form of increased depreciation and interest expense. For regulated utilities, by contrast, the cost of compliance with state or federal environmental regulations would generally be recoverable in rates. In a best-case scenario, these compliance costs could be capitalized in rate base, accelerating the growth of regulated earnings.

The EPA's Phase II Rule would have regulated all power plants with water intake in excess of 50 million gallons per day (MGD). On the assumption that future federal and state regulations will adopt a similar standard, our analysis focuses on those power plants subject to regulation under the EPA's Phase II Rule.

The capital costs of retrofitting a power plant with cooling towers are a function of a variety of factors, including: (1) the capacity of the plant and the volume of cooling water it requires; (2) construction costs, including raw materials and labor; and (3) space constraints on construction.

We have taken two approaches to estimating the likely cost of such retrofits, one for fossil-fueled plants and one for nuclear power plants. For fossil-fueled power plants, we have relied on the EPA's analysis of the projected cost of installing cooling towers, titled *Technical Development Document for the Proposed Section 316(b) Phase II Existing Facilities Rule.* **Exhibit 6** presents the cost equation developed by the authors of the EPA study, which estimates dry cooling tower cost based on the generating unit's water intake. In this equation, X is the water inflow in gallons per minute. The equation assumes that the cooling towers are designed to achieve a 5°F differential between the water inflow and outflow temperature. The EPA model, when applied to the nation's fossil fueled plants with once-through cooling, estimates the average cost of installing cooling towers to be $180/kW. This figure is similar to the Edison Electric Institute's estimate of cooling tower costs at fossil-fueled plants of $208/kW.

U.S. Utilities

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Exhibit 6
Equation to Determine Cooling Tower Costs for Fossil Fuel Plants

$$\text{Capital Cost} = -2 \times 10^3 x^3 + 0.00002 x^2 + 337.56 x + 973608$$

$$R^2 = 0.9989$$

Where x is the water intake flow in gpm

Source: EPA and Bernstein analysis.

For nuclear power plants, we have examined the estimates made by utilities in regulatory filings in cases where state environmental authorities have sought to require the construction of cooling towers at nuclear plants. The estimates made in these filings are presented in **Exhibit 7**. The average cost per kW of installing cooling towers at the six nuclear power plants listed is $544/kW. This is significantly higher than the Edison Electric Institute's estimate of cooling tower costs at nuclear power plants of $306/kW.

Exhibit 7
Estimated Cooling Tower Costs for Nuclear Power Plants

Owner	Plant	Owned Capacity (MW)	Etimated Upgrade Cost ($MM)	$/kW
Constellation	Ginna	581	189	325
Exelon	Salem	981	500	510
Exelon	Oyster Creek	615	750	1,221
Entergy	James Fitzpatrick	852	240	282
Entergy	Indian Point	2,045	1,079	528
Average		**5,073**	**2,758**	**544**

Source: Corporate reports and Bernstein analysis.

Estimated Impact on Companies

The EPA's proposed cooling water intake regulations would require existing power plants drawing at least 125 million gallons per day of cooling water to conduct studies to help state environmental authorities determine what controls, if any, are required to reduce the number of aquatic organisms sucked into cooling water systems. We estimate that this requirement will affect 307 large thermal power plants. It is of course impossible to predict with any accuracy the outcome of 307 site-specific environmental studies.

Our analysis, therefore, estimates the minimum impact of the EPA's proposed rule by focusing on those of these 307 power plants that are likely to have the greatest adverse environmental impact. We believe these to be those plants that draw their cooling water from ocean bays and estuaries (tidal rivers), as such water bodies often constitute important spawning grounds for fish and thus would have the highest rates of mortality from entrainment. For purposes of quantifying the potential impact of the EPA's rule, therefore, we assume that state environmental authorities will require cooling towers to be installed at those power plants with cooling water intake in excess of 125 million gallons per day and which take their cooling water from ocean bays or estuaries.

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To identify those power plants among this group that are most likely to be retrofitted with cooling towers, we have assessed the economic benefit of doing so to the plant owners. Specifically, we have compared the present value of (a) the after-tax operating cash flow of these plants over their remaining useful lives, given forward power prices (including both energy and capacity), forward commodity prices, and the heat rates of the units in question, with (b) the estimated cost of installing cooling towers, net of any tax benefits from the additional depreciation expense. We have assumed that cooling towers will be added at those plants where the present value of future operating cash flow exceeds the cost of installing cooling towers. Where cooling towers costs exceed the present value of future operating cash flow, on the other hand, we have assumed that the cooling tower is not installed and, if the plants cease to operate.

Based on the assumptions described above, and the cost estimates presented in the preceding section, we estimate that certain unregulated generators may be forced to retire generation capacity because it is uneconomic to install cooling towers. In **Exhibit 8**, we present those unregulated generators we believe will be most affected. We present a similar estimate for the regulated utilities in **Error! Reference source not found.**. We next present our estimates of the capital cost likely to be incurred to comply with the new regulations. Our estimates for unregulated generators appear in **Exhibit 9**, and our estimates for regulated utilities in **Exhibit 10**.

As can be seen in **Exhibit 8**, our analysis suggests that retirements of unregulated generation capacity will be limited, and will affect primarily two companies, NRG Energy (NRG), and Entergy (ETR), each of which may find that approximately 4% of its total generation capacity is at risk. Among primarily regulated utilities, we estimate that Progress Energy (PGN) and Dominion Resources (D) could face the largest plant retirements as a percentage of their installed capacity (9% and 5%, respectively) (see **Exhibit 9**). Because the affected facilities are regulated on a cost of service basis, however, the undepreciated value of these plants is much more likely to be recovered in regulated rates.

Exhibit 8
Unregulated Utilities: Estimated Reduction in Generation Capacity Due to EPA's Phase II Rule

Holding Company Name	Ticker	Total Nameplate Capacity MW	Reduction in Nameplate Capacity	
			in MW	*As % of Total*
NRG Energy Inc	NRG	22,997	898	*4%*
Entergy Corp	ETR	30,860	1,099	*4%*

Source: EPA, Global Energy, Capital IQ and Bernstein analysis.

Exhibit 9
Regulated Utilities: Estimated Reduction in Generation Capacity Due to EPA's Phase II Rule

Holding Company Name	Ticker	Total Nameplate Capacity MW	Reduction in Nameplate Capacity	
			in MW	*As % of Total*
Progress Energy Inc	PGN	21,688	1,937	*9%*
Dominion Resources Inc	D	24,314	1,257	*5%*
AES Corp (The)	AES	11,502	495	*4%*
NextEra Energy Inc	NEE	38,814	812	*2%*
Southern Co	SO	42,519	734	*2%*

Source: EPA, Global Energy, Capital IQ and Bernstein analysis.

The next two exhibits present our estimates of the capital cost likely to be incurred to comply with the new regulations. For unregulated generators, the cost of installing cooling towers at existing power plants may

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represent a significant claim on distributable cash flow and a future drag on earnings in the form of increased depreciation and interest expense. For regulated utilities, by contrast, the cost of compliance with state or federal environmental regulations would generally be recoverable in rates. In a best-case scenario, these compliance costs could be capitalized in rate base, accelerating the growth of regulated earnings.

Our estimates for competitive generators appear in **Exhibit 10** and our estimates for regulated utilities in **Exhibit 10**. Among unregulated generators, the capital cost of retrofitting existing power plants to comply with the EPA's requirements is expected to be highest, relative to market capitalization, for Dynegy (DYN) (16%), Constellation (CEG) (12%), and Entergy (ETR) (8%) (see **Exhibit 10**). Among regulated utilities, we expect the capital expenditures required to comply with the EPA's requirements, relative to estimated rate base, to be relatively limited. The regulated utilities likely to be most affected, by our estimate, are TECO Energy (TE), NextEra Energy (NEE), PG&E (PCG), and Progress Energy (PGN) (see **Exhibit 11**).

Exhibit 10
Unregulated Utilities: Estimated Capital Cost to Install Cooling Towers to Comply With a EPA's Phase II Rule

Holding Company Name	Ticker	Market Capitalization	Capital Cost Required	
			in $M	*As % of Market Cap.*
Dynegy Inc	DYN	697	114	*16%*
Constellation Energy Group	CEG	6,143	717	*12%*
Entergy Corp	ETR	11,907	952	*8%*
Public Service Enterprise Group Inc	PEG	15,677	520	*3%*
Dominion Resources Inc	D	25,634	687	*3%*
Exelon Corp	EXC	26,614	322	*1%*

Source: EPA, Global Energy, Capital IQ and Bernstein analysis.

Exhibit 11
Regulated Utilities: Estimated Capital Cost to Install Cooling Towers to Comply With a EPA's Phase II Rule

Holding Company Name	Ticker	Rate Base	Capital Cost Required	
			in $M	*As % of Rate Base*
TECO Energy Inc	TE	5,888	197	*3%*
NextEra Energy Inc	NEE	33,792	947	*3%*
PG&E Corp	PCG	25,789	711	*3%*
Progress Energy Inc	PGN	19,234	509	*3%*
Dominion Resources Inc	D	22,005	519	*2%*
Edison International	EIX	24,068	547	*2%*
Sempra Energy	SRE	18,340	140	*1%*

Source: EPA, Global Energy, Capital IQ and Bernstein analysis.

In conclusion, the economic impact on individual utilities of complying with the EPA's requirement to install cooling towers will depend critically on their regulatory status. For regulated utilities, the capital expenditures and plant retirements required for compliance represent prudently incurred and therefore recoverable costs. Indeed, regulators may allow the capital expenditures for cooling towers and replacement capacity to be added to regulated rate base, potentially accelerating the growth of regulated earnings. Unregulated generators, by contrast, enjoy no such mechanism for the recovery of environmental capex, nor any offset to the loss of generation from retired plants. Only to the extent that this loss of generation capacity is reflected in higher wholesale power prices can unregulated generators expect relief.

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Valuation Methodology

Our target prices reflects the results of three alternative valuation methodologies: (i) a multiple-based valuation calculated by applying the median valuation multiples of a group of comparable companies to our estimates of a utility's future earnings, dividends and EBITDA; (ii) a discounted cash flow model over the forecast period of 2011-2015, and a terminal value in 2016 discounted back to present value at the weighted average cost of capital; and (iii) a discounted dividend model over the forecast period of 2011-2015, and a terminal value in 2016, discounted back to present value at the cost of equity.

Risks

AEP:
Our earnings and cash flow forecasts for AEP are driven primarily by our projections of load growth, future rate relief and the volume and profitability of AEP's off-system sales. If our assumptions in these critical areas prove overly optimistic, our earnings and cash flow forecast may need to be adjusted downwards and with it our target price. Similarly, increases in operation and maintenance expense that exceed our forecast, or increases in the price of steam coal that further erode AEP's gross margin on off-system sales, could likewise force a reduction in our earnings forecast and target price.

D:
Risks to our earnings estimates and rating are primarily to the upside, and include (i) the impact of a more favorable outcome to VEPCO's 2009 rate case on the segment's EPS contribution in 2010 and beyond, (ii) the potential for natural gas and hence wholesale power prices to rise from depressed first quarter levels, expanding generation gross margin at the company's unregulated generation fleet, (iii) the potential, in a more favorable gas price environment, for a second sale of drilling rights in the Marcellus shale eliminating the need for the company's planned equity issuance or 2010, and (iv) a recovery in the financial markets bringing about a reduction in pension expense.

DUK:
Our valuation of Duke Energy by business segments, and our assessment of the upside and downside risks to our earnings forecast, support our $18 target price for the stock. Our long term EPS growth and our valuation of Duke Energy stock could be undermined, however, by the company' failure to complete its planned expansion of regulated rate base as scheduled, or to recover a fair and timely return on this invested capital. A prolonged economic slowdown could force Duke to delay its capital investment program. Duke also faces the risk of construction cost overruns -- and the possible disallowance of these costs by regulators – when deploying relatively unfamiliar generation technologies, such as the Edwardsport IGCC. Finally, Duke's regulated utility subsidiaries operate in jurisdictions where rates are set on a backward looking basis, i.e., based on a utility's cost of service in a historic test year. Such backward looking rate setting mechanisms are disadvantageous when rate base is expanding rapidly, as rates set on the basis of historic test years fail to compensate adequately for rapidly rising depreciation and interest expense. This problem is compounded when regulated utilities are prevented from filing rate cases on an annual basis. Duke suffers from both disadvantages: in the Carolinas, Duke's 2010 rates are based on a 2008 test year, but the company may not file a new rate case until 2011, with any change in rates taking effect no sooner than 2012.

In addition to risks associated with the implementation of its capital expenditure program, and securing the revenue increases required to earn a fair return on this incremental investment, Duke Energy could significant compliance costs associated with new federal environmental regulations. While as a general matter these costs should be recoverable in Duke's regulated jurisdiction, compliance costs could be formidably high if Duke were required to install cooling towers at those nuclear and coal fired power plants

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that currently use once-through cooling. Similarly, the long term cost of compliance with a cap-and-trade scheme to limit emissions of CO2 could require very substantial upward adjustment in rates.

EIX:

There are several possible risks to our price target. EMG's large portfolio of coal-fired plants is exposed to gas price volatility. Our estimate of EMG's value is based on current forward power prices, which in turn reflect the prevailing forward curve for natural gas. For 2010, the forward gas price averages $4.51/MMBtu, rising to $5.15 in 2011, $5.58 in 2012, and approximately $5.85 in 2013. Given EMG's forecast coal fired generation in 2012, and in the absence of any power price hedges, we estimate that a $1.00/MMBtu increase in gas prices would add some $169 million in after-tax earnings at EMG's coal-fired fleet, or $0.51 per EIX share. Thus a $1.00/MMBtu increase in the gas price, if perceived by the market to be sustainable and capitalized at an 8x P/E multiple, could add $4.00 to the value of EIX stock.

Another significant risk to our earnings forecast is the prospect that federal or state government may impose a cap-and-trade scheme to limit power plant emissions of CO2. Coal-fired power plants in the United States emit, on average, twice as much CO2 per MWh (1.1 tons) as do their gas-fired competitors (0.6 tons). The impact on generation costs of a mandatory program of allowance purchases for CO2 emissions will thus be far greater for coal-fired plants than gas-fired generators. In the event CO2 emissions limits are imposed by the federal government, and allowances are sold by the government rather than allocated to generators for free, we estimate that an allowance price of $10/Mt would reduce EMG's earnings by $105 million, or $0.32 per share.

Risks at EIX's regulated utility, Southern California Edison for the next five years are primarily associated with the investment programs that are subject to various regulatory proceedings. Although SCE has received its 2009 GRC decision, it only determined rates for 2009 through 2011. Some 78% of the 2009-13 capital investment program is to be determined by proceedings beyond 2009 GRC, including 41% under upcoming 2012 GRC, 11% under other CPUC proceedings, and 26% under FERC rate cases. Therefore the projected rate base growth from 2010 through 2014 would be affected by the outcomes of these various regulatory proceedings, posing risk for SCE's earnings.

EXC:

Our estimates of Exelon's future earnings are predicated on the currently prevailing forward price curves for power. As discussed above, a downward move in the forward price curve for natural gas, and a commensurate decline in on-peak power prices in PJM, would significantly reduce Exelon's long run earnings power. We estimate the earnings impact of $1.00/MMBtu increase in the price of gas at some $0.77 per share.

In addition, our valuation and rating of Exelon stock are predicated on the assumption that CO2 emissions will be subject to cap-and-trade regulation by the federal government over the next five years. We estimate that a $10/Mt price for CO2 emissions allowances would increase Exelon's earnings by some $0.56 per share. The failure of the federal government to regulate CO2 would reduce our estimate of Exelon's value by some $5.00 per share.

FE:

Our estimates of FirstEnergy's future earnings are predicated on the currently prevailing forward price curves. A downward move in the price for natural gas, and a commensurate decline in on-peak power prices at the western PJM hub, could significantly reduce the generation rates enjoyed by FirstEnergy's Pennsylvania subsidiaries when they transition to market-based pricing in 2011. Similarly, a downward move in the price of Appalachian coal could depress the prices received by FirstEnergy's Ohio utilities in their 2011 auction. These adverse price movements would erode the gross margins of FirstEnergy's competitive generation business.

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NEE:

The outcome of 2010 rate case will likely force FP&L to file more frequent rate cases in future, resulting in repeated scrutiny of its allowed ROE by the Florida Public Utilities Commission. If there is a bright side to yesterday's FPSC decision, it is FP&L's allowed ROE at 10% is now the lowest among the investor-owned utilities in the state, strengthening the company's argument for rate relief in future rate cases.

However, we note that over the last three years, the average ROE set in electric utility rate cases nationwide has been only 10.3%, materially above the 10.0% ROE that was granted to FP&L in its current rate case.

FP&L's earnings growth going forward will be driven by its MWh sales growth and clause related rate relief, as well as the outcome of future rate cases. Our estimate of FP&L's MWh sales growth is based upon NERC's forecast of power demand growth in Florida; should FP&L's actual sales growth be materially higher or lower than our estimate, the company's future earnings potential and value of could differ markedly from our estimate. Similarly, our estimate of FP&L's future revenue increase potential reflects the company's current pipeline of generation projects, which includes solar plants, nuclear uprates, and gas plant modernizations. To the extent these projects are not fully developed, our estimate of FP&L's base revenue growth, and consequently earnings growth, will be overstated.

We have assumed that Energy Resources' wind power fleet will grow through the development of some 1,000 MW of wind capacity per annum, reflecting the expected availability of utility PPAs. A faster than expected recovery in power demand, or markedly higher gas and power prices, could increase utility demand for renewable generation and accelerate Energy Resources' earnings growth from new projects. Energy Resources could also begin to acquire renewable generation capacity in addition to building new plants. Our base case does not include potential acquisitions of renewable generation projects. On the other hand, the scheduled expiry of the production tax credit for wind in 2013 could slow the growth of renewable projects considerably.

PCG:

PG&E's valuation remains highly uncertain until the cost of its liability for the accident, the cost to survey its transmission grid, and the scale of any potential penalties imposed by the CPUC are known. Other risks to our target price for PG&E are primarily related to the upcoming 2011 GRC, which will set PG&E's rates and rate base for the period of 2011 through 2013, and thus determine PG&E's earnings for the period. Our EPS forecasts for 2010 and beyond, and thus our target price for PG&E, also could be put at risk by significant revisions to projected capital expenditures over our forecast period, corresponding to regulatory decisions. Longer-term risks include a reduction by the CPUC of PG&E's allowed ROE and equity ratio.

The eventual resolution of the liabilities arising from the San Bruno explosion, and the extent to which these liabilities are covered under PG&E's liability insurance policy, could have a material impact on our forecasts and target price.

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D	M (RC) 09/04/07	
DUK	M (RC) 08/05/04	
EIX	M (RC) 10/08/09	
EXC	M (RC) 02/05/10	
FE	M (RC) 10/27/10	O (RC) 08/05/09
PCG	O (RC) 03/22/07	

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From: Nelson, Tomeka
Sent: Fri 2/1/2013 9:15:25 PM
Subject: 2-week review report
2.1.2013.OP Review Status Update and Planning.docx

Tomeka Nelson,
OW Water Policy Staff (Detail)
202-566-1291
Room 3226C EPA East

To: Mccarthy, Regina[McCarthy.Gina@epa.gov]; Hooks, Craig[Hooks.Craig@epa.gov]; Bennett, Barbara[Bennett.Barbara@epa.gov]; Frank, Joyce[Frank.Joyce@epa.gov]; Cynthia Giles-AA[GilesAA.Cynthia@epa.gov]; Jackson, Malcolm[jackson.malcolm@epa.gov]; Mallory, Brenda[Mallory.Brenda@epa.gov]; DePass, Michelle[DePass.Michelle@epa.gov]; Elkins, Arthur[Elkins.Arthur@epa.gov]; Jones, Jim[Jones.Jim@epa.gov]; Kadeli, Lek[Kadeli.Lek@epa.gov]; Stanislaus, Mathy[Stanislaus.Mathy@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Spalding, Curt[Spalding.Curt@epa.gov]; Enck, Judith[Enck.Judith@epa.gov]; Garvin, Shawn[garvin.shawn@epa.gov]; KeyesFleming, Gwen[KeyesFleming.Gwendolyn@epa.gov]; Hedman, Susan[hedman.susan@epa.gov]; Curry, Ron[Curry.Ron@epa.gov]; Brooks, Karl[brooks.karl@epa.gov]; Martin, Jim[Martin.Jim@epa.gov]; BLUMENFELD, JARED[BLUMENFELD.JARED@EPA.GOV]; McLerran, Dennis[mclerran.dennis@epa.gov]
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From: Kime, Robin
Sent: Wed 1/30/2013 7:16:49 PM
Subject: Draft February-March 60-day List for Your Review and Comment
draft 60 Day List February-March 2013.docx

OP has prepared a draft 60-Day List report for February-March 2013. This document contains brief descriptions and timelines of EPA actions upcoming between now and the end of March. It also contains descriptions and timelines for some priority policy actions regardless of the projected date of their next milestone. Major active IRIS assessments and high-profile NEPA reviews are also included regardless of next milestone date. The report is generated using the Scout database and is intended to be used you and your immediate office staff.

As before, I'd appreciate your help in finalizing the attached report. In particular, I would like to make sure that:

(1) all relevant actions/milestones for your office are listed;
(2) the associated dates are as up-to-date as possible; and
(3) the associated descriptions are adequate and accurate.

If milestone dates need to be revised, those changes should be made directly in Scout (or in ADP Tracker for tiered actions) by your staff. Suggested changes to the 60-Day List titles and descriptions can be made in Scout by your staff using instruction previously provided them, or can be e-mailed to Lesley Schaaff and Bruce Schillo.

Please make any changes in Scout or provide us with any additional information by COB, Tuesday, February 5.

If you or your staff have Scout related questions, please contact Bruce Schillo at 564-6552. If you have any other questions, please let me or Bruce Schillo know.

Thanks very much
- Michael

To: Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Wynne, Hugh N
Sent: Fri 1/25/2013 7:08:27 PM
Subject: Request for Meeting on Tuesday, March 26th
EPA's Proposed Rule on Cooling Water Intake.pdf

Dear Mr. Kopocis:

I am an equity research analyst at Sanford C. Bernstein & Co., an institutional brokerage with a reputation for in-depth industry research. I have been covering the power industry for the last decade, and have focused much of my recent research on environmental issues. To give you a flavor for this research, I've attached a copy of the report we wrote on the potential impact of the EPA's proposed cooling water intake rule on the nation's coal and nuclear power plants.

Given the potential consequences for U.S. utilities, both debt and equity investors in the industry have an ongoing interest in the evolution of the EPA's cooling water intake rule as well as regulations governing power plant effluents. In an effort to shed light on these and other environmental issues, I am arranging a trip to Washington for institutional clients of Sanford C. Bernstein on Tuesday, March 26th. On previous such visits, participants have included representatives of some of the largest and most influential institutional investors in the country, including Blackrock, Capital, Fidelity, JP Morgan, Lord Abbett, Oppenheimer, TIAA/CREF and Wellington. On behalf of this group of institutional investors, I would to like to request a meeting with you or your designee to discuss the EPA's approach to the regulation of cooling water intake and power plant effluents. I hope I can interest you in this opportunity to address these critical issues with key investors in the power industry.

Sincerely,

Hugh Wynne

Senior Research Analyst

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March 29, 2011

BERNSTEINRESEARCH

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U.S. Utilities: EPA Proposes Regulations Governing Cooling Water Intake by Power Plants; Who Is at Risk?

Ticker	Rating	CUR	28 Mar 2011 Closing Price	Target Price	TTM Rel. Perf.	EPS 2010A	EPS 2011E	EPS 2012E	P/E 2010A	P/E 2011E	P/E 2012E	Yield
AEP	M	USD	34.69	39.00	-10.6%	3.03	3.26	3.19	11.4	10.6	10.9	4.8%
D	M	USD	44.23	38.00	-3.4%	3.34	3.10	2.88	13.2	14.3	15.4	4.1%
DUK	M	USD	17.86	18.00	-3.5%	1.43	1.35	1.39	12.5	13.2	12.8	5.5%
EIX	M	USD	36.14	40.00	-6.1%	3.48	2.75	2.15	10.4	13.1	16.8	3.5%
EXC	M	USD	40.19	37.00	-19.3%	4.06	4.08	2.98	9.9	9.9	13.5	5.2%
FE	M	USD	36.25	35.00	-18.9%	3.62	3.06	3.14	10.0	11.8	11.5	6.1%
PCG	O	USD	43.88	50.00	-10.2%	3.42	3.68	3.91	12.8	11.9	11.2	4.2%
SPX			1310.19			85.35	97.35	111.20	15.4	13.5	11.8	1.9%

O – Outperform, M – Market-Perform, U – Underperform, N – Not Rated

Highlights

Late Thursday, the EPA issued a proposed rule governing cooling water intake by existing power plants under Section 316(b) of the Clean Water Act. Critically, the proposed rule would not require the universal deployment of closed loop cooling systems (cooling towers). Rather, it directs the nation's largest thermal power plants to collaborate with state environmental authorities to determine what controls may be required to limit entrainment of aquatic organisms in cooling water. By allowing site-specific analyses (which may include an assessment of benefits against costs) and delegating decision making to the local level, the EPA's approach is likely to minimize the industry's cost of compliance.

- Specifically, the proposed rule would impose three principal requirements:
  - Existing power plants that draw at least 125 million gallons per day of cooling water would be required to conduct studies to help state environmental authorities determine what controls, if any, are required to reduce the number of aquatic organisms sucked into cooling water systems (entrainment). We estimate that this requirement will affect 307 large thermal power plants, including all 104 of the nation's operating nuclear facilities, with a combined capacity of 297 GW (29% of U.S. capacity).
  - Existing power plants that have a design intake flow greater than 2 million gallons per day and draw at least 25% of their cooling water from an adjacent water body (a category the EPA estimates will include 670 power plants, including all nuclear and the bulk of coal-fired plants) would be subject to an upper limit on how many fish can be killed by being pinned against intake screens (impingement).
  - New units that add generation capacity at an existing facility would be required to deploy cooling towers or such other designs as achieve equivalent reductions in cooling water intake.
- The proposed rule will be subject to public comment for 90 days and is scheduled to be issued in final form by July 27, 2012. Compliance deadlines vary across the three requirements:
  - The first category of power plants – those drawing more than 125 million gallons per day of cooling water -- would face compliance deadlines set by state environmental authorities in light of the site-specific environmental analyses mandated by the new rule.

U.S. Utilities

See Disclosure Appendix of this report for important disclosures and analyst certifications.

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- The second category of power plants – those drawing more than 2 million gallons per day -- must deploy technologies to reduce impingement within eight years of the final rule becoming effective. The EPA estimates, however, that more than half of the facilities covered by the proposed rule already employ impingement mitigation technologies that put them in compliance with the new standard.
- Finally, new units at an existing facility would have to comply by the time they begin operation.

Investment Conclusion

The EPA's proposed cooling water intake regulations would require existing power plants drawing at least 125 million gallons per day of cooling water to conduct studies to help state environmental authorities determine what controls, if any, are required to limit entrainment of aquatic organisms in cooling water. We estimate that this requirement will affect 307 large thermal power plants, including all 104 of the nation's operating nuclear facilities, with a combined capacity of 297 GW (29% of U.S. capacity).

Our analysis estimates the minimum impact of the EPA's proposed rule by focusing on those of the 307 power plants that are likely to have the greatest adverse environmental impact. We believe these to be those plants that draw their cooling water from ocean bays and estuaries (tidal rivers), as such water bodies often constitute important spawning grounds for fish and thus would have the highest rates of mortality from entrainment. We assume, therefore, that state environmental authorities will require cooling towers to be installed at those power plants with cooling water intake in excess of 125 million gallons per day and which take their cooling water from ocean bays or estuaries.

Our analysis suggests that certain unregulated generators may be forced to retire generation capacity because it is uneconomic to install cooling towers. As can be seen in **Exhibit 8**, however, ***retirements of unregulated generation capacity are estimated to be limited, and to affect primarily two companies, NRG Energy (NRG), and Entergy (ETR), each of which may find that approximately 4% of its total generation capacity is at risk. Among regulated utilities, we estimate that Progress Energy (PGN) and Dominion Resources (D) could face the largest plant retirements as a percentage of their installed capacity (9% and 5%, respectively)*** (see **Exhibit 9**). Because the affected facilities are regulated on a cost of service basis, however, the undepreciated value of these plants is likely to be recovered in regulated rates.

We have also estimated the capital cost likely to be incurred to comply with the new regulations. ***Among unregulated generators, the capital cost of retrofitting existing power plants to comply with the EPA's requirements is expected to be highest, relative to market capitalization, for Dynegy (DYN) (16%), Constellation (CEG) (12%), and Entergy (ETR) (8%)*** (see **Exhibit 10**). Among regulated utilities, we expect the capital expenditures required to comply with the EPA's requirements, relative to estimated rate base, to be relatively limited. ***The regulated utilities likely to be most affected, by our estimate, are TECO Energy (TE), NextEra Energy (NEE), PG&E (PCG), and Progress Energy (PGN)*** (see **Exhibit 11**).

The economic impact on individual utilities of complying with the EPA's requirement to install cooling towers will depend critically on their regulatory status. ***For regulated utilities, the capital expenditures and plant retirements required for compliance represent prudently incurred and therefore recoverable costs.*** Indeed, regulators may allow the capital expenditures for cooling towers and replacement capacity to be added to regulated rate base, potentially accelerating the growth of regulated earnings. Unregulated generators, by contrast, enjoy no such mechanism for the recovery of environmental capex, nor any offset to the loss of generation from retired plants. Only to the extent that this loss of generation capacity is reflected in higher wholesale power prices can unregulated generators expect relief.

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Details

Late Thursday, the EPA issued a proposed rule governing cooling water intake by existing power plants. The proposed rule would impose three principal requirements:

- Existing power plants that draw at least 125 million gallons per day of cooling water would be required to conduct studies to help state environmental authorities determine what controls, if any, are required to reduce the number of aquatic organisms sucked into cooling water systems. We estimate that this requirement will affect 307 large thermal power plants, including all 104 of the nation's operating nuclear facilities, with a combined capacity of 297 GW (approximately 29% of U.S. capacity).
- Existing power plants that have a design intake flow greater than 2 million gallons per day and draw at least 25% of their cooling water from an adjacent water body (a category the EPA estimates will include 670 power plants, including all nuclear and the bulk of coal-fired plants) would be subject to an upper limit on how many fish can be killed by being pinned against intake screens. To demonstrate compliance, power plants could conduct monitoring to show that the maximum mortality rates have been met, or they could reduce water intake velocity to less than 0.5 feet per second – slow enough that fish can swim away from the cooling water intake.
- New units that add generation capacity at an existing facility would be required to deploy cooling towers or such other designs as achieve equivalent reductions in cooling water intake.

The proposed rule will be subject to public comment for 90 days and is scheduled to be issued in final form by July 27, 2012. Compliance deadlines vary across the three requirements:

- Power plants drawing more than 125 million gallons per day of cooling water would face compliance deadlines set by their state environmental authorities in light of the site-specific environmental analyses mandated by the new rule.
- Power plants drawing more than 2 million gallons per day would be required to deploy technologies to reduce impingement within eight years of the date that the final rule becomes effective. The EPA estimates, however, that more than half of the facilities covered by the proposed rule already employ impingement mitigation technologies that would put them in compliance with the new standard.
- New units at an existing facility would have to comply by the time they begin operation.

Technical Background

Nuclear and coal-fired power plants use steam turbines to drive their power generators. In such plants, a boiler heated by a coal furnace or a nuclear reactor core produces steam to drive the turbine; exhaust steam from the turbine is then condensed and returned under pressure to the boiler. When equipped with "once-through" (or "open-loop") cooling systems, these plants will take in large amounts of water from a river, lake or ocean to condense the exhaust steam. The water is run through the condensers in a single pass and is discharged, a few degrees warmer, back into the river, lake or ocean.

The volume of cooling water used by such power plants is extremely large. The cooling water requirement of a single nuclear-generating unit, for example, can range from 300,000 to 1,100,000 gallons per minute. As a result, power plants account for one-half of U.S. water use.

Once-through cooling has a significant adverse environmental impact: as water flows into the cooling water intake structures of power plants, fish and shellfish are trapped against the screens that cover the structures (known as "impingement"), and smaller aquatic organisms and fish larvae are drawn into the cooling system ("entrainment"). In aggregate, the scale of this impact is huge: the EPA estimates that 2.1 billion fish, crabs and shrimp are killed annually by impingement and entrainment.

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To avoid these adverse environmental effects, power plants may limit the intake of cooling water by constructing a "closed-loop" system that re-uses the cooling water discharged from the plant's condenser. As it circulates through the condenser, the cooling water is heated by the exhaust steam; prior to re-use, it must be cooled in large, open air cooling towers. Poured from the top of the cooling tower and allowed to drip down over its internal surfaces, the water cools through contact with the air. While approximately 5% of the cooling water will be lost to evaporation, the remainder can be re-used in the condenser, limiting the need for additional water intake.

Legal Background

Cooling water intake by power plants is subject to federal regulation under Section 316(b) of the Clean Water Act, which requires that plants use "the best technology available for minimizing adverse environmental impact." Under the Clean Water Act, however, EPA manages the permitting of water intake structures in partnership with state environmental agencies, and the EPA has authorized 46 states to issue such permits directly.

The EPA has set national standards for compliance with Section 316(b), issuing regulations covering new onshore facilities (the "Phase I Rule," promulgated in 2001), regulations covering large existing power plants (the "Phase II Rule," promulgated in 2004), and regulations covering new offshore oil and gas extraction facilities (the "Phase III Rule," promulgated in 2006).

In January 2007, however, significant portions of the Phase II Rule governing existing power plants were set aside or remanded to the EPA by a decision of the Second Circuit Court of Appeals. The Phase II Rule had allowed power plants significant discretion in the choice of strategies to comply with Section 316(b), thereby seeking to limit the cost of compliance to the power industry. Thus, the Phase II Rule allowed power plants to design their cooling water intake structures so as to reduce the number of fish killed by impingement, or to replace fish killed in one water body by stocking another with fish. The Appeals Court determined that the provisions of the Phase II Rule that allowed plants to select among compliance options were not in accordance with the Clean Water Act. The court concluded that section 316(b), which requires plants to the use "the best technology available for minimizing adverse environmental impact" (BTA), "does not permit the EPA to choose the BTA on the basis of cost-benefit analysis."

On July 9, 2007, the EPA formally suspended the Phase II Rule, pending its preparation of new regulations stipulating how existing power plants must comply with Section 316(b) of the Clean Water Act.

On April 14, 2008, the U.S. Supreme Court granted a petition filed by affected utilities to review the key element of the Second Circuit Court's opinion — that Section 316(b) of the Clean Water Act does not authorize the EPA to compare costs with benefits in determining the best available technology to minimize adverse environmental effects. On April 1, 2009, the Supreme Court overturned the Appeals Court's ruling, finding that it was indeed permissible for the EPA to rely on cost-benefit analysis in setting national performance standards for compliance with Section 316(b) (*Entergy v. Riverkeeper).*

Until the EPA promulgates a final Phase II Rule, there are no applicable EPA standards for implementing Section 316(b) for existing power plants. Under the Clean Water Act, however, EPA manages the permitting of water intake structures in partnership with state environmental agencies, and the EPA has authorized 46 states to issue such permits directly. Until a final Phase II Rule is promulgated, therefore, the EPA has advised the state permitting agencies to use their best professional judgment in applying the requirement of the Clean Water Act that cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. As a result, states are implementing their own regulations to enforce Section 316(b).

On May 4, 2010, California's State Water Resources Control Board issued regulations governing the intake of river and ocean water by the state's power plants. The new regulations mandate a 93% reduction in water intake, effectively requiring steam turbine generators to replace their once-through cooling water systems

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with costly closed-loop cooling towers. California's decision follows a similar action by New York's Department of Environmental Conservation, which on March 10, 2010 proposed regulations that would also require cooling towers at the state's power plants. These decisions by New York and California, which together account for 8% of U.S. power output.

Four Major Cooling Methods

Four major cooling methods are commonly used by the power industry (see **Exhibit 1**).

Open-loop cooling. In open-loop cooling systems (also called "once-through systems"), the cooling water is withdrawn from a local body of water such as a lake, river or ocean, and the warm cooling water is subsequently discharged back to the same water body after passing through a surface condenser. Because cooling water is continuously withdrawn from the water source, plants equipped with once-through cooling systems have high volumes of water withdrawal and a commensurately high environmental impact.

Closed-loop. Closed-loop or recirculating cooling systems use wet cooling towers to dissipate heat into the atmosphere. Cooling water from the condenser is dropped from the top of a cooling tower, transferring heat to the ambient air through evaporation and releasing the heat in the water into the atmosphere. The water falls downward over surfaces in the tower, increasing the contact time between the water and the air. This helps maximize heat transfer between the two. Wet cooling towers are available in two basic designs: (1) natural draft wet process and (2) mechanical draft wet process. Natural draft towers rely on the difference in air density between the warm air in the tower and the cooler ambient air outside the tower to draw air up through the tower, while mechanical draft towers utilize a fan to move ambient air through the tower. Natural draft designs use very large concrete chimneys to introduce air through the water. Due to the tremendous size of these towers (500 feet high and 400 feet in diameter at the base), they are generally only used for large utility power stations. Mechanical draft cooling towers are much smaller in scale and utilize large fans to force air through circulated water.

Dry cooling. Also known as air cooling, dry cooling systems can use either a direct or indirect air cooling process. In direct dry cooling, exhaust steam from a power plant's steam turbines flows through tubes of an air-cooled condenser (ACC) where the steam is cooled directly via conductive heat transfer using a high flow rate of ambient air that is blown by fans across the outside surface of the tubes. Indirect air cooling uses a conventional water-cooled surface condenser to condense the turbine exhaust steam, but a dry cooling tower is used to transfer the heat from the cooling water to the ambient air. In a dry cooling tower, there is no direct contact between the heated water and the air; rather, as in an automobile radiator, air flows over pipes containing the heated water.

Hybrid cooling. Hybrid cooling systems use a combination of the above-mentioned cooling methods. For example, a plant may utilize both once-through and closed-loop technology. For example, in regions where the summer months see markedly reduced water flow in rivers and streams, a dry cooling system can be used to minimize water intake during these months, while the wet cooling system can be used during the remainder of the year.

Exhibit 1
Principal Cooling Methods Used by Power Plants

	Water cooling			
	Open loop	Closed loop	Dry cooling	Hybrid cooling
Water withdrawn	Largest	Small	None	Closed loop in summer
Cooling performance	Best	Good	Inconsistent	Okay
Environmental impact	Huge	Small	Smallest	Small
Capital costs	Low	High	Modest	High

Source: Bernstein analysis.

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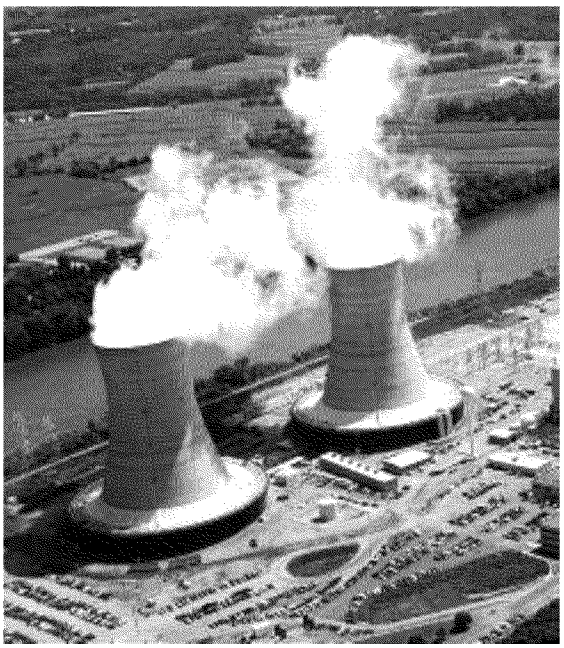
Potential future environmental regulations prohibiting once-through cooling systems would leave power plants with two compliance options: installing wet cooling towers or dry cooling technology. While dry cooling technology involves a lower capital cost than wet cooling towers, it is far less effective at cooling exhaust steam, resulting in reduced power generation output. This is particularly true during the hot summer months, when power prices are the highest. It is likely, therefore, that utilities will favor wet cooling towers for retrofitting existing power plants.

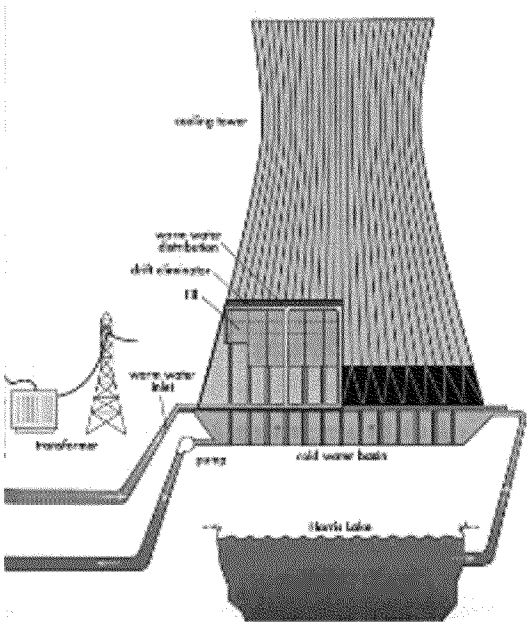
As noted above, there are two major types of wet process cooling towers: natural draft wet process cooling towers and mechanical draft wet process cooling towers. **Exhibit 2** and **Exhibit 3** shows two natural draft wet process cooling towers at the Three Mile Island nuclear plant and a simplified schematic of such cooling towers. **Exhibit 4** and **Exhibit 5** shows an array of mechanical draft wet process cooling towers and a simplified schematic of mechanical draft cooling towers.

Exhibit 2
Natural Draft Wet Process Cooling Towers at the Three **Mile Island Nuclear Plant**



Source: NuclearTourist.com.

Exhibit 3
Natural Draft Wet Process Cooling Tower Schematics



Source: NuclearTourist.com.

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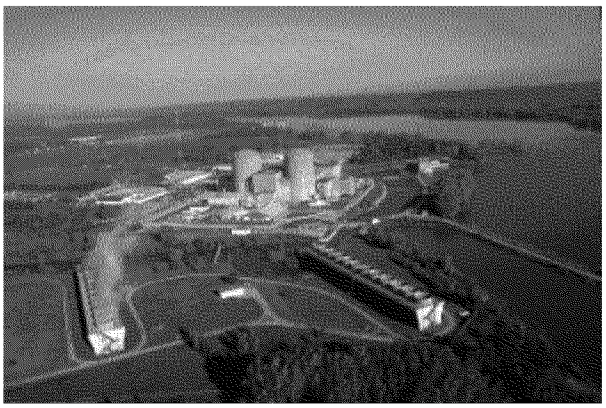
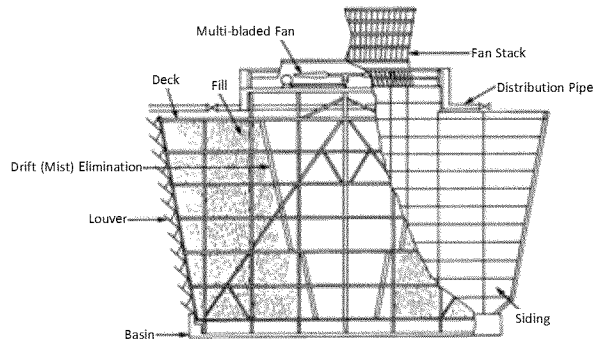
Exhibit 4
Mechanical Draft Wet Process Cooling Towers **(Foreground)**



Source: NuclearTourist.com.

Exhibit 5
Mechanical Draft Wet Process Cooling Tower **Schematics**



Source: gc3.com.

Estimating the Cost of Compliance: Methodology & Analysis

The objective of this analysis is first to identify those power plants that may be required by the EPA to adopt once-through cooling and second to estimate the cost of installing cooling towers at these facilities. We also assess the financial impact of these capital expenditures on individual utilities and the associated risk of plant closures in case the installation of a cooling tower is deemed uneconomic.

For unregulated generators, the cost of installing cooling towers at existing power plants may represent a significant claim on distributable cash flow and a future drag on earnings in the form of increased depreciation and interest expense. For regulated utilities, by contrast, the cost of compliance with state or federal environmental regulations would generally be recoverable in rates. In a best-case scenario, these compliance costs could be capitalized in rate base, accelerating the growth of regulated earnings.

The EPA's Phase II Rule would have regulated all power plants with water intake in excess of 50 million gallons per day (MGD). On the assumption that future federal and state regulations will adopt a similar standard, our analysis focuses on those power plants subject to regulation under the EPA's Phase II Rule.

The capital costs of retrofitting a power plant with cooling towers are a function of a variety of factors, including: (1) the capacity of the plant and the volume of cooling water it requires; (2) construction costs, including raw materials and labor; and (3) space constraints on construction.

We have taken two approaches to estimating the likely cost of such retrofits, one for fossil-fueled plants and one for nuclear power plants. For fossil-fueled power plants, we have relied on the EPA's analysis of the projected cost of installing cooling towers, titled *Technical Development Document for the Proposed Section 316(b) Phase II Existing Facilities Rule.* **Exhibit 6** presents the cost equation developed by the authors of the EPA study, which estimates dry cooling tower cost based on the generating unit's water intake. In this equation, X is the water inflow in gallons per minute. The equation assumes that the cooling towers are designed to achieve a 5°F differential between the water inflow and outflow temperature. The EPA model, when applied to the nation's fossil fueled plants with once-through cooling, estimates the average cost of installing cooling towers to be $180/kW. This figure is similar to the Edison Electric Institute's estimate of cooling tower costs at fossil-fueled plants of $208/kW.

U.S. Utilities

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Exhibit 6
Equation to Determine Cooling Tower Costs for Fossil Fuel Plants

$$\text{Capital Cost} = -2 \times 10^3 x^3 + 0.00002 x^2 + 337.56 x + 973608$$

$$R^2 = 0.9989$$

Where x is the water intake flow in gpm

Source: EPA and Bernstein analysis.

For nuclear power plants, we have examined the estimates made by utilities in regulatory filings in cases where state environmental authorities have sought to require the construction of cooling towers at nuclear plants. The estimates made in these filings are presented in **Exhibit 7**. The average cost per kW of installing cooling towers at the six nuclear power plants listed is $544/kW. This is significantly higher than the Edison Electric Institute's estimate of cooling tower costs at nuclear power plants of $306/kW.

Exhibit 7
Estimated Cooling Tower Costs for Nuclear Power Plants

Owner	Plant	Owned Capacity (MW)	Etimated Upgrade Cost ($MM)	$/kW
Constellation	Ginna	581	189	325
Exelon	Salem	981	500	510
Exelon	Oyster Creek	615	750	1,221
Entergy	James Fitzpatrick	852	240	282
Entergy	Indian Point	2,045	1,079	528
Average		**5,073**	**2,758**	**544**

Source: Corporate reports and Bernstein analysis.

Estimated Impact on Companies

The EPA's proposed cooling water intake regulations would require existing power plants drawing at least 125 million gallons per day of cooling water to conduct studies to help state environmental authorities determine what controls, if any, are required to reduce the number of aquatic organisms sucked into cooling water systems. We estimate that this requirement will affect 307 large thermal power plants. It is of course impossible to predict with any accuracy the outcome of 307 site-specific environmental studies.

Our analysis, therefore, estimates the minimum impact of the EPA's proposed rule by focusing on those of these 307 power plants that are likely to have the greatest adverse environmental impact. We believe these to be those plants that draw their cooling water from ocean bays and estuaries (tidal rivers), as such water bodies often constitute important spawning grounds for fish and thus would have the highest rates of mortality from entrainment. For purposes of quantifying the potential impact of the EPA's rule, therefore, we assume that state environmental authorities will require cooling towers to be installed at those power plants with cooling water intake in excess of 125 million gallons per day and which take their cooling water from ocean bays or estuaries.

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To identify those power plants among this group that are most likely to be retrofitted with cooling towers, we have assessed the economic benefit of doing so to the plant owners. Specifically, we have compared the present value of (a) the after-tax operating cash flow of these plants over their remaining useful lives, given forward power prices (including both energy and capacity), forward commodity prices, and the heat rates of the units in question, with (b) the estimated cost of installing cooling towers, net of any tax benefits from the additional depreciation expense. We have assumed that cooling towers will be added at those plants where the present value of future operating cash flow exceeds the cost of installing cooling towers. Where cooling towers costs exceed the present value of future operating cash flow, on the other hand, we have assumed that the cooling tower is not installed and, if the plants cease to operate.

Based on the assumptions described above, and the cost estimates presented in the preceding section, we estimate that certain unregulated generators may be forced to retire generation capacity because it is uneconomic to install cooling towers. In **Exhibit 8**, we present those unregulated generators we believe will be most affected. We present a similar estimate for the regulated utilities in **Error! Reference source not found.**. We next present our estimates of the capital cost likely to be incurred to comply with the new regulations. Our estimates for unregulated generators appear in **Exhibit 9**, and our estimates for regulated utilities in **Exhibit 10**.

As can be seen in **Exhibit 8**, our analysis suggests that retirements of unregulated generation capacity will be limited, and will affect primarily two companies, NRG Energy (NRG), and Entergy (ETR), each of which may find that approximately 4% of its total generation capacity is at risk. Among primarily regulated utilities, we estimate that Progress Energy (PGN) and Dominion Resources (D) could face the largest plant retirements as a percentage of their installed capacity (9% and 5%, respectively) (see **Exhibit 9**). Because the affected facilities are regulated on a cost of service basis, however, the undepreciated value of these plants is much more likely to be recovered in regulated rates.

Exhibit 8
Unregulated Utilities: Estimated Reduction in Generation Capacity Due to EPA's Phase II Rule

Holding Company Name	Ticker	Total Nameplate Capacity MW	Reduction in Nameplate Capacity	
			in MW	*As % of Total*
NRG Energy Inc	NRG	22,997	898	*4%*
Entergy Corp	ETR	30,860	1,099	*4%*

Source: EPA, Global Energy, Capital IQ and Bernstein analysis.

Exhibit 9
Regulated Utilities: Estimated Reduction in Generation Capacity Due to EPA's Phase II Rule

Holding Company Name	Ticker	Total Nameplate Capacity MW	Reduction in Nameplate Capacity	
			in MW	*As % of Total*
Progress Energy Inc	PGN	21,688	1,937	*9%*
Dominion Resources Inc	D	24,314	1,257	*5%*
AES Corp (The)	AES	11,502	495	*4%*
NextEra Energy Inc	NEE	38,814	812	*2%*
Southern Co	SO	42,519	734	*2%*

Source: EPA, Global Energy, Capital IQ and Bernstein analysis.

The next two exhibits present our estimates of the capital cost likely to be incurred to comply with the new regulations. For unregulated generators, the cost of installing cooling towers at existing power plants may

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represent a significant claim on distributable cash flow and a future drag on earnings in the form of increased depreciation and interest expense. For regulated utilities, by contrast, the cost of compliance with state or federal environmental regulations would generally be recoverable in rates. In a best-case scenario, these compliance costs could be capitalized in rate base, accelerating the growth of regulated earnings.

Our estimates for competitive generators appear in **Exhibit 10** and our estimates for regulated utilities in **Exhibit 10**. Among unregulated generators, the capital cost of retrofitting existing power plants to comply with the EPA's requirements is expected to be highest, relative to market capitalization, for Dynegy (DYN) (16%), Constellation (CEG) (12%), and Entergy (ETR) (8%) (see **Exhibit 10**). Among regulated utilities, we expect the capital expenditures required to comply with the EPA's requirements, relative to estimated rate base, to be relatively limited. The regulated utilities likely to be most affected, by our estimate, are TECO Energy (TE), NextEra Energy (NEE), PG&E (PCG), and Progress Energy (PGN) (see **Exhibit 11**).

Exhibit 10
Unregulated Utilities: Estimated Capital Cost to Install Cooling Towers to Comply With a EPA's Phase II Rule

Holding Company Name	Ticker	Market Capitalization	Capital Cost Required	
			in $M	*As % of Market Cap.*
Dynegy Inc	DYN	697	114	*16%*
Constellation Energy Group	CEG	6,143	717	*12%*
Entergy Corp	ETR	11,907	952	*8%*
Public Service Enterprise Group Inc	PEG	15,677	520	*3%*
Dominion Resources Inc	D	25,634	687	*3%*
Exelon Corp	EXC	26,614	322	*1%*

Source: EPA, Global Energy, Capital IQ and Bernstein analysis.

Exhibit 11
Regulated Utilities: Estimated Capital Cost to Install Cooling Towers to Comply With a EPA's Phase II Rule

Holding Company Name	Ticker	Rate Base	Capital Cost Required	
			in $M	*As % of Rate Base*
TECO Energy Inc	TE	5,888	197	*3%*
NextEra Energy Inc	NEE	33,792	947	*3%*
PG&E Corp	PCG	25,789	711	*3%*
Progress Energy Inc	PGN	19,234	509	*3%*
Dominion Resources Inc	D	22,005	519	*2%*
Edison International	EIX	24,068	547	*2%*
Sempra Energy	SRE	18,340	140	*1%*

Source: EPA, Global Energy, Capital IQ and Bernstein analysis.

In conclusion, the economic impact on individual utilities of complying with the EPA's requirement to install cooling towers will depend critically on their regulatory status. For regulated utilities, the capital expenditures and plant retirements required for compliance represent prudently incurred and therefore recoverable costs. Indeed, regulators may allow the capital expenditures for cooling towers and replacement capacity to be added to regulated rate base, potentially accelerating the growth of regulated earnings. Unregulated generators, by contrast, enjoy no such mechanism for the recovery of environmental capex, nor any offset to the loss of generation from retired plants. Only to the extent that this loss of generation capacity is reflected in higher wholesale power prices can unregulated generators expect relief.

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Valuation Methodology

Our target prices reflects the results of three alternative valuation methodologies: (i) a multiple-based valuation calculated by applying the median valuation multiples of a group of comparable companies to our estimates of a utility's future earnings, dividends and EBITDA; (ii) a discounted cash flow model over the forecast period of 2011-2015, and a terminal value in 2016 discounted back to present value at the weighted average cost of capital; and (iii) a discounted dividend model over the forecast period of 2011-2015, and a terminal value in 2016, discounted back to present value at the cost of equity.

Risks

AEP:
Our earnings and cash flow forecasts for AEP are driven primarily by our projections of load growth, future rate relief and the volume and profitability of AEP's off-system sales. If our assumptions in these critical areas prove overly optimistic, our earnings and cash flow forecast may need to be adjusted downwards and with it our target price. Similarly, increases in operation and maintenance expense that exceed our forecast, or increases in the price of steam coal that further erode AEP's gross margin on off-system sales, could likewise force a reduction in our earnings forecast and target price.

D:
Risks to our earnings estimates and rating are primarily to the upside, and include (i) the impact of a more favorable outcome to VEPCO's 2009 rate case on the segment's EPS contribution in 2010 and beyond, (ii) the potential for natural gas and hence wholesale power prices to rise from depressed first quarter levels, expanding generation gross margin at the company's unregulated generation fleet, (iii) the potential, in a more favorable gas price environment, for a second sale of drilling rights in the Marcellus shale eliminating the need for the company's planned equity issuance or 2010, and (iv) a recovery in the financial markets bringing about a reduction in pension expense.

DUK:
Our valuation of Duke Energy by business segments, and our assessment of the upside and downside risks to our earnings forecast, support our $18 target price for the stock. Our long term EPS growth and our valuation of Duke Energy stock could be undermined, however, by the company' failure to complete its planned expansion of regulated rate base as scheduled, or to recover a fair and timely return on this invested capital. A prolonged economic slowdown could force Duke to delay its capital investment program. Duke also faces the risk of construction cost overruns -- and the possible disallowance of these costs by regulators – when deploying relatively unfamiliar generation technologies, such as the Edwardsport IGCC. Finally, Duke's regulated utility subsidiaries operate in jurisdictions where rates are set on a backward looking basis, i.e., based on a utility's cost of service in a historic test year. Such backward looking rate setting mechanisms are disadvantageous when rate base is expanding rapidly, as rates set on the basis of historic test years fail to compensate adequately for rapidly rising depreciation and interest expense. This problem is compounded when regulated utilities are prevented from filing rate cases on an annual basis. Duke suffers from both disadvantages: in the Carolinas, Duke's 2010 rates are based on a 2008 test year, but the company may not file a new rate case until 2011, with any change in rates taking effect no sooner than 2012.

In addition to risks associated with the implementation of its capital expenditure program, and securing the revenue increases required to earn a fair return on this incremental investment, Duke Energy could significant compliance costs associated with new federal environmental regulations. While as a general matter these costs should be recoverable in Duke's regulated jurisdiction, compliance costs could be formidably high if Duke were required to install cooling towers at those nuclear and coal fired power plants

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that currently use once-through cooling. Similarly, the long term cost of compliance with a cap-and-trade scheme to limit emissions of CO2 could require very substantial upward adjustment in rates.

EIX:

There are several possible risks to our price target. EMG's large portfolio of coal-fired plants is exposed to gas price volatility. Our estimate of EMG's value is based on current forward power prices, which in turn reflect the prevailing forward curve for natural gas. For 2010, the forward gas price averages $4.51/MMBtu, rising to $5.15 in 2011, $5.58 in 2012, and approximately $5.85 in 2013. Given EMG's forecast coal fired generation in 2012, and in the absence of any power price hedges, we estimate that a $1.00/MMBtu increase in gas prices would add some $169 million in after-tax earnings at EMG's coal-fired fleet, or $0.51 per EIX share. Thus a $1.00/MMBtu increase in the gas price, if perceived by the market to be sustainable and capitalized at an 8x P/E multiple, could add $4.00 to the value of EIX stock.

Another significant risk to our earnings forecast is the prospect that federal or state government may impose a cap-and-trade scheme to limit power plant emissions of CO2. Coal-fired power plants in the United States emit, on average, twice as much CO2 per MWh (1.1 tons) as do their gas-fired competitors (0.6 tons). The impact on generation costs of a mandatory program of allowance purchases for CO2 emissions will thus be far greater for coal-fired plants than gas-fired generators. In the event CO2 emissions limits are imposed by the federal government, and allowances are sold by the government rather than allocated to generators for free, we estimate that an allowance price of $10/Mt would reduce EMG's earnings by $105 million, or $0.32 per share.

Risks at EIX's regulated utility, Southern California Edison for the next five years are primarily associated with the investment programs that are subject to various regulatory proceedings. Although SCE has received its 2009 GRC decision, it only determined rates for 2009 through 2011. Some 78% of the 2009-13 capital investment program is to be determined by proceedings beyond 2009 GRC, including 41% under upcoming 2012 GRC, 11% under other CPUC proceedings, and 26% under FERC rate cases. Therefore the projected rate base growth from 2010 through 2014 would be affected by the outcomes of these various regulatory proceedings, posing risk for SCE's earnings.

EXC:

Our estimates of Exelon's future earnings are predicated on the currently prevailing forward price curves for power. As discussed above, a downward move in the forward price curve for natural gas, and a commensurate decline in on-peak power prices in PJM, would significantly reduce Exelon's long run earnings power. We estimate the earnings impact of $1.00/MMBtu increase in the price of gas at some $0.77 per share.

In addition, our valuation and rating of Exelon stock are predicated on the assumption that CO2 emissions will be subject to cap-and-trade regulation by the federal government over the next five years. We estimate that a $10/Mt price for CO2 emissions allowances would increase Exelon's earnings by some $0.56 per share. The failure of the federal government to regulate CO2 would reduce our estimate of Exelon's value by some $5.00 per share.

FE:

Our estimates of FirstEnergy's future earnings are predicated on the currently prevailing forward price curves. A downward move in the price for natural gas, and a commensurate decline in on-peak power prices at the western PJM hub, could significantly reduce the generation rates enjoyed by FirstEnergy's Pennsylvania subsidiaries when they transition to market-based pricing in 2011. Similarly, a downward move in the price of Appalachian coal could depress the prices received by FirstEnergy's Ohio utilities in their 2011 auction. These adverse price movements would erode the gross margins of FirstEnergy's competitive generation business.

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NEE:

The outcome of 2010 rate case will likely force FP&L to file more frequent rate cases in future, resulting in repeated scrutiny of its allowed ROE by the Florida Public Utilities Commission. If there is a bright side to yesterday's FPSC decision, it is FP&L's allowed ROE at 10% is now the lowest among the investor-owned utilities in the state, strengthening the company's argument for rate relief in future rate cases.

However, we note that over the last three years, the average ROE set in electric utility rate cases nationwide has been only 10.3%, materially above the 10.0% ROE that was granted to FP&L in its current rate case.

FP&L's earnings growth going forward will be driven by its MWh sales growth and clause related rate relief, as well as the outcome of future rate cases. Our estimate of FP&L's MWh sales growth is based upon NERC's forecast of power demand growth in Florida; should FP&L's actual sales growth be materially higher or lower than our estimate, the company's future earnings potential and value of could differ markedly from our estimate. Similarly, our estimate of FP&L's future revenue increase potential reflects the company's current pipeline of generation projects, which includes solar plants, nuclear uprates, and gas plant modernizations. To the extent these projects are not fully developed, our estimate of FP&L's base revenue growth, and consequently earnings growth, will be overstated.

We have assumed that Energy Resources' wind power fleet will grow through the development of some 1,000 MW of wind capacity per annum, reflecting the expected availability of utility PPAs. A faster than expected recovery in power demand, or markedly higher gas and power prices, could increase utility demand for renewable generation and accelerate Energy Resources' earnings growth from new projects. Energy Resources could also begin to acquire renewable generation capacity in addition to building new plants. Our base case does not include potential acquisitions of renewable generation projects. On the other hand, the scheduled expiry of the production tax credit for wind in 2013 could slow the growth of renewable projects considerably.

PCG:

PG&E's valuation remains highly uncertain until the cost of its liability for the accident, the cost to survey its transmission grid, and the scale of any potential penalties imposed by the CPUC are known. Other risks to our target price for PG&E are primarily related to the upcoming 2011 GRC, which will set PG&E's rates and rate base for the period of 2011 through 2013, and thus determine PG&E's earnings for the period. Our EPS forecasts for 2010 and beyond, and thus our target price for PG&E, also could be put at risk by significant revisions to projected capital expenditures over our forecast period, corresponding to regulatory decisions. Longer-term risks include a reduction by the CPUC of PG&E's allowed ROE and equity ratio.

The eventual resolution of the liabilities arising from the San Bruno explosion, and the extent to which these liabilities are covered under PG&E's liability insurance policy, could have a material impact on our forecasts and target price.

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Ticker	Rating Changes	
AEP	M (IC) 01/15/03	
D	M (RC) 09/04/07	
DUK	M (RC) 08/05/04	
EIX	M (RC) 10/08/09	
EXC	M (RC) 02/05/10	
FE	M (RC) 10/27/10	O (RC) 08/05/09
PCG	O (RC) 03/22/07	

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From: Nelson, Tomeka
Sent: Fri 1/25/2013 6:25:53 PM
Subject: 2-week review report
1.25.2013.OP Review Status Update and Planning.docx

Tomeka Nelson,
OW Water Policy Staff (Detail)
202-566-1291
Room 3226C EPA East

To: Kopocis, Ken[Kopocis.Ken@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]; Balserak, Paul[Balserak.Paul@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]
Cc: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]; Levine, MaryEllen[levine.maryellen@epa.gov]
From: Penman, Crystal
Sent: Fri 7/11/2014 1:02:05 PM
Subject: 316B Call in Non-Responsive passcode Non-Responsive

To: Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Penman, Crystal
Sent: Thur 7/10/2014 12:35:48 PM
Subject: ECOS Water Committee Call

Dear Nancy and Ellen:

We discovered yesterday that both our Chair, Colleen Cripps (NV), and Vice Chair, Dave Paylor (VA), are not available on the time of the next ECOS Water Committee call which was July 24. Accordingly, we are now holding the call on the 17th of July from 2-3. We have an EPA update (which could you pls. include cooling water intake structures?) at the end of the agenda. Can you confirm whether one or both of you will be able to dial in? Also if there are additional items you'd like to add to the agenda, let me know.

I will follow up with Andrew Hanson in Intergovernmental Relations who is lining up OW speakers on the Tribes as States issue coming out of OST.

Hope you are both terrific!

Alex

Alexandra Dapolito Dunn, Esq.
Executive Director & General Counsel
Environmental Council of the States
50 F Street, NW, Suite 350
Washington, DC 20001
202-266-4929 (T); 202-230-4247 (C);202-266-4937 (F)
adunn@ecos.org
Twitter @ECOStates
View my research on my SSRN Page: http://ssrn.com/author=1356207
Register for ECOS' 7/31 STEP Conf. on 111(d) at www.ecos.org

To: Feldt, Lisa[Feldt.Lisa@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]; mbradley@mjbradley.com[mbradley@mjbradley.com]
From: Feldt, Lisa
Sent: Thur 6/12/2014 5:14:08 PM
Subject: General

RE: 316B

Attendees:
Joel Beauvais
Ken Kopocis
Michael Bradley

To: Feldt, Lisa[Feldt.Lisa@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Poole, Jacqueline[Poole.Jacqueline@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]
From: Feldt, Lisa
Sent: Fri 6/6/2014 1:58:20 PM
Subject: Meeting re: 316b

To: Senn, John[Senn.John@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Magruder, DeMara[Magruder.Demara@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Highsmith, Damon[Highsmith.Damon@epa.gov]; Zipf, Lynn[Zipf.Lynn@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Biddle, Lisa[Biddle.Lisa@epa.gov]; Ortiz, Julia[Ortiz.Julia@epa.gov]
From: Senn, John
Sent: Thur 5/15/2014 6:14:22 PM
Subject: 316(b) reporter call
Cooling Water Rule Announcement Conference Call - Tom Reynolds.ics

Here is the call in info for Ken for tomorrow's 316b press call happening at 12:45. Ken should call the "Leader" line: Non-Responsive, **though the operator will already have his name & know he will be joining the call on the Leader line.**

The press office will set up a conference line for this call...Julia, please let me know if you'd like us to come over your way to do the call with Monica in person.

FYI, DeMara, Ken will step out of the retreat to take this call.

20011028T020000

PRODID
-//Microsoft Corporation//Outlook 12.0 MIMEDIR//EN

Version
2.0

METHOD
REQUEST

TZID
US-Eastern

Start Date/Time
20011028T020000

Recurrence Rule
FREQ=YEARLY;INTERVAL=1;BYDAY=1SU;BYMONTH=11

TZOFFSETFROM
-0400

TZOFFSETTO
-0500

TZNAME
Standard Time

20020407T020000

Start Date/Time
20020407T020000

Recurrence Rule
FREQ=YEARLY;INTERVAL=1;BYDAY=2SU;BYMONTH=3

TZOFFSETFROM
-0500

TZOFFSETTO
-0400

TZNAME
Daylight Savings Time

Cooling Water Rule Announcement Conference Call - Tom Reynolds
Dial-In Number(s) :
20140516T124500

ORGANIZER
audio-teleconf@epamail.epa.gov

Start Date/Time
20140516T124500

End Date/Time
20140516T131500

Location
Dial-In Number(s) :

Time Transparency
OPAQUE

Sequence Number
0

DTSTAMP
20140515T154826

UID
20140515T1549366-61943030

Description
Leader Toll-Free Dial-In Number:
Participant Toll Free Dial-In Num

Non-Responsive

*
Non-Responsive

NOTE: In order to join this conference call, you will be required to provide the Conference ID Number listed above.

Summary
Cooling Water Rule Announcement Conference Call - Tom Reynolds

Categories

PUBLIC

TRIGGER
PT15M

ACTION
DISPLAY

Description
Reminder

Cc: Levine, MaryEllen[levine.maryellen@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]; Wade, Alexis[Wade.Alexis@epa.gov]; Vaught, Laura[Vaught.Laura@epa.gov]
To: Wood, Robert[Wood.Robert@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]
From: Kopocis, Ken
Sent: Thur 5/15/2014 10:47:17 AM
Subject: 316(b) Update

Call-in code
to call 866- **Non-Responsive**

To: Kopocis, Ken[Kopocis.Ken@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]
Cc: Levine, MaryEllen[levine.maryellen@epa.gov]
From: Penman, Crystal
Sent: Tue 5/13/2014 2:27:40 PM
Subject: 316(b) Call in Non-Responsive

Per Ken's request

To: Beauvais, Joel[Beauvais.Joel@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]
From: Beauvais, Joel
Sent: Mon 5/12/2014 5:44:27 PM
Subject: 316(b) ESA Call

To: Kopocis, Ken[Kopocis.Ken@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]
From: Penman, Crystal
Sent: Thur 5/8/2014 5:58:06 PM
Subject: 316(b) Call in 1 **Non-Responsive**

To: Loop, Travis[Loop.Travis@epa.gov]; Reynolds, Thomas[Reynolds.Thomas@epa.gov]; Purchia, Liz[Purchia.Liz@epa.gov]; Lee, Monica[Lee.Monica@epa.gov]; Ortiz, Julia[Ortiz.Julia@epa.gov]; Senn, John[Senn.John@epa.gov]; Lalley, Cara[Lalley.Cara@epa.gov]; Ganesan, Arvin[Ganesan.Arvin@epa.gov]; Bond, Brian[Bond.Brian@epa.gov]; Vaught, Laura[Vaught.Laura@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Loop, Travis
Sent: Thur 5/1/2014 7:44:49 PM
Subject: Roll Out: Cooling Water Intake - 316b

ÿ

To: Kopocis, Ken[Kopocis.Ken@epa.gov]; Vaught, Laura[Vaught.Laura@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]
From: Penman, Crystal
Sent: Tue 4/29/2014 7:25:17 PM
Subject: 316(b)

Per Ken's request

To: Feldt, Lisa[Feldt.Lisa@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Vaught, Laura[Vaught.Laura@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]
From: Feldt, Lisa
Sent: Tue 4/29/2014 2:16:23 PM
Subject: 316b

Ct. Robin Kime

Attendees:
Joel Beauvais
Ken Kopocis
Laura Vaught

To: Administrator B6 @epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Richardson, Elena[Richardson.Elena@epa.gov]; Kime, Robin[Kime.Robin@epa.gov]; Poole, Jacqueline[Poole.Jacqueline@epa.gov]; Veney, Carla[Veney.Carla@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]
From: Administrator B6
Sent: Mon 4/28/2014 3:18:47 PM
Subject: General Discussion

Subject: 316B Status
POC: Lisa Feldt

Staff:
Lisa Feldt (OA)
Joel Beauvais (OP)
Avi Garbow (OGC)
Ken Kopocis (OW)

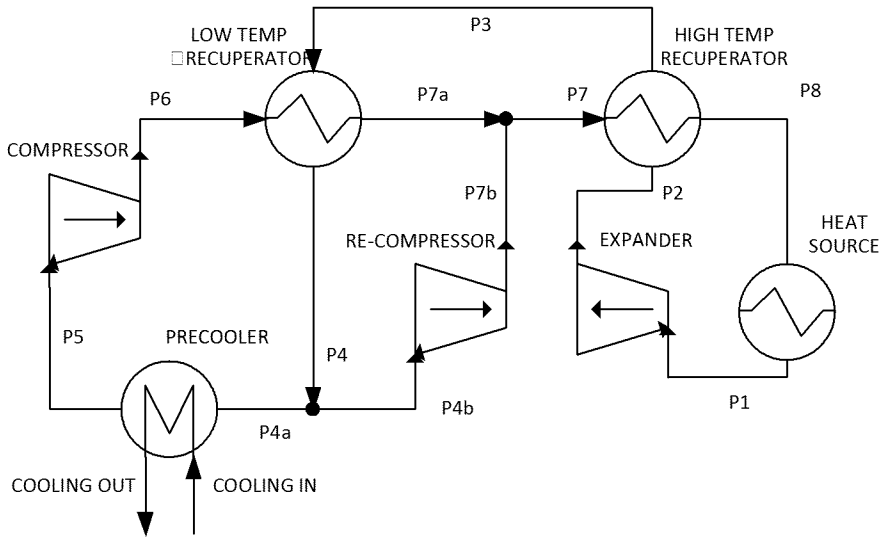
To: Feldt, Lisa[Feldt.Lisa@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]
From: Feldt, Lisa
Sent: Fri 4/18/2014 12:33:06 PM
Subject: 316 B

Ct. Elena Richardson

Call in: **Non-Responsive**

Staff:
Ken Kopocis
Joel Beauvais

To: Kopocis, Ken[Kopocis.Ken@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]
From: Penman, Crystal
Sent: Mon 4/14/2014 6:11:46 PM
Subject: 316b


LOW TEMP
RECUPERATOR
P3
HIGH TEMP
RECUPERATOR
P6
P7a
P7
P8
COMPRESSOR
P7b
P2
HEAT
SOURCE
RE-COMPRESSOR
EXPANDER
P5
PRECOOLER
P4
P4b
P1
P4a
COOLING OUT
COOLING IN

To: Kopocis, Ken[Kopocis.Ken@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]
From: Penman, Crystal
Sent: Mon 4/7/2014 7:22:44 PM
Subject: 316B Conference Call Call in Non-Responsive

To: **Administrator B6** @epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Veney, Carla[Veney.Carla@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]; Porterfield, Teri[Porterfield.Teri@epa.gov]
From: Herckis, Arian
Sent: Wed 3/12/2014 2:20:46 PM
Subject: Meeting re: 316b

SCt: Arian Herckis
Ct: Avi Garbow - 202-564-8040

Staff:
Avi Garbow, Steve Neugeboren (OGC)
Ken Kopocis (OW)
Joel Beauvais (OP)

From: Kopocis, Ken
Sent: Mon 3/10/2014 10:23:14 PM
Subject: Avi Call re 316(b)

To: Kopocis, Ken[Kopocis.Ken@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]
From: Penman, Crystal
Sent: Fri 2/28/2014 1:33:02 PM
Subject: 316b Call in Non-Responsive
2014_02_28_13_01_54.pdf

To: Kopocis, Ken[Kopocis.Ken@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]
From: Penman, Crystal
Sent: Wed 2/26/2014 1:35:37 PM
Subject: Prebrief 316B

To: Administrator B6 @epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Veney, Carla[Veney.Carla@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Administrator B6
Sent: Tue 2/25/2014 10:01:27 PM
Subject: Meeting re: 316b

SCt: Arian Herckis
Ct: Avi Garbow

Staff:
Avi Garbow (OGC)
Lisa Feldt (OA)
Ken Kopocis (OW)

From: Kopocis, Ken
Sent: Wed 2/19/2014 11:49:22 PM
Subject: 316(b) Outreach

To: Administrator B6 @epa.gov]; Tate, Jeffrey[Tate.Jeffrey@epa.gov]; Collins, Adrian[Collins.Adrian@epa.gov]; Geller, Michael[Geller.Michael@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Ingram, Amir[Ingram.Amir@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Tarquinio, Ellen[Tarquinio.Ellen@epa.gov]; McCabe, Janet[McCabe.Janet@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]
Cc: Carbon Pollution Input[CarbonPollutionInput@epa.gov]
From: Herckis, Arian
Sent: Wed 2/19/2014 10:09:01 PM
Subject: Meeting with Exelon CEO Chris Crane

SCt: Alison Kukla
Ct: Amy Trojecki, amy.trojecki@exeloncorp.com, 215-823-9104

Staff:
Avi Garbow (OGC)
Ken Kopocis (OW)
Janet McCabe, Joe Goffman (OAR)

Attendees:
Joe Dominguez, Senior Vice President, Governmental and Regulatory Affairs and Public Policy
Kathleen Barron, Senior Vice President, Federal Regulatory Affairs and Wholesale Market Policy
Amy Trojecki, Director, Environmental and Fuels Policy

Topics of Discussion:
- GHG NSPS regulations for power plants
- 316(b) cooling water intake structure rule

To: Feldt, Lisa[Feldt.Lisa@epa.gov]; Kopocis, Ken[Kopocis, Ken]; Beauvais, Joel[Beauvais, Joel]; Garbow, Avi[Garbow, Avi]
From: Richardson, Elena
Sent: Wed 2/19/2014 12:43:34 PM
Subject: 316B Discussion

Ct. Elena Richardson 564-5936

Staff:
Avi Garbow
Joel Beauvais
Ken Kopocis

To: Spraul, Greg[Spraul.Greg@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Distefano, Nichole[DiStefano.Nichole@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]
From: Spraul, Greg
Sent: Fri 2/7/2014 7:01:20 PM
Subject: Call w/ House Oversight minority on ESA and 316(b)

To: Administrator B6 @epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Ingram, Amir[Ingram.Amir@epa.gov]; Tarquinio, Ellen[Tarquinio.Ellen@epa.gov]
From: Administrator B6
Sent: Thur 2/6/2014 3:19:30 PM
Subject: Meeting re: 316B

SCt: Alison Kukla

Staff:
Lisa Feldt (OA)
Avi Garbow, Steve Neugeboren (OGC)
Ken Kopocis (OW)

From: Kopocis, Ken
Sent: Wed 2/5/2014 1:14:53 PM
Subject: Cooling Water Mtg hosted by Rob Nabors

To: Beauvais, Joel[Beauvais.Joel@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Barron, Alex[Barron.Alex@epa.gov]; Balserak, Paul[Balserak.Paul@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Poole, Jacqueline[Poole.Jacqueline@epa.gov]; Newbold, Steve[Newbold.Steve@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]
Cc: Kime, Robin[Kime.Robin@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]
From: Kime, Robin
Sent: Tue 2/4/2014 4:09:09 PM
Subject: 316(b) Preliminary Comments

POC: Balserak

From: Kopocis, Ken
Sent: Mon 2/3/2014 9:13:30 PM
Subject: Avi Garbow and Lisa Feldt re 316(b)

To: Administrator B6 @epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Deputy Administrator[62Perciasepe.Bob73@epa.gov]; Anderson, Denise[anderson.denise@epa.gov]
From: Herckis, Arian
Sent: Mon 1/27/2014 9:00:46 PM
Subject: Meeting re: 316b

SCt: Arian Herckis
Ct: Lisa Feldt -202- 566-0183

Staff:
Avi Garbow +1 (OGC)
Ken Kopocis +1 (OW)
Lisa Feldt (OA)

Optional:
Deputy Perciasepe

From: Kopocis, Ken
Sent: Fri 1/24/2014 11:49:29 PM
Subject: 316(b) and nuclear; options 2 and 3 for ann mcmillan

To: Garbow, Avi[Garbow.Avi@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Levine, MaryEllen[levine.maryellen@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]; Wade, Alexis[Wade.Alexis@epa.gov]; Mallory, Brenda[Mallory.Brenda@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]
From: Garbow, Avi
Sent: Fri 1/24/2014 6:03:46 PM
Subject: Discussion on 316(b) and ESA

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Shapiro, Mike[Shapiro.Mike@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Keehner, Denise[Keehner.Denise@epa.gov]; Lape, Jeff[lape.jeff@epa.gov]; Best-Wong, Benita[Best-Wong.Benita@epa.gov]; Sawyers, Andrew[Sawyers.Andrew@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Grevatt, Peter[Grevatt.Peter@epa.gov]; Frace, Sheila[Frace.Sheila@epa.gov]; Bissonette, Eric[Bissonette.Eric@epa.gov]
Cc: Telleen, Katherine[Telleen.Katherine@epa.gov]; Flaharty, Stephanie[Flaharty.Stephanie@epa.gov]; Zipf, Lynn[Zipf.Lynn@epa.gov]; Faller, Heidi[Faller.Heidi@epa.gov]; Peck, Gregory[Peck.Gregory@epa.gov]; Lousberg, Macara[Lousberg.Macara@epa.gov]; Evalenko, Sandy[Evalenko.Sandy@epa.gov]; Skane, Elizabeth[Skane.Elizabeth@epa.gov]; Ruf, Christine[Ruf.Christine@epa.gov]; Loop, Travis[Loop.Travis@epa.gov]; Scozzafava, MichaelE[Scozzafava.MichaelE@epa.gov]; Code, Tanya[Code.Tanya@epa.gov]; Ortiz, Agnes[Ortiz.Agnes@epa.gov]; Krieger, Andrew[Krieger.Andrew@epa.gov]; Lopez-Carbo, Maria[Lopez-Carbo.Maria@epa.gov]; Sanelli, Diane[Sanelli.Diane@epa.gov]; Peterson, Jeff[Peterson.Jeff@epa.gov]; Bathersfield, Nizanna[Bathersfield.Nizanna@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Nelson, Tomeka[Nelson.Tomeka@epa.gov]
From: Nelson, Tomeka
Sent: Fri 9/13/2013 5:32:19 PM
Subject: 2-week review report
9.13.2013 OP Review Status Update and Planning.docx

Have a great weekend!

Tomeka Nelson

OW Water Policy Staff (Detail)

202-566-1291

3226C - WJC East

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Wood, Robert
Sent: Fri 9/13/2013 12:25:08 PM
Subject: 316(b) Meeting Today

Is it OK with you if I include Paul Balserak from OP in our meeting with you today? I'm trying to keep Paul up to speed. If OK I'll forward the invitation to him. Also, Ken is not on the invitation and I can forward it to him at the same time.

Robert Wood
Director,
Engineering and Analysis Division
202-566-1822ÿ

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
Cc: Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Zobrist, Marcus[Zobrist.Marcus@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]
From: Wood, Robert
Sent: Mon 9/9/2013 2:07:57 PM
Subject: RE: do we need to talk before 316(b) meeting?

We're headed over to your office now.

Robert Wood

Engineering and Analysis Division

Office of Water

202-566-1822

From: Stoner, Nancy
Sent: Monday, September 09, 2013 10:03 AM
To: Wood, Robert; Southerland, Elizabeth
Cc: Neugeboren, Steven; Zobrist, Marcus
Subject: RE: do we need to talk before 316(b) meeting?

That's fine, but you are welcome to come over also. Whatever you prefer.

From: Wood, Robert
Sent: Monday, September 09, 2013 10:02 AM
To: Stoner, Nancy; Southerland, Elizabeth
Cc: Neugeboren, Steven; Zobrist, Marcus
Subject: RE: do we need to talk before 316(b) meeting?

I'm on the phone with Steve on same topic. Yes, a conversation ahead of time would be good. Is 10:15 good for 30 minutes? We could do it by phone at 1-866-299-3188, Non-Responsive #

From: Stoner, Nancy
Sent: Monday, September 09, 2013 9:55 AM
To: Wood, Robert; Southerland, Elizabeth
Subject: do we need to talk before 316(b) meeting?

I am available if it would be helpful

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Scozzafava, MichaelE
Sent: Fri 9/6/2013 11:39:43 AM
Subject: RE: 316b materials

OK...I have them from OST and will get them loaded up now

-----Original Message-----
From: Stoner, Nancy
Sent: Friday, September 06, 2013 7:36 AM
To: Scozzafava, MichaelE
Subject: Re: 316b materials

I didn't

From: Scozzafava, MichaelE
Sent: Thursday, September 05, 2013 4:41:25 PM
To: Stoner, Nancy
Subject: 316b materials

Hey Nancy,

I hope you're not reading this, but if so - and you're planning to review these materials before they go to Bob P - please send to me when ur ready and I'll get them loaded up.

Thanks and I hope you're having a pleasant holiday.

Mike
ÿ

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Scozzafava, MichaelE
Sent: Thur 9/5/2013 8:41:25 PM
Subject: 316b materials

Hey Nancy,

I hope you're not reading this, but if so - and you're planning to review these materials before they go to Bob P - please send to me when ur ready and I'll get them loaded up.

Thanks and I hope you're having a pleasant holiday.

Mikeÿ

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Penman, Crystal
Sent: Thur 9/5/2013 6:27:32 PM
Subject: FW: Materials for ESA consultation issues for 316(b) cooling water intake rule 9/6 w/ Deputy Admin

For your review: Meeting w/Bob P 9/6 @ 12:30pm

From: Hewitt, Julie
Sent: Thursday, September 05, 2013 2:09 PM
To: Penman, Crystal; Wood, Robert
Subject: RE: Materials for ESA consultation issues for 316(b) cooling water intake rule 9/6 w/ Deputy Admin

Yes; I just got from staff and am reviewing now. I should be able to send in a few minutes.

From: Penman, Crystal
Sent: Thursday, September 05, 2013 2:08 PM
To: Wood, Robert; Hewitt, Julie
Subject: Materials for ESA consultation issues for 316(b) cooling water intake rule 9/6 w/ Deputy Admin

Are there any materials that Nancy need to review prior to submission to the office of the administrator? Please advise.

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Penman, Crystal
Sent: Wed 9/4/2013 1:06:59 PM
Subject: RE: Wrong room

Climate change meeting in 3106. Remember no audio in 2369b. ESA for this afternoon will be is 2123 EPA EAST

-----Original Message-----
From: Stoner, Nancy
Sent: Wednesday, September 04, 2013 9:05 AM
To: Penman, Crystal
Subject: Wrong room

I and several others are in 2369b. Apparently the room changed.

Where is the 316b mtg w/Services? My calendar says 2133
ÿ

To: Kopocis, Ken[Kopocis.Ken@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]
Cc: Magruder, DeMara[Magruder.Demara@epa.gov]
From: Scozzafava, MichaelE
Sent: Tue 9/3/2013 2:56:46 PM
Subject: RE: EEI

Sure…

From: Kopocis, Ken
Sent: Tuesday, September 03, 2013 10:56 AM
To: Scozzafava, MichaelE; Stoner, Nancy
Cc: Magruder, DeMara
Subject: RE: EEI

Will you see what materials she needs?

From: Scozzafava, MichaelE
Sent: Tuesday, September 03, 2013 10:50 AM
To: Kopocis, Ken; Stoner, Nancy
Cc: Magruder, DeMara
Subject: EEI

Ken/Nancy:

Ken will be added to the meeting with the Administrator and EEI on Thursday. It's a two hour meeting, and the first topic (i.e. from 9 to 10) will be 316b. An invite is forthcoming.

Mike

Michael Scozzafava

Special Assistant

Office of the Administrator

ARN 3316

202-566-1376

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
Cc: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Wade, Alexis[Wade.Alexis@epa.gov]
From: Wood, Robert
Sent: Wed 8/28/2013 4:33:22 PM
Subject: RE: Another mtg needed on 316(b) with the Services

It would be good if FWS folks are present for the next meeting or we could offer to go to their offices.

Robert Wood
Engineering and Analysis Division
Office of Water
202-566-1822

-----Original Message-----
From: Stoner, Nancy
Sent: Wednesday, August 28, 2013 11:28 AM
To: Penman, Crystal
Cc: Wood, Robert
Subject: Another mtg needed on 316(b) with the Services

Same group as this morning. We'd like it to be Tues or Wed if possible. Thx
ÿ

To: Wood, Robert[Wood.Robert@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]
Cc: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Born, Tom[Born.Tom@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]; Wade, Alexis[Wade.Alexis@epa.gov]; Zobrist, Marcus[Zobrist.Marcus@epa.gov]; Nagle, Deborah[Nagle.Deborah@epa.gov]
From: Clark, Donetta
Sent: Wed 8/28/2013 4:21:06 PM
Subject: RE: Another mtg needed on 316(b) with the Services

Just sent it.

Thank you,

Donetta Clark
Office Management Support, Level 4
NCBA-SEE - Office of Water/Office of Science & Technology
1301 Constitution Avenue, NW, Room 5233 West - MC 4301T
Washington, DC 20460
Main: 202-566-0130
Fax: 202-566-0441

-----Original Message-----
From: Wood, Robert
Sent: Wednesday, August 28, 2013 12:18 PM
To: Stoner, Nancy; Penman, Crystal
Cc: Southerland, Elizabeth; Clark, Donetta; Hewitt, Julie; Born, Tom; Witt, Richard; Wade, Alexis; Zobrist, Marcus; Nagle, Deborah
Subject: RE: Another mtg needed on 316(b) with the Services

Crystal,

We have put in a meeting request for this and Betsy just signed it. It's heading to OW now. Thanks

Rob

Robert Wood
Engineering and Analysis Division
Office of Water
202-566-1822

-----Original Message-----
From: Stoner, Nancy
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To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]
Cc: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Clark, Donetta[Clark.Donetta@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Born, Tom[Born.Tom@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]; Wade, Alexis[Wade.Alexis@epa.gov]; Zobrist, Marcus[Zobrist.Marcus@epa.gov]; Nagle, Deborah[Nagle.Deborah@epa.gov]
From: Wood, Robert
Sent: Wed 8/28/2013 4:17:40 PM
Subject: RE: Another mtg needed on 316(b) with the Services

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Robert Wood
Engineering and Analysis Division
Office of Water
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To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]
From: Wood, Robert
Sent: Fri 8/16/2013 3:59:08 PM
Subject: FYI FW: GOP Senators Urge EPA To Drop Use Survey For Cooling Water Benefits

FYI, Below is an Inside EPA article about opposition to the stated preference survey, along with a bit of commentary from Steve Newbold in EPA's NCEE.

Robert Wood

Engineering and Analysis Division

Office of Water

202-566-1822

From: newbold.steve@gmail.com [mailto:newbold.steve@gmail.com] **On Behalf Of** Steve Newbold
Sent: Friday, August 16, 2013 11:39 AM
To: Wood, Robert
Cc: McGartland, Al; Hewitt, Julie; Simon, Nathalie; Moore, Chris; Maguire, Kelly; Dockins, Chris; Spraul, Greg; Bowen, Jennifer
Subject: Re: GOP Senators Urge EPA To Drop Use Survey For Cooling Water Benefits

Ex. 5 - Deliberative

populations."

****

Steve Newbold

U.S. EPA

National Center for Environmental Economics (NCEE)

EPA West 4316T (MC1809T)

1200 Pennsylvania Ave NW

Washington, DC 20460

(202)566-2293

****

On Fri, Aug 16, 2013 at 11:23 AM, Wood, Robert <Wood.Robert@epa.gov> wrote:

Ex. 5 - Deliberative

Robert Wood

Director,

Engineering and Analysis Division

Office of Water

202-566-1822

From: McGartland, Al

Sent: Friday, August 16, 2013 10:55 AM
To: Newbold, Steve; Hewitt, Julie; Wood, Robert; Simon, Nathalie; Moore, Chris; Maguire, Kelly; Dockins, Chris
Subject: FW: GOP Senators Urge EPA To Drop Use Survey For Cooling Water Benefits

From: Germann, Sandy
Sent: Friday, August 16, 2013 7:59 AM
To: Goo, Michael; Kenny, Shannon; Kime, Robin; Barron, Alex; McGartland, Al; Simon, Nathalie; Bowen, Jennifer; Moore, Chris
Subject: GOP Senators Urge EPA To Drop Use Survey For Cooling Water Benefits

Inside EPA on GOP questioning of stated preference study for water intake rule….

GOP Senators Urge EPA To Drop Use Survey For Cooling Water Benefits

Outlet Full Name: Inside EPA Weekly Report
News Text: GOP lawmakers are calling on EPA to reconsider the cost-benefit analysis of its pending Clean Water Act cooling water intake rule, arguing that the agency used questionable assessment methods to "deliberately inflate" the benefits of the measure to justify its price tag.

In a recent letter to Nancy Stoner, acting head of EPA's Office of Water, key Republicans on the Senate Environment & Public Works Committee (EPW) argue that the agency's use of a "stated preference survey," which asks participants what they would pay to prevent fish and other species from being harmed, is inappropriate for calculating the benefits of the rule.

"The results of this survey cannot be taken as credible estimates of potential benefits of the proposed rule and certainly cannot be used to justify spending hundreds of millions or potentially billions of dollars each year," the senators argue in the letter. "Accordingly, EPA should not use the results of the stated preference survey as the basis for a final rule." The letter is available on InsideEPA.com. (Doc ID: 2442104)

The cooling water intake rule under CWA section 316(b), which EPA proposed in 2011, generally sets a flexible, site-specific standard for reducing the entrainment of fish eggs and larvae into cooling water systems but sets a strict nationwide standard for reducing the impingement of live adult fish on the structures.

The measure is one of two water rules EPA is developing that power plant operators fear will create a new round of requirements for electricity generators after the agency's suite of recent air rules, and which top industry officials are lobbying EPA to soften.

Industry groups have largely praised the entrainment portion of the rule but have urged the agency to develop a similarly flexible standard for impingement. The agency has indicated that it will include significant flexibilities in the final version of the rule, steering away from a closed-system standard.

But environmentalists have long sought to strengthen the rule's requirements, in part to better protect endangered

species. The agency is currently undertaking formal consultation of the proposal with federal wildlife officials to determine if the final rule will have any effects on species in violation of the Endangered Species Act and whether mitigation measures are necessary.

The ESA consultation could strengthen the rule, and potentially increase the stated benefits because of its protection of species.

Riverkeeper, Natural Resources Defense Council (NRDC), Sierra Club and a slew of other environmental groups, in Aug. 18, 2011, comments made the case for EPA to consult with the services on the rule given its potential effects. While the groups recognized that it is difficult to quantify the benefits from protecting endangered species given the focus in the past on studying the economic benefits of protecting commercial and recreational benefits, they said "[t]he protection of federally listed species is considered to be paramount, and protection of these species cannot be weighed against a cost-benefit analysis."

Meanwhile, industry and Republicans have long raised concerns about EPA's use of the survey to calculate benefits of the rule. When calculating benefits in most cases, EPA will look at the value of recreational and commercial fisheries that could be aided by the rule. However, for the 316(b) rule, it decided to reach out to individuals to determine what value they gave to fish and fish populations that could be effected by the rule, a method industry has deemed to be inappropriate.

In Feb. 22, 2011, comments on the information collection request for the survey, American Chemistry Council, American Forest & Paper Association, American Petroleum Institute and Utility Water Act Group, which represents power plants, raised concerns that EPA's survey lacked necessary utility because it examined large-scale changes in fish populations, while the rule focused on individual fish and egg losses.

Further, the industry players said that the survey leads respondents to incorrect assumptions about loss of life in fish populations due to cleaning water intake structures. "The survey respondents are given a choice of doing nothing ('status quo') or saving seemingly huge numbers (0.3 to 2.6 billion) of fish and affecting 'populations' and 'ecosystems.'" All alternatives in the survey focus on large percentages of fish populations, industry says in the comments, and never small proportions or small numbers of fish that would have no effect on populations or ecosystems.

In their July 22 letter, Republican Sens. David Vitter (LA), Mike Crapo (ID), James Inhofe (OK) and John Boozman (AR), back industry's concerns, noting that "stated preference surveys are one of the most controversial methods for estimating non-use benefits because they are based on what individuals say they would do as opposed to what they are actually observed doing. There are very few instances in which such a complicated and subjective tool can be used with any degree of reliability."

The lawmakers raise issues in particular with the shift in the cost-benefit analysis of the rule after EPA added the survey results, which took the benefits of the rule from $16.3 million annually to $2.275 billion, compared to annual estimated costs of $466 million.

"This is a substantial and questionable increase in benefits," the lawmakers write, and as a result, EPA should scrap the use of the survey and avoid setting a dangerous precedent.

"EPA has never attempted to justify an entire regulation primarily on non-use benefits," the senators argue. "Doing so now would set a dangerous precedent that would interject arbitrariness and unpredictability in the regulatory process and allow regulators to justify actions based on public opinion surveys rather than sound science."

Sandy Germann

U.S. Environmental Protection Agency

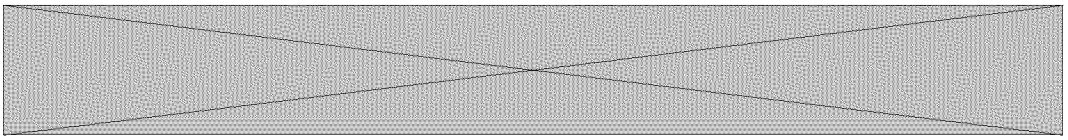
Office of Policy

919-359-1523 (MWF)

919-541-3061 (TTH)

919-818-2909 (cell)

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: E&E Publishing, LLC
Sent: Tue 7/30/2013 5:18:57 PM
Subject: July 30 -- Greenwire is ready



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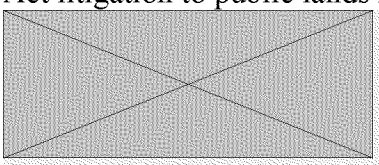

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RIN: 2040-AE95 (201310) **Agency/Sub Agency:** 2040 EPA/WATER **Tracking #:**
Stage of Rulemaking: Final Rule Stage **Submitted By:** Caryn Muellerleile **Submitted Date:** 07/26/2013
Title: Criteria and Standards for Cooling Water Intake Structures

EO Review Package 2040-AE95

EO Review Package was successfully submitted at 07/26/2013 13:54:05 PM.

Primary Document: EO12866_Cooling Water Intakes_2040-AE95_Preamble_20130722.docx

Supplementary Documents

Title	Document	Date Uploa
EO12866_Cooling Water Intakes_2040-AE95_Final_Rule_20130722.docx	EO12866_Cooling Water Intakes_2040-AE95_Final_Rule_20130722.docx	07/26/201
EO12866_Cooling Water Intakes_2040_AE95_BenAnal_20130719 (2).pdf	EO12866_Cooling Water Intakes_2040_AE95_BenAnal_20130719 (2).pdf	07/26/201
EO12866_Cooling Water Intakes_AE95-2040_EconAnal_20130605.pdf	EO12866_Cooling Water Intakes_AE95-2040_EconAnal_20130605.pdf	07/26/201

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EO12866_Cooling Water Intakes_2040_AE95_BenAnal_20130719 (2).pdf	EO12866_Cooling Water Intakes_2040_AE95_BenAnal_20130719 (2).pdf	07/26/2013
EO12866_Cooling Water Intakes_AE95-2040_EconAnal_20130605.pdf	EO12866_Cooling Water Intakes_AE95-2040_EconAnal_20130605.pdf	07/26/2013

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]
From: Kopocis, Ken
Sent: Fri 7/26/2013 3:47:42 PM
Subject: 316(b)

Is being uploaded today.
KKÿ

To: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]
Cc: Kopocis, Ken[Kopocis.Ken@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Zipf, Lynn[Zipf.Lynn@epa.gov]; Lalley, Cara[Lalley.Cara@epa.gov]
From: Altieri, Sonia
Sent: Wed 7/24/2013 8:43:49 PM
Subject: RE: 316(b) Section 7 Consultation Letter & Biological Assessment

Done! I've sent the documents to the industry stakeholders and cc'd you.

From: Southerland, Elizabeth
Sent: Wednesday, July 24, 2013 2:09 PM
To: Altieri, Sonia
Cc: Kopocis, Ken; Gilinsky, Ellen; Stoner, Nancy; Wood, Robert; Zipf, Lynn; Lalley, Cara
Subject: FW: 316(b) Section 7 Consultation Letter & Biological Assessment

Sonia, I have checked everything out, and you can now send to all the industrial stakeholders these two attachments. The first is the redacted BE, already accessible through our FOIA database. The other is the June 18 request for formal consultation, uploaded on the Inside EPA website last Friday.

Elizabeth Southerland, Director

Office of Science & Technology

Office Water

Room 5233A - MC - 4301T

Washington, D. C. 20460

Direct: (202) 566-0328

Fax: (202) 566-0441

To: Kopocis, Ken[Kopocis.Ken@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]
Cc: Skane, Elizabeth[Skane.Elizabeth@epa.gov]
From: Southerland, Elizabeth
Sent: Mon 7/22/2013 11:24:30 AM
Subject: Re: 316(b) Section 7 Consultation Letter & Biological Assessment

Elizabeth Skane, my special assistant, will set up a meeting so Rob and I can discuss next steps.

From: Kopocis, Ken
Sent: Sunday, July 21, 2013 8:51:16 PM
To: Southerland, Elizabeth; Stoner, Nancy; Gilinsky, Ellen; Wood, Robert
Subject: Re: 316(b) Section 7 Consultation Letter & Biological Assessment

We should discuss.
I have a lot of time Tuesday between 2:30 and 6:30.

From: Southerland, Elizabeth
Sent: Saturday, July 20, 2013 3:06:16 PM
To: Stoner, Nancy; Kopocis, Ken; Gilinsky, Ellen; Wood, Robert
Subject: Fw: 316(b) Section 7 Consultation Letter & Biological Assessment

Oh well, the best laid plans don't always work out....

From: Bozek, Richard <RBozek@eei.org>
Sent: Friday, July 19, 2013 3:07:00 PM
To: Southerland, Elizabeth
Cc: Lousberg, Macara
Subject: RE: 316(b) Section 7 Consultation Letter & Biological Assessment

So the June 18 Bob Wood letter was just released via Inside EPA today. Any chance of getting the Biological Assessment in advance of the press?

As always,

Thanks,

Rich

C. Richard Bozek

Director, Environmental Policy

Edison Electric Institute

701 Pennsylvania Ave., N.W.

Washington, D.C. 20004-2696

(202) 508-5641

Rbozek@eei.org

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From: Southerland, Elizabeth [mailto:Southerland.Elizabeth@epa.gov]
Sent: Thursday, July 18, 2013 5:22 PM
To: Bozek, Richard
Cc: Lousberg, Macara
Subject: Re: 316(b) Section 7 Consultation Letter & Biological Assessment

I am out of the office in meetings this week but have instructed staff to make any necessary redactions. They will then send this info on to Macara so she can send out from the Office of Water to all the people who requested this info. I assume that she will send out next week.

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Sent: Thursday, July 18, 2013 12:17:06 PM
To: Southerland, Elizabeth
Subject: 316(b) Section 7 Consultation Letter & Biological Assessment

Betsy,

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FOIA'd and that the agency would share the redacted version of that document as well. I appreciate this.

Please forward the documents to me at your earliest convenience. I understand the BE may not be prepared yet, but if you could email the other today, that would be much appreciated.

Cordially,

Rich

C. Richard Bozek

Director, Environmental Policy

Edison Electric Institute

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Rbozek@eei.org

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Cc: Lousberg, Macara
Subject: Re: 316(b) Section 7 Consultation Letter & Biological Assessment

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Rich

C. Richard Bozek

Director, Environmental Policy

Edison Electric Institute

701 Pennsylvania Ave., N.W.

Washington, D.C. 20004-2696

(202) 508-5641

Rbozek@eei.org

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To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]
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From: Bozek, Richard <RBozek@eei.org>
Sent: Friday, July 19, 2013 3:07:00 PM
To: Southerland, Elizabeth
Cc: Lousberg, Macara
Subject: RE: 316(b) Section 7 Consultation Letter & Biological Assessment

So the June 18 Bob Wood letter was just released via Inside EPA today. Any chance of getting the Biological Assessment in advance of the press?

As always,

Thanks,

Rich

C. Richard Bozek

Director, Environmental Policy

Edison Electric Institute

701 Pennsylvania Ave., N.W.

Washington, D.C. 20004-2696

(202) 508-5641

Rbozek@eei.org

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From: Southerland, Elizabeth [mailto:Southerland.Elizabeth@epa.gov]
Sent: Thursday, July 18, 2013 5:22 PM
To: Bozek, Richard
Cc: Lousberg, Macara
Subject: Re: 316(b) Section 7 Consultation Letter & Biological Assessment

I am out of the office in meetings this week but have instructed staff to make any necessary redactions. They will then send this info on to Macara so she can send out from the Office of Water to all the people who requested this info. I assume that she will send out next week.

From: Bozek, Richard <RBozek@eei.org>
Sent: Thursday, July 18, 2013 12:17:06 PM
To: Southerland, Elizabeth
Subject: 316(b) Section 7 Consultation Letter & Biological Assessment

Betsy,

Yesterday at the Industry coffee meeting you discussed the ongoing Section 7 consultation between the agency and the services. You noted that the agency would share the letter to the Services requesting consultation. You also mentioned the biological evaluation had been FOIA'd and that the agency would share the redacted version of that document as well. I appreciate this.

Please forward the documents to me at your earliest convenience. I understand the BE may not be prepared yet, but if you could email the other today, that would be much appreciated.

Cordially,

Rich

C. Richard Bozek

Director, Environmental Policy

Edison Electric Institute

701 Pennsylvania Ave., N.W.

Washington, D.C. 20004-2696

(202) 508-5641

Rbozek@eei.org

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To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Kopocis, Ken
Sent: Fri 7/19/2013 12:04:44 PM
Subject: RE: Swearing in is at 10

FYI. Today, BNA did an extensive story on Gina and the upcoming EPA agenda. It listed 12 "full plate" items for the agenda.
On the list are diesel fuel in fracking, the fracking drinking water study, stormwater, WOUS, 316(b), and mountaintop mining and the CWA. It also includes CCR without recognizing the relation to steam electric. While climate gets the most attention, OW could certainly be the busy.

-----Original Message-----
From: Stoner, Nancy
Sent: Friday, July 19, 2013 7:17 AM
To: Kopocis, Ken
Subject: Swearing in is at 10

Want to be sure you know about it
ÿ

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Kopocis, Ken
Sent: Tue 7/2/2013 10:13:40 PM
Subject: Re: 316 (b) ESA Consultation Senior Management Check in Call 1-866-299-3188 passcode

Non-Responsive

Yes.

From: Stoner, Nancy
Sent: Tuesday, July 02, 2013 5:07:24 PM
To: Kopocis, Ken
Subject: Fw: 316 (b) ESA Consultation Senior Management Check in Call 1-866-299-3188

Non-Responsive

Can you do this instead?

From: Bean, Michael
Sent: Tuesday, July 02, 2013 11:54:54 AM
To: Stoner, Nancy
Subject: Re: 316 (b) ESA Consultation Senior Management Check in Call 1-866-299-3188

Non-Responsive

Nancy: If you have a few minutes, could you please call me today to discuss the St Johns Bayou/New Madrid Floodway matter? My direct line is 202-208-7400. Michael Bean

On Fri, Jun 21, 2013 at 9:24 AM, Stoner, Nancy <Stoner.Nancy@epa.gov> wrote:

> When: Tuesday, July 02, 2013 2:00 PM-3:30 PM (GMT-05:00) Eastern Time (US & Canada).
> Where: EPA 1201 Constitution Ave NW, Washiington DC 20004 EPA EAST 3233 Please call 202-564-5700 for escort.
>
> Note: The GMT offset above does not reflect daylight saving time adjustments.
>
> *~*~*~*~*~*~*~*~*~*~*

--

Michael J. Bean

Counselor to the Assistant Secretary for Fish and Wildlife and Parks

Room 3152, Department of the Interior

Washington, DC 20240

202-208-4416

202-208-4684 (fax)

michael_bean@ios.doi.gov

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Acting Administrator[62Perciasepe.Bob73@epa.gov]
Cc: Mccarthy, Gina[McCarthy.Gina@epa.gov]; Ganesan, Arvin[Ganesan.Arvin@epa.gov]; Reynolds, Thomas[Reynolds.Thomas@epa.gov]; Fritz, Matthew[Fritz.Matthew@epa.gov]; KeyesFleming, Gwen[KeyesFleming.Gwendolyn@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Stoner, Nancy
Sent: Fri 6/28/2013 10:08:25 PM
Subject: RE: OW Hot issues -- June 28 -- deliberative

I will be out of the office next week. Ellen will be Acting AA. I will have my blackberry if you need to contact me.

Lots of stuff happening here in OW. Here are a few highlights

Ex. 5 - Deliberative

Cooling water intakes -- Only thing new this week is that the new date for completion of the rule, Nov 4, was made public by the plaintiffs. ESA consultation is ongoing. The next principals meeting is next week.

Ex. 5 - Deliberative

Ex. 5 - Deliberative

Ex. 5 - Deliberative

That's it for now. I am copying Ken since I am out next week.

Nancy

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To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Tracy, Kirk
Sent: Fri 6/28/2013 8:23:31 PM
Subject: Association of Clean Water Administrators Weekly Wrap Vol. IV Issue 25 (Week of June 24, 2013)

All:

This Week's Wrap is accessible here*:

http://image.exct.net/lib/fe6515707660027970 17/m/1/ACWA_Weekly_Wrap_Vol+4_Issue+25_FINAL.pdf

**Please try refreshing your browser if you encounter font formatting issues that make the above-linked PDF difficult to view when first opened. Please notify us if this fails to correct the problem.*

In this issue . . .

- ACWA Annual Meeting '13 Quickly Approaching! Book your lodging in time for the ACWA rate!

- ACWA's Annual Awards

- Healthy Watersheds MOU Kickoff

- 316(b) Cooling Water Intake Rule Delayed

- Decentralized MOU

- Proposed Steam Electric ELG

- Nutrients Policy Committee Call

- State/EPA Rural Branch Workgroup

- EPA Lab Competency Policy—New Effective Date

- Support Letter for NAWQA Funding

- Hill Briefing on Infrastructure Financing

- SCOTUS Ruling on Takings in Permit Denials

- CWA/SDWA Collaboration—NPDES Workgroup

- One Water Management Perspectives

- ACWA Video Interview

There will be no Wrap next week, due to the holiday. We hope everyone has a fun and safe 4th of July!

This week's Wrap will be posted to the web early next week on ACWA's website - where you can currently find the last five issues and an archive of the issues from 2012 to present.

What is the Wrap? The Weekly Wrap is a one page road map of the past week's events and upcoming activities. The Wrap reminds our membership of important deadlines and may highlight information distributed by the Association. Please direct any Wrap comments to Susan Kirsch at skirsch@acwa-us.org.

Thanks!

The ACWA Staff

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Penman, Crystal
Sent: Thur 6/20/2013 3:45:26 PM
Subject: RE: 316(b) ESA Consultation Senior Management Check in Call at 2 PM Today, Thursday June 20 - Call in Non-Responsive

I called every office to make sure they were aware of the meeting today.

From: Stoner, Nancy
Sent: Thursday, June 20, 2013 11:42 AM
To: Penman, Crystal
Subject: FW: 316(b) ESA Consultation Senior Management Check in Call at 2 PM Today, Thursday June 20 - Call in Non-Responsive

For 2 pm – note the difficulties with the invitation

From: Wood, Robert
Sent: Thursday, June 20, 2013 11:23 AM
To: Donna.Wieting@noaa.gov; gary_frazer@fws.gov; paul_souza@fws.gov; helen.golde@noaa.gov; lois.schiffer@noaa.gov; michael_bean@ios.doi.gov
Cc: Jennifer.Schultz@noaa.gov; Ron.Dean@noaa.gov; Pamela.Lawrence@noaa.gov; Drew_Crane@fws.gov; Patrice_Ashfield@fws.gov; Rick_Sayers@fws.gov; Stoner, Nancy; Hewitt, Julie; Kopocis, Ken; Gilinsky, Ellen; Sawyers, Andrew; Southerland, Elizabeth; Mallory, Brenda; Neugeboren, Steven; Levine, MaryEllen; Wade, Alexis; Witt, Richard; Penman, Crystal; Zipf, Lynn
Subject: 316(b) ESA Consultation Senior Management Check in Call at 2 PM Today, Thursday June 20 - Call in 1-Non-Responsive

Colleagues at the Services:

There was apparently a problem with the meeting invitation for today's 2PM management check-in and some of you on the invitation did not receive it or did not receive the call-in information. The call-in number and pass code are above. In addition, a suggested agenda is below and attached. I hope some of you can make it. I do not anticipate it will take the whole hour. Thanks

- Confirm Services' receipt of EPA letter requesting formal consultation, biological evaluation, and draft final rule and preamble

- Clarify timing of Services' written response to EPA request, including time frames.

- Confirm schedule (requested) for final rule signature: November 4, 2013

- Confirm plan for bi-weekly meetings starting: 6/25

- Discuss next steps in identifying and agreeing on Reasonable and Prudent Alternatives early in the consultation process.

- Other?

Robert Wood

Director

Engineering and Analysis Division

Office of Water

202-566-1822

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Penman, Crystal
Sent: Thur 6/20/2013 3:45:08 PM
Subject: RE: 316(b) ESA Consultation Senior Management Check in Call at 2 PM Today, Thursday June 20 - Call in Non-Responsive

You have this.

From: Stoner, Nancy
Sent: Thursday, June 20, 2013 11:42 AM
To: Penman, Crystal
Subject: FW: 316(b) ESA Consultation Senior Management Check in Call at 2 PM Today, Thursday June 20 - Call in Non-Responsive

For 2 pm – note the difficulties with the invitation

From: Wood, Robert
Sent: Thursday, June 20, 2013 11:23 AM
To: Donna.Wieting@noaa.gov; gary_frazer@fws.gov; paul_souza@fws.gov; helen.golde@noaa.gov; lois.schiffer@noaa.gov; michael_bean@ios.doi.gov
Cc: Jennifer.Schultz@noaa.gov; Ron.Dean@noaa.gov; Pamela.Lawrence@noaa.gov; Drew_Crane@fws.gov; Patrice_Ashfield@fws.gov; Rick_Sayers@fws.gov; Stoner, Nancy; Hewitt, Julie; Kopocis, Ken; Gilinsky, Ellen; Sawyers, Andrew; Southerland, Elizabeth; Mallory, Brenda; Neugeboren, Steven; Levine, MaryEllen; Wade, Alexis; Witt, Richard; Penman, Crystal; Zipf, Lynn
Subject: 316(b) ESA Consultation Senior Management Check in Call at 2 PM Today, Thursday June 20 - Call in 1-Non-Responsive

Colleagues at the Services:

There was apparently a problem with the meeting invitation for today's 2PM management check-in and some of you on the invitation did not receive it or did not receive the call-in information. The call-in number and pass code are above. In addition, a suggested agenda is below and attached. I hope some of you can make it. I do not anticipate it will take the whole hour. Thanks

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- Confirm plan for bi-weekly meetings starting: 6/25

- Discuss next steps in identifying and agreeing on Reasonable and Prudent Alternatives early in the consultation process.

- Other?

Robert Wood

Director

Engineering and Analysis Division

Office of Water

202-566-1822

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Penman, Crystal
Sent: Thur 6/20/2013 12:28:40 PM
Subject: RE: Senior Management Check in on ESA Consultation on 316(b) Rule

Lois will be joining the 316b meeting today. I called her office to confirm

From: Stoner, Nancy
Sent: Wednesday, June 19, 2013 3:38 PM
To: Wood, Robert
Cc: Southerland, Elizabeth; Penman, Crystal; Zipf, Lynn
Subject: Re: Senior Management Check in on ESA Consultation on 316(b) Rule

Yes, it is a check in. Crystal, were we successful in getting Lois to join us?

From: Wood, Robert
Sent: Wednesday, June 19, 2013 3:21:34 PM
To: Stoner, Nancy
Cc: Southerland, Elizabeth; Penman, Crystal; Zipf, Lynn
Subject: Senior Management Check in on ESA Consultation on 316(b) Rule

Hi Nancy, is it your intention to have a 2 PM call with the Services tomorrow at 2? I'm checking because I heard from Helen Golde that it is showing up on her calendar as "cancelled." It's on my calendar still with Michael Beane from DOI as the only non EPA person invited. I have a call into Crystal as well. Thanks

---

Robert Wood

Engineering and Analysis Division

Office of Water

202-566-1822

To: Penman, Crystal[Penman.Crystal@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]
Cc: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Zipf, Lynn[Zipf.Lynn@epa.gov]
From: Wood, Robert
Sent: Wed 6/19/2013 7:43:44 PM
Subject: RE: Senior Management Check in on ESA Consultation on 316(b) Rule

Thanks Crystal. Helen Golde called me to say it is showing on her calendar as cancelled. Not sure what that's about. I'll call her.

Robert Wood

Engineering and Analysis Division

Office of Water

202-566-1822

From: Penman, Crystal
Sent: Wednesday, June 19, 2013 3:42 PM
To: Wood, Robert; Stoner, Nancy
Cc: Southerland, Elizabeth; Zipf, Lynn
Subject: RE: Senior Management Check in on ESA Consultation on 316(b) Rule

This meeting is on Nancy's calendar for 2pm-3pm Michael bean from DOI, Donna Weiting, Helen Golde from Noaa and Gary Fraer, Paul Souza from FWS were all invited to this meeting.

From: Wood, Robert
Sent: Wednesday, June 19, 2013 3:22 PM
To: Stoner, Nancy
Cc: Southerland, Elizabeth; Penman, Crystal; Zipf, Lynn
Subject: Senior Management Check in on ESA Consultation on 316(b) Rule

Hi Nancy, is it your intention to have a 2 PM call with the Services tomorrow at 2? I'm checking because I heard from Helen Golde that it is showing up on her calendar as "cancelled."

It's on my calendar still with Michael Beane from DOI as the only non EPA person invited. I have a call into Crystal as well. Thanks

---

Robert Wood

Engineering and Analysis Division

Office of Water

202-566-1822

To: Wood, Robert[Wood.Robert@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]
Cc: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Zipf, Lynn[Zipf.Lynn@epa.gov]
From: Penman, Crystal
Sent: Wed 6/19/2013 7:42:08 PM
Subject: RE: Senior Management Check in on ESA Consultation on 316(b) Rule

This meeting is on Nancy's calendar for 2pm-3pm Michael bean from DOI, Donna Weiting, Helen Golde from Noaa and Gary Fraer, Paul Souza from FWS were all invited to this meeting.

From: Wood, Robert
Sent: Wednesday, June 19, 2013 3:22 PM
To: Stoner, Nancy
Cc: Southerland, Elizabeth; Penman, Crystal; Zipf, Lynn
Subject: Senior Management Check in on ESA Consultation on 316(b) Rule

Hi Nancy, is it your intention to have a 2 PM call with the Services tomorrow at 2? I'm checking because I heard from Helen Golde that it is showing up on her calendar as "cancelled." It's on my calendar still with Michael Beane from DOI as the only non EPA person invited. I have a call into Crystal as well. Thanks

---

Robert Wood

Engineering and Analysis Division

Office of Water

202-566-1822

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]
From: Southerland, Elizabeth
Sent: Tue 6/18/2013 6:32:51 PM
Subject: Re: hit send on 316(b) consultation letter -- thx

Got it!

From: Stoner, Nancy
Sent: Tuesday, June 18, 2013 2:20:11 PM
To: Southerland, Elizabeth; Wood, Robert
Subject: hit send on 316(b) consultation letter -- thx

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]
From: Southerland, Elizabeth
Sent: Thur 6/13/2013 3:05:04 PM
Subject: Re: comments on 316(b) ltr from Ken on their way from Dmara

Great!

From: Stoner, Nancy
Sent: Thursday, June 13, 2013 11:01:11 AM
To: Southerland, Elizabeth; Wood, Robert
Subject: comments on 316(b) ltr from Ken on their way from Dmara

To: Kopocis, Ken[Kopocis.Ken@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]; Levine, MaryEllen[levine.maryellen@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Wade, Alexis[Wade.Alexis@epa.gov]
From: Magruder, DeMara
Sent: Thur 1/23/2014 3:41:31 PM
Subject: 316b Schedule

To: Administrator B6; Feldt, Lisa[Feldt.Lisa@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Vaught, Laura[Vaught.Laura@epa.gov]
From: Administrator B6
Sent: Tue 1/14/2014 2:51:52 PM
Subject: Meeting re: 316b

SCt: Arian Herckis
Ct: Lisa Feldt - 202-566-0183

Staff:
Lisa Feldt (OA)
Ken Kopocis, Rob Wood, Elizabeth Southerland (OW)
Joel Beauvais (OP)
Avi Garbow (OGC)
Laura Vaught (OCIR)

To: Feldt, Lisa[Feldt.Lisa@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]
Cc: Wade, Alexis[Wade.Alexis@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]; Levine, MaryEllen[levine.maryellen@epa.gov]
From: Feldt, Lisa
Sent: Fri 1/10/2014 3:42:42 PM
Subject: 316B ESA Follow-up

To: Kopocis, Ken[Kopocis.Ken@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]; Barron, Alex[Barron.Alex@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Magruder, DeMara[Magruder.Demara@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Levine, MaryEllen[levine.maryellen@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]
Cc: Balserak, Paul[Balserak.Paul@epa.gov]
From: Kopocis, Ken
Sent: Sat 1/4/2014 6:37:46 PM
Subject: 316(b) Update Discussion

From: Kopocis, Ken
Sent: Tue 12/31/2013 12:20:04 PM
Subject: 316(b) Call with Services

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To: Wood, Robert[Wood.Robert@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]
From: Kopocis, Ken
Sent: Thur 12/26/2013 11:56:46 AM
Subject: 316(b) Call

Call in:
Code: 2 **Non-Responsive**

To: Administrator B6 @epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]
From: Administrator B6
Sent: Mon 12/23/2013 2:07:42 PM
Subject: 316B Check-In

Conference Line: Non-Responsive

To: Administrator B6 @epa.gov]; Kopocis, Ken[]; Garbow, Avi[]; Feldt, Lisa[]; Deputy Administrator[]
Cc: Herckis, Arian[]
From: Administrator B6
Sent: Fri 12/20/2013 4:59:49 PM
Subject: Updates on 316b

Conference Line: 1 Non-Responsive

To: Garbow, Avi[Garbow.Avi@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]; Levine, MaryEllen[levine.maryellen@epa.gov]; Wade, Alexis[Wade.Alexis@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]
From: Veney, Carla
Sent: Thur 12/19/2013 6:50:20 PM
Subject: 316b (Non-Responsive

To: Kopocis, Ken[Kopocis.Ken@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]
Cc: Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Levine, MaryEllen[levine.maryellen@epa.gov]; Wade, Alexis[Wade.Alexis@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]
Bcc: DCRoomEast2369B/DC-ICC-OW-IO[DCRoomEast2369B@epa.gov]
From: Kopocis, Ken
Sent: Tue 12/17/2013 10:20:33 PM
Subject: 316(b) Call in 1 Non-Responsive

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From: Penman, Crystal
Sent: Fri 12/13/2013 12:15:06 PM
Subject: 316(b) ESA - Conference Call: Call in number: **Non-Responsive**

From: Kopocis, Ken
Sent: Sun 12/8/2013 10:11:05 PM
Subject: 316(b) Lawyers call re ESA

To: Kopocis, Ken[Kopocis.Ken@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]
Cc: Beauvais, Joel[Beauvais.Joel@epa.gov]
To: christy.walsh@ferc.gov[christy.walsh@ferc.gov]
Cc: Kurlansky, Ellen[Kurlansky.Ellen@epa.gov]
From: Magruder, DeMara
Sent: Thur 10/24/2013 8:16:22 PM
Subject: 316b Update

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Born, Tom[Born.Tom@epa.gov]; Levine, MaryEllen[levine.maryellen@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]; Wade, Alexis[Wade.Alexis@epa.gov]; Zobrist, Marcus[Zobrist.Marcus@epa.gov]; Saxena, Juhi[Saxena.Juhi@epa.gov]; Piziali, Jamie[Piziali.Jamie@epa.gov]; Messier, Dawn[Messier.Dawn@epa.gov]
Cc: Sawyers, Andrew[Sawyers.Andrew@epa.gov]; Nagle, Deborah[Nagle.Deborah@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]
From: Stoner, Nancy
Sent: Fri 8/16/2013 7:43:46 PM
Subject: Endangered Species Act Constultation for 316(b) Cooling Water Intake Rule Call in Non-Responsive

Non-Responsive

Untitled
Untitled
Untitled
Untitled

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Born, Tom[Born.Tom@epa.gov]; Levine, MaryEllen[levine.maryellen@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]; Wade, Alexis[Wade.Alexis@epa.gov]; Zobrist, Marcus[Zobrist.Marcus@epa.gov]; Saxena, Juhi[Saxena.Juhi@epa.gov]; Piziali, Jamie[Piziali.Jamie@epa.gov]
Cc: Kopocis, Ken[Kopocis.Ken@epa.gov]; Sawyers, Andrew[Sawyers.Andrew@epa.gov]; Nagle, Deborah[Nagle.Deborah@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]
From: /O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=DDA7244A389640C3BAC29EECEF1DB4A1-STONER, NANCY

APPENDIX B: Office of Water Meeting Request Form

Date Received in OW: _____

FOR: Nancy Stoner __X_ Michael Shapiro _ Ken Kopocis _X_ Ellen Gilinsky _X

Subject: Endangered Species Act Consultation for 316(b) Cooling Water Intake Rule

Meeting Requested By: Tom Born Date: August 28, 2013

Office Director Approval: _____ **Date:** 8/28/13

Date staff will be ready for this meeting: September 3, 2013

Latest date meeting can happen: September 3, 2013

Time needed for meeting: 20 Min _____ 45 Min _____ 1 Hr __X__ Other:

Purpose of the meeting:

AA decision expected? Yes ___ No ___

Provide AA with information? Yes ___ No

What specifically is to be decided or presented? Why is a meeting needed?
FWS/NOAA Senior Managers' Meeting: Elevation of 316(b) ESA Consultation Issues

Who will attend the meeting? (Give Full Names as listed in Notes and Identify Office)
Mandatory Attendees:

NOAA: Lois Schiffer (lois.schiffer@noaa.gov) General Counsel (202/482-4080), pamela.lawrence@noaa.gov, ron.dean@noaa.gov, Jennifer.Schultz@noaa.gov, mike.tust@noaa.gov, Kristine.Petersen@noaa.gov, Helen.Golde@noaa.gov, Donna.Wieting@noaa.gov

FWS: Gary Frazer (Gary_Frazer@fws.gov) Assit. Director Endangered Species (202/208-4646), Paul Souza (Paul_Souza@fws.gov) , patrice_ashfield@fws.gov, rick_sayers@fws.gov, drew_crane@fws.gov,

DOI: Michael_Bean@ios.doi.gov

EPA: Elizabeth Southerland, Robert Wood, Julie Hewitt, Alexis Wade, Tom Born, Steve Neugeboren, MaryEllen Levine, Deborah Nagle, Marcus Zobrist, Richard Witt, Jamie Piziali, Dawn Messier, Juhi Saxena, Andrew Sawyers, Brenda Mallory, Lynn Zipf, Jeff Lape, Jennifer Chan, Paul Balserak, Betsy Behl

Optional Attendees:

Person Providing Agenda for the Meeting (mandatory):
Name: Tom Born **Phone**: 202-566-1001

Person Providing Briefing Material (if any) for the Meeting: None
Name: _____ **Phone:** _____

Cook

ROUTING AND TRANSMITTAL SLIP

Date 08/28/13

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. Robert Wood	RWW	8/28/13
2. Elizabeth Southerland	[illegible]	8/28
3. Donetta Clark	DC	8/28/13
4.		
5.		
6.		
7.		
8.		
9.		
10.		

☐	Action	☐	File	☐	Note and Return
☐	Approval	☐	For Clearance	☐	Per Conversation
☐	As Requested	☐	For Correction	☐	Prepare Reply
☐	Circulate	☐	For Your Information	☐	See Me
☐	Comment	☐	Investigate	☒	Signature
☐	Coordination	☐	Justify		

REMARKS

Meeting request form for September 3, 2013, 316(b) ESA Senior Manager's Check-in Meeting with Nancy

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No. – Bldg.
Tom Born	Phone No. (202) 566-1001

OPTIONAL FORM 41 (Rev. 1-94)
Prescribed by GSA

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Born, Tom[Born.Tom@epa.gov]; Levine, MaryEllen[levine.maryellen@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]; Wade, Alexis[Wade.Alexis@epa.gov]; Zobrist, Marcus[Zobrist.Marcus@epa.gov]; Saxena, Juhi[Saxena.Juhi@epa.gov]; Piziali, Jamie[Piziali.Jamie@epa.gov]
Cc: Kopocis, Ken[Kopocis.Ken@epa.gov]; Sawyers, Andrew[Sawyers.Andrew@epa.gov]; Nagle, Deborah[Nagle.Deborah@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]
To: Messier, Dawn[Messier.Dawn@epa.gov]

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Born, Tom[Born.Tom@epa.gov]; Levine, MaryEllen[levine.maryellen@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]; Wade, Alexis[Wade.Alexis@epa.gov]; Zobrist, Marcus[Zobrist.Marcus@epa.gov]; Saxena, Juhi[Saxena.Juhi@epa.gov]; Piziali, Jamie[Piziali.Jamie@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]
Cc: Sawyers, Andrew[Sawyers.Andrew@epa.gov]; Nagle, Deborah[Nagle.Deborah@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]
To: Messier, Dawn[Messier.Dawn@epa.gov]

To: Kopocis, Ken[Kopocis.Ken@epa.gov]; ann.w.loomis@dom.com[ann.w.loomis@dom.com]; Goo, Michael[Goo.Michael@epa.gov]; Vaught, Laura[Vaught.Laura@epa.gov]
From: Magruder, DeMara
Sent: Thur 10/17/2013 7:30:39 PM
Subject: Cooling Water Intake

Please show the guard your ID and ask them to call 202-564-5700 for an escort.

Thank you.

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Stoner, Nancy
Sent: Wed 9/18/2013 3:46:40 PM
Subject: 316 (b) Letter

To: Kopocis, Ken[Kopocis.Ken@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Goo, Michael[Goo.Michael@epa.gov]; Balserak, Paul[Balserak.Paul@epa.gov]
Cc: Witt, Richard[Witt.Richard@epa.gov]; Levine, MaryEllen[levine.maryellen@epa.gov]; Wade, Alexis[Wade.Alexis@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]
From: Penman, Crystal
Sent: Wed 9/4/2013 1:21:31 PM
Subject: Prebrief on 316(b) issues for meeting with Administrator and EEI
2013_09_04_09_20_32.pdf

Poc Julie Hewitt 202-566-1031

Office of Water Meeting Request Form

Date Received in OW: _____

FOR: Nancy Stoner ___ Michael Shapiro _ Ken Kopocis _X___ Ellen Gilinsky _____

Subject: ____Prebrief on 316(b) issues for meeting with Administrator and EEI _____

Meeting Requested By: Julie Hewitt____ Date: 09/03/13_____

Office Director Approval: _____ **Date:** _____

Date staff will be ready for this meeting: 9/4/13_____

Latest date meeting can happen: _____9/4/13_____

Time needed for meeting: 20 Min _____ 45 Min _____ 1 Hr X____ Other _____

Purpose of the meeting:

AA decision expected? Yes ___ No _X__

Provide AA with information? Yes X__ No

What specifically is to be decided or presented? Why is a meeting needed?
Ken Kopocis requested prebrief for 316(b) issues for meeting with the Administrator and EEI on Thursday at 9 am.

Who will attend the meeting? (Give Full Names as listed in Notes and Identify Office)
Mandatory Attendees: Elizabeth Southerland, Robert Wood, Julie Hewitt

Optional Attendees: Richard Witt, MaryEllen Levine, Alexis Wade

Person Providing Agenda for the Meeting (mandatory):
Name: Julie Hewitt_____ **Phone:** _____202-566-1031_____

Person Providing Briefing Material (if any) for the Meeting:
Name: Julie Hewitt_____ **Phone:** __202-566-1031_____

To: Kopocis, Ken[Kopocis.Ken@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]
Cc: Kurlansky, Ellen[Kurlansky.Ellen@epa.gov]
From: Penman, Crystal
Sent: Mon 7/29/2013 4:52:44 PM
Subject: 316(b) and low use facilities

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; 'dean.ellis@dynegy.com'[dean.ellis@dynegy.com]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]
Cc: Clark, Donetta[Clark.Donetta@epa.gov]; Cash, Debbie[Cash.Debbie@epa.gov]
From: Stoner, Nancy
Sent: Thur 5/9/2013 3:07:54 PM
Subject: Dynegy visit to EPA

Hi Crystal - Following up on our voicemails/messages from a few days ago. The CEO of our company, Dynegy, and I will be in D.C. on Monday May 13 and would like to visit the Office of Water to introduce ourselves. As a way of background, Dynegy is a power generator with approximately 10,000 MW of generating plants. We're currently most focused on Once Through Cooling (316b) and Effluent Limit Guidelines (ELGs).

We'll be meeting with the Office of Solid Waste in Arlington between noon-1 PM, and the Office of Air at 1200 Pennsylvania between 2-2:45 PM. Would we be able to meet between say 3-4 PM?

Thanks, in advance.

Sincerely,
Dean

Dean Ellis
Dynegy
713-767-0328 Office
713-205-6023 Mobile
601 Travis St., Suite 1400, Houston, TX 77002
* Note new contact info as of Jan. 1 *

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Goo, Michael[Goo.Michael@epa.gov]
Cc: Penman, Crystal[Penman.Crystal@epa.gov]
From: Stoner, Nancy
Sent: Wed 5/8/2013 2:33:38 PM
Subject: Review of 316 (b) package **Non-Responsive**

To: Kopocis, Ken[Kopocis.Ken@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Vaught, Laura[Vaught.Laura@epa.gov]; 'ann.w.loomis@dom.com'[ann.w.loomis@dom.com]; Barron, Alex[Barron.Alex@epa.gov]; Goo, Michael[Goo.Michael@epa.gov]
Cc: Wood, Robert[Wood.Robert@epa.gov]; Levine, MaryEllen[levine.maryellen@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]
From: Penman, Crystal
Sent: Fri 4/26/2013 3:13:32 PM
Subject: 316(b)

On Thursday, we would like to discuss the stated-preference survey results, the closed-cycle cooling definition and the treatment of new/repowered/retrofitted units.

Attending Thursday's meeting will be:

Ray Butts - NextEra
Bill Skaff - NEI
Rich Bozek - EEI
Amy Trojecki - Exelon

To: Kopocis, Ken[Kopocis.Ken@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Vaught, Laura[Vaught.Laura@epa.gov]; 'ann.w.loomis@dom.com'[ann.w.loomis@dom.com]
Bcc: DCRoomEast2369B/DC-ICC-OW-IO[DCRoomEast2369B@epa.gov]
Cc: Wood, Robert[Wood.Robert@epa.gov]
From: Penman, Crystal
Sent: Fri 4/26/2013 3:12:00 PM
Subject: 316 (b)

Attending Wednesday's meeting will be:

Ann Loomis - Dominion
Ray Butts - NextEra
Amy Trojecki - Exelon
Melissa Lavinson - Pacific Gas & Electric
Russ Furnari - PSEG
Rich Bozek - EEI

To: Acting Administrator[62Perciasepe.Bob73@epa.gov]
From: Penman, Crystal
Sent: Mon 4/22/2013 2:32:11 PM
Subject: FW: This meeting moved from today to next week - so sorry for the last minute noticed.. Discuss State of Preference Survey for 316b Rule

-----Original Appointment-----
From: Acting Administrator
Sent: Friday, April 19, 2013 10:02 AM
To: Acting Administrator; Sussman, Bob; Goo, Michael; Stoner, Nancy; Kopocis, Ken; Gilinsky, Ellen; Garbow, Avi; Vaught, Laura; Ganesan, Arvin; Wood, Robert; Southerland, Elizabeth; Hewitt, Julie; Maddox, Donald; Penman, Crystal; Patrick, Monique; Poole, Jacqueline; Kime, Robin
Subject: FYI: This meeting moved from today to next week - so sorry for the last minute noticed.. Discuss State of Preference Survey for 316b Rule
When: Tuesday, April 23, 2013 11:00 AM-11:45 AM (GMT-05:00) Eastern Time (US & Canada).
Where: 3412 ARN

-----Original Appointment-----
From: Porterfield, Teri **On Behalf Of** Acting Administrator
Sent: Tuesday, April 16, 2013 6:07 PM
To: Acting Administrator; Sussman, Bob; Goo, Michael; Stoner, Nancy; Kopocis, Ken; Gilinsky, Ellen; Garbow, Avi; Vaught, Laura; Ganesan, Arvin; Wood, Robert; Southerland, Elizabeth; Hewitt, Julie
Cc: Maddox, Donald; Penman, Crystal; Patrick, Monique; Poole, Jacqueline; Kime, Robin
Subject: Discuss State of Preference Survey for 316b Rule
When: Tuesday, April 23, 2013 11:00 AM-11:45 AM (GMT-05:00) Eastern Time (US & Canada).
Where: 3412 ARN

Ct: Bob Sussman

To: Acting Administrator[62Perciasepe.Bob73@epa.gov]; Goo, Michael[Goo.Michael@epa.gov]; Kime, Robin[Kime.Robin@epa.gov]; Poole, Jacqueline[Poole.Jacqueline@epa.gov]; Vaught, Laura[Vaught.Laura@epa.gov]; Sussman, Bob[Sussman.Bob@epa.gov]; Maddox, Donald[Maddox.Donald@epa.gov]; Goffman, Joseph[Goffman.Joseph@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]
From: Acting Administrator
Sent: Wed 4/10/2013 10:01:46 PM
Subject: Meeting with Edison Electric Institute on 316b

Ct: Ann Loomis - 202-585-4205

Attendees:
Lew Hay - NextEra
Tom Farrell - Dominion
Marv Fertel - Nuclear Energy Institute
Chris Crane - Exelon (not confirmed)
Randy LaBauve - NextEra
Joe Dominguez - Exelon
Ann Loomis - Dominion
Quin Shea - EEI

To: Goo, Michael[Goo.Michael@epa.gov]; 'ann.w.loomis@dom.com'[ann.w.loomis@dom.com]; Vaught, Laura[Vaught.Laura@epa.gov]
Cc: Balserak, Paul[Balserak.Paul@epa.gov]; Cristofaro, Alexander[Cristofaro.Alexander@epa.gov]; Schaaff, Lesley[Schaaff.Lesley@epa.gov]; Barron, Alex[Barron.Alex@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; McGartland, Al[McGartland.Al@epa.gov]; Newbold, Steve[Newbold.Steve@epa.gov]
From: Goo, Michael
Sent: Wed 4/10/2013 7:55:13 PM
Subject: Meeting with A. Loomis re: 316(b) - Call in number: Non-Responsive

Please contact Jacqueline Poole or Verna Irving for escort - 202 564 - 4332

POC: Robin Kime

Robin,

On behalf of EEI and several companies, I would like to request a meeting with Michael Goo and others on his team to discuss the major issues involving the proposed 316b, cooling water intake structure rule. Several CEO's and leadership with EEI are scheduled to meet with Acting Administrator Perciasepe on April 15 at 3:00 pm. Staff for these companies would like to discuss some of the issues in advance of the meeting on the 15th. Companies who usually participate are NextEra, PSEG, PGE, Exelon and Dominion.

Since a few have to fly into town for the meeting, we are hoping something could be scheduled for Thursday afternoon or Friday this week. Let me know if you have any questions.

Thanks,

Ann Loomis
Senior Advisor for Federal &
Environmental Policy
Dominion
202-585-4205

To: Acting Administrator[62Perciasepe.Bob73@epa.gov]; Sussman, Bob[Sussman.Bob@epa.gov]; Maddox, Donald[Maddox.Donald@epa.gov]; Thompson, Diane[Thompson.Diane@epa.gov]; Washington, Stephanie[Washington.Stephanie@epa.gov]; Scozzafava, MichaelE[Scozzafava.MichaelE@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]; Goo, Michael[Goo.Michael@epa.gov]; Barron, Alex[Barron.Alex@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]; Levine, MaryEllen[levine.maryellen@epa.gov]; Vaught, Laura[Vaught.Laura@epa.gov]
Cc: Ganesan, Arvin[Ganesan.Arvin@epa.gov]
From: Acting Administrator
Sent: Wed 4/3/2013 12:18:34 PM
Subject: Meeting on 316b Rulemaking with the Acting Administrator

Ct: Mike Scozzafava - 202-566-1376

Staff:
Bob Sussman, Diane Thompson, Mike Scozzafava (OA)
Nancy Stoner, Elizabeth Southland, Ken Kopocis, Ellen Gilinsky, Robert Wood, Julie Hewitt (OW)
Michael Goo, Alex Barron (OP)
Avi Garbow, Steve Neugeboren, Richard Witt, MaryEllen Levine (OGC)
Laura Vaught (OCIR)

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Gilinsky, Ellen
Sent: Wed 6/12/2013 9:15:32 PM
Subject: RE: where are we on 316(b) comm/outreach plan?

Still checking

Ellen Gilinsky

Ellen Gilinsky, Ph.D.

Senior Policy Advisor

EPA Office of Water

Room 3111 EPA East, Mail Code 4101M

1200 Pennsylvania Ave, NW

Washington, DC 20460

Phone: 202-564-2549

Cell: 202-236-6882

email: gilinsky.ellen@epa.gov

From: Stoner, Nancy
Sent: Wednesday, June 12, 2013 5:14 PM
To: Gilinsky, Ellen
Subject: where are we on 316(b) comm/outreach plan?

To: Wood, Robert[Wood.Robert@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]
Cc: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Lape, Jeff[lape.jeff@epa.gov]; Zipf, Lynn[Zipf.Lynn@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]
From: Gilinsky, Ellen
Sent: Fri 6/7/2013 9:21:37 PM
Subject: RE: 316(b) Biological Evaluation

Thanks everyone for the hard work

Ellen Gilinsky

Ellen Gilinsky, Ph.D.

Senior Policy Advisor

EPA Office of Water

Room 3111 EPA East, Mail Code 4101M

1200 Pennsylvania Ave, NW

Washington, DC 20460

Phone: 202-564-2549

Cell: 202-236-6882

email: gilinsky.ellen@epa.gov

From: Wood, Robert
Sent: Friday, June 07, 2013 5:08 PM
To: Stoner, Nancy
Cc: Gilinsky, Ellen; Southerland, Elizabeth; Lape, Jeff; Zipf, Lynn; Hewitt, Julie
Subject: 316(b) Biological Evaluation

Julie sent the revised Biological Evaluation to the Services today as promised—Progress!

Robert Wood

Engineering and Analysis Division

Office of Water

202-566-1822

To: Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]
Cc: Barron, Alex[Barron.Alex@epa.gov]; Goo, Michael[Goo.Michael@epa.gov]; Kime, Robin[Kime.Robin@epa.gov]; Poole, Jacqueline[Poole.Jacqueline@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Maddox, Donald[Maddox.Donald@epa.gov]
From: Sussman, Bob
Sent: Wed 6/5/2013 12:42:39 PM
Subject: RE: Pre-Brief for ESA and 316b

I don't want a huge group but if there are people we need, they should come.

Robert M. Sussman

Senior Policy Counsel to Administrator

Office of the Administrator

U.S. Environmental Protection Agency

Washington DC

(202)-564-7397

From: Neugeboren, Steven
Sent: Wednesday, June 05, 2013 8:05 AM
To: Sussman, Bob; Southerland, Elizabeth; Gilinsky, Ellen; Stoner, Nancy
Cc: Barron, Alex; Goo, Michael; Kime, Robin; Poole, Jacqueline; Penman, Crystal; Maddox, Donald
Subject: Re: Pre-Brief for ESA and 316b

Should staff come to this?

From: Sussman, Bob
Sent: Tuesday, June 04, 2013 11:53:11 AM
To: Neugeboren, Steven; Southerland, Elizabeth; Gilinsky, Ellen; Stoner, Nancy
Cc: Barron, Alex; Goo, Michael; Kime, Robin; Poole, Jacqueline; Penman, Crystal; Maddox, Donald
Subject: Pre-Brief for ESA and 316b
When: Wednesday, June 05, 2013 10:00 AM-10:30 AM.
Where: ARN 3309

To: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Gilinsky, Ellen
Sent: Tue 6/4/2013 7:59:48 PM
Subject: RE: Request to bring experts to tomorrow's meeting on ESA issues for EPA 316b Rulemaking

Lets talk about it in the briefing that is at 10 AM which they should come to

Ellen Gilinsky

Ellen Gilinsky, Ph.D.

Senior Policy Advisor

EPA Office of Water

Room 3111 EPA East, Mail Code 4101M

1200 Pennsylvania Ave, NW

Washington, DC 20460

Phone: 202-564-2549

Cell: 202-236-6882

email: gilinsky.ellen@epa.gov

From: Southerland, Elizabeth
Sent: Tuesday, June 04, 2013 3:59 PM
To: Stoner, Nancy; Gilinsky, Ellen; Kopocis, Ken
Subject: Request to bring experts to tomorrow's meeting on ESA issues for EPA 316b Rulemaking

Can I bring Rob and/or Julie to this meeting tomorrow at 5 PM? Lois is bringing staffers, and I assume Michael Bean is also.

Elizabeth Southerland, Director

Office of Science & Technology

Office Water

Room 5233A - MC - 4301T

Washington, D. C. 20460

Direct: (202) 566-0328

Fax: (202) 566-0441

From: Maddox, Donald
Sent: Tuesday, June 04, 2013 11:22 AM
To: marilou.shanefelt@noaa.gov; Lois Schiffer - NOAA Federal; gina.jackson@noaa.gov; Michael Bean; Stoner, Nancy; Gilinsky, Ellen; Southerland, Elizabeth; Neugeboren, Steven; abbie.mimiko@noaa.gov
Cc: Penman, Crystal; Maddox, Donald; Jones, Gail-R; Sussman, Bob
Subject: Meeting on ESA issues for EPA 316b Rulemaking

Team – It appears that the 5:00 pm time tomorrow seems to be narrowing down as the slot with the most participants. Can we go ahead and lock that down on our schedules and if we develop any issues with that time tomorrow we can take a second look. Thanks to everyone for responding so quickly. I will send out an invite shortly.

v / r

Don

Don Maddox

Office of the Acting Administrator &

Office of the Senior Policy Counsel

maddox.donald@epa.gov

Office: 202-564-8443

Direct: 202-564-7207

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]
From: Southerland, Elizabeth
Sent: Tue 6/4/2013 7:58:41 PM
Subject: Request to bring experts to tomorrow's meeting on ESA issues for EPA 316b Rulemaking

Can I bring Rob and/or Julie to this meeting tomorrow at 5 PM? Lois is bringing staffers, and I assume Michael Bean is also.

Elizabeth Southerland, Director

Office of Science & Technology

Office Water

Room 5233A - MC - 4301T

Washington, D. C. 20460

Direct: (202) 566-0328

Fax: (202) 566-0441

From: Maddox, Donald
Sent: Tuesday, June 04, 2013 11:22 AM
To: marilou.shanefelt@noaa.gov; Lois Schiffer - NOAA Federal; gina.jackson@noaa.gov; Michael Bean; Stoner, Nancy; Gilinsky, Ellen; Southerland, Elizabeth; Neugeboren, Steven; abbie.mimiko@noaa.gov
Cc: Penman, Crystal; Maddox, Donald; Jones, Gail-R; Sussman, Bob
Subject: Meeting on ESA issues for EPA 316b Rulemaking

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v / r

Don

Don Maddox

Office of the Acting Administrator &

Office of the Senior Policy Counsel

maddox.donald@epa.gov

Office: 202-564-8443

Direct: 202-564-7207

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Penman, Crystal
Sent: Tue 6/4/2013 6:51:50 PM
Subject: RE: Meeting on ESA issues for EPA 316b Rulemaking

Its on the calendar.

From: Stoner, Nancy
Sent: Tuesday, June 04, 2013 2:38 PM
To: Penman, Crystal
Subject: Fw: Meeting on ESA issues for EPA 316b Rulemaking

Pls confirm receipt, thx

From: Maddox, Donald
Sent: Tuesday, June 04, 2013 9:37:41 AM
To: Lois Schiffer - NOAA Federal; Michael Bean
Cc: Maddox, Donald; Stoner, Nancy; Gilinsky, Ellen; Southerland, Elizabeth; Garbow, Avi; Neugeboren, Steven
Subject: Re: Meeting on ESA issues for EPA 316b Rulemaking

Team – I have listed below times that we could field a meeting either tomorrow or Thursday. Please let me know if any of these will work on your ends and we will set it up as a conference call or in house meeting. We can accommodate both or even a mix of in house and conference line in order to make it accessible for everyone possible.

V / r

Don

Start times assuming a 45 minute discussion.

6-5-13: 8:30 am, 9:00 am, 9:30 am, 1:00 pm, 5:00 pm

6-6-13: 8:30 am, 9:00 am, 9:30 am, 11:00 am, 11:30 am, 1:15 pm

If we need Friday(6-7-13): any start time from 8:30 am – 10:15 am, or any start time after 1:00 pm

Don Maddox

Office of the Acting Administrator &

Office of the Senior Policy Counsel

maddox.donald@epa.gov

Office: 202-564-8443

Direct: 202-564-7207

To: Goo, Michael[Goo.Michael@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Robison, Ryan[Robison.Ryan@epa.gov]; Sussman, Bob[Sussman.Bob@epa.gov]; Vaught, Laura[Vaught.Laura@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]
Cc: Maddox, Donald[Maddox.Donald@epa.gov]; Kime, Robin[Kime.Robin@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Poole, Jacqueline[Poole.Jacqueline@epa.gov]; Patrick, Monique[Patrick.Monique@epa.gov]; Herckis, Arian[Herckis.Arian@epa.gov]; Kukla, Alison[Kukla.Alison@epa.gov]
From: Kopocis, Ken
Sent: Sun 6/2/2013 7:49:44 PM
Subject: Re: Pre-Brief on Acting Administrator's Meeting with Dominion - Monday, 10am, ARN 3412

I would think a mini-version of our 316(b) discussion would be good.

From: Goo, Michael
Sent: Sunday, June 02, 2013 2:31:31 PM
To: Gilinsky, Ellen; Robison, Ryan; Sussman, Bob; Vaught, Laura; Stoner, Nancy; Garbow, Avi; Kopocis, Ken
Cc: Maddox, Donald; Kime, Robin; Penman, Crystal; Poole, Jacqueline; Patrick, Monique; Herckis, Arian; Kukla, Alison
Subject: Re: Pre-Brief on Acting Administrator's Meeting with Dominion - Monday, 10am, ARN 3412

I will be there and will bring some one pagers for Bob and Laura to use at the meeting.

From: Gilinsky, Ellen
Sent: Friday, May 31, 2013 5:26:46 PM
To: Robison, Ryan; Sussman, Bob; Vaught, Laura; Goo, Michael; Stoner, Nancy; Garbow, Avi; Kopocis, Ken
Cc: Maddox, Donald; Kime, Robin; Penman, Crystal; Poole, Jacqueline; Patrick, Monique; Herckis, Arian; Kukla, Alison
Subject: Re: Pre-Brief on Acting Administrator's Meeting with Dominion - Monday, 10am, ARN 3412

I will be there. Nancy is on furlough. Ken should be available so am copying him here

---

From: Robison, Ryan
Sent: Friday, May 31, 2013 4:48:56 PM
To: Sussman, Bob; Vaught, Laura; Goo, Michael; Stoner, Nancy; Gilinsky, Ellen; Garbow, Avi
Cc: Maddox, Donald; Kime, Robin; Penman, Crystal; Poole, Jacqueline; Patrick, Monique; Herckis, Arian; Kukla, Alison; Robison, Ryan
Subject: Pre-Brief on Acting Administrator's Meeting with Dominion - Monday, 10am, ARN 3412

Good Afternoon,

Due to tech problems with outlook calendar my office cannot send you a scheduler notice regarding this meeting on Monday morning. Please make note. I will try again this weekend, or send a reminder Monday morning.

This meeting will be:

Monday, June 3rd

10am

Requested by Bob Sussman

Staff:

Bob Sussman (OA)

Laura Vaught (OCIR)

Nancy Stoner, Ellen Gilinsky (OW)

Avi Garbow (OGC)

Michael Goo (OP)

Please keep in mind that the ACTUAL meeting with Dominion will be on Monday at 4pm in Richmond, VA. E-mail me if you have any concerns.

Thanks,

Ryan

Ryan M. Robison

Deputy Director of Scheduling
Office of the Administrator | US EPA
robison.ryan@epa.gov
202-564-2856 Office
202-591-5593 Cell

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Gilinsky, Ellen
Sent: Wed 5/29/2013 10:35:28 AM
Subject: Re: 316(b)

Yes

From: Stoner, Nancy
Sent: Wednesday, May 29, 2013 6:12:46 AM
To: Gilinsky, Ellen
Subject: 316(b)

Can you make sure that talking points get to Bob P today? We have a too many cooks problem. Thx
ÿ

To: Goo, Michael[Goo.Michael@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Kopocis, Ken[Kopocis.Ken@epa.gov]; Sussman, Bob[Sussman.Bob@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]; Barron, Alex[Barron.Alex@epa.gov]
Cc: Penman, Crystal[Penman.Crystal@epa.gov]; Maddox, Donald[Maddox.Donald@epa.gov]; Patrick, Monique[Patrick.Monique@epa.gov]
From: Goo, Michael
Sent: Wed 3/20/2013 2:56:25 PM
Subject: 316 (b) Politicals Only

To: Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]
From: Kopocis, Ken
Sent: Thur 7/17/2014 4:55:07 PM
Subject: FW: Reminder: July 17 ECOS Water Committee Call
draft water committee agenda with attachments.pdf

This may be a more current agenda.

From: Alexandra Dapolito Dunn [mailto:adunn@ecos.org]
Sent: Thursday, July 17, 2014 7:41 AM
To: Leutner, Fred; Kopocis, Ken; Penman, Crystal; Ken Zarker; Cripps Colleen; David Paylor
Subject: Fwd: Reminder: July 17 ECOS Water Committee Call

Looking forward to having all of you participate in some way in our call today at 2 eastern. Please see attached reminder and agenda materials below. All are welcome for the full call.

Ken, please offer an update on 316b, Waters of the US and related matters, and any other developments of which the Commissioners should be aware.

Alexandra Dapolito Dunn, Esq.

Executive Director & General Counsel

Environmental Council of the States

50 F Street, NW, Suite 350

Washington, DC 20001

202-266-4929 (T); 202-230-4247 (C);202-266-4937 (F)

adunn@ecos.org; Twitter @ECOStates

View my research on my SSRN Author page: http://ssrn.com/author=1356207
ECOS' 7/31 111(d) STEP Conference - Register @ www.ecos.org

---------- Forwarded message ----------
From: **Layne Piper** <lpiper@ecos.org>
Date: Wed, Jul 16, 2014 at 9:32 AM

Subject: Reminder: July 17 ECOS Water Committee Call
To: Alexandra Dapolito Dunn <adunn@ecos.org>

Dear ECOS Water Committee:

The next Water Committee Call will be held tomorrow, July 17, from 2-3 PM eastern. A call will NOT be held July 24.

We have a dynamic agenda with lots to discuss and look forward to your participation. Please see the attached draft agenda for the call information and materials in a single .pdf.

Please contact me with any questions regarding the call.

Call in number: 1-888-450-5996 Passcode: 838379

Thursday, July 17, 2014

2:00 – 3:00 PM Eastern Time

I. Welcome and Introductions (Cripps, Paylor) (2-205)

II. Waters of the U.S. Proposed Rule (All) (205-215)

a. American College of Environmental Lawyers Analysis

b. Debrief from Call with EPA on June 26

c. Other Discussion

III. Tribes as States (Fred Leutner, US EPA Office of Water) (215-225)

IV. Water Session at ECOS Fall Meeting (225-230)

Monday, September 15, 3:00 to 4:15 pm (last session of the day)

(draft) Exploring the Water/Energy Nexus

Significant water quantities are used in energy production. From cooling water intake structures, to hydraulic fracturing, to solar, the volume of water used to power our nation is staggering. During this discussion, states and federal agencies will present how they are problem solving at the nexus of water/energy. Translatable examples will include permitting, infrastructure siting and CWA jurisdiction, wastewater management, water supply management, and balancing competing water uses. *Time will be allocated at the end of this session to discuss the proposed Waters of the U.S. rule and the related paper prepared for ECOS by the American College of Environmental Lawyers.*

Possible Speakers: Stoner (EPA), EPA Region __ Administrator, Cripps (NV), State (__), State (___)

V. Copper in Brake Pad MOU (Ken Zarker, WA) (*invited*) (230-240)

VI. EPA Update (Ken Kopocis, Senior Adviser, US EPA Office of Water) (240-250)

VII. Expiring Resolutions (250-300)

VIII. Next Calls & Adjourn (Cripps/Paylor) (300)

a. August 14, 2:00 – 3:00 PM Eastern

b. October 16, 2:00 – 3:00 PM Eastern

Layne Piper
Research and Meetings Associate
Environmental Council of the States
202-266-4928
Twitter: @ECOStates

To: Loop, Travis[Loop.Travis@epa.gov]
From: Kopocis, Ken
Sent: Tue 7/15/2014 10:13:45 PM
Subject: RE: Press

Thanks.

From: Loop, Travis
Sent: Tuesday, July 15, 2014 5:48 PM
To: Kopocis, Ken
Subject: RE: Press

Pasted both below.

EPA Finalizes Standards to Protect Fish, Aquatic Life from Cooling Water Intakes

Release Date: 05/19/2014
Contact Information: Julia Q. Ortiz, Ortiz.Julia@epa.gov, 202-564-1931

WASHINGTON – The U.S. Environmental Protection Agency (EPA) today finalized standards to protect billions of fish and other aquatic life drawn each year into cooling water systems at large power plants and factories. This final rule is required by the Clean Water Act to address site-specific challenges, and establishes a common sense framework, putting a premium on public input and flexibility for facilities to comply.

An estimated 2.1 billion fish, crabs, and shrimp are killed annually by being pinned against cooling water intake structures (impingement) or being drawn into cooling water systems and affected by heat, chemicals, or physical stress (entrainment). To protect threatened and endangered species and critical habitat, the expertise of the Fish & Wildlife Service and National Marine Fisheries Service is available to inform decisions about control technologies at individual facilities.

"EPA is making it clear that if you have cooling water intakes you have to look at the impact on aquatic life in local waterways and take steps to minimize that impact," said Nancy Stoner, acting Assistant Administrator for Water at EPA.

The final rule establishes requirements under the Clean Water Act for all existing power generating facilities and existing manufacturing and industrial facilities that withdraw more than 2 million gallons per day of water from waters of the U.S. and use at least 25 percent of the water they withdraw exclusively for cooling purposes. This rule covers roughly 1,065 existing facilities –521 of these facilities are factories, and the other 544 are power plants. The technologies required under the rule are well-understood, have been in use for several decades, and are in use at over 40 percent of facilities.

The national requirements, which will be implemented through National Pollutant Discharge Elimination System (NPDES) permits, are applicable to the location, design, construction, and capacity of cooling water intake structures at these facilities and are based on the best technology available for minimizing environmental impact. The rule establishes a strong baseline level of protection and then allows additional safeguards for aquatic life to be developed through site-specific analysis, an approach that ensures the best technology available is used. It puts implementation analysis in the hands of the permit writers so requirements can be tailored to the particular facility.

There are three components to the final regulation.

· Existing facilities that withdraw at least 25 percent of their water from an adjacent waterbody exclusively for cooling purposes

and have a design intake flow of greater than 2 million gallons per day are required to reduce fish impingement. To ensure flexibility, the owner or operator of the facility will be able to choose one of seven options for meeting best technology available requirements for reducing impingement.
· Facilities that withdraw very large amounts of water – at least 125 million gallons per day – are required to conduct studies to help the permitting authority determine what site-specific entrainment mortality controls, if any, will be required. This process will include public input.
· New units at an existing facility that are built to increase the generating capacity of the facility are be required to reduce the intake flow to a level similar to a closed cycle, recirculation system. Closed cycle systems are the most effective at reducing entrainment. This can be done by incorporating a closed-cycle system into the design of the new unit, or by making other design changes equivalent to the reductions associated with closed-cycle cooling.

More information: http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/

EPA Recommends New Recreational Water Quality Criteria to Better Protect Public Health

Release Date: 11/26/2012
Contact Information: Julia Valentine (News Media Only), valentine.julia@epa.gov, 202-564-0496, 202-564-4355

WASHINGTON -- Pursuant to an order from a U.S. District Court and as required by the Beaches Environmental Assessment and Coastal Health Act of 2000, the U.S. Environmental Protection Agency (EPA) today recommended new recreational water quality criteria for states that will help protect peoples' health during visits to beaches and waters year round. The science-based criteria provide information to help states improve public health protection by addressing a broader range of illness symptoms, better accounting for pollution after heavy rainfall, providing more protective recommendations for coastal waters, encouraging early alerts to beachgoers and promoting rapid water testing. The criteria released today do not impose any new requirements; instead, they are a tool that states can choose to use in setting their own standards.

The criteria provide states and communities with the most up to date science and information that they can use to determine whether water quality is safe for the public and when to issue an advisory or a beach closure. EPA has provided a variety of other tools to help states evaluate and manage recreational waters.

The new criteria are based on several recent health studies and use a broader definition of illness to recognize that symptoms may occur without a fever, including a number of stomach ailments. EPA also narrowed from 90 days to 30 days the time period over which the results of monitoring samples may be averaged. This produces a more accurate picture of the water quality for that given time, allowing for improved notification time about water quality to the public. This shortened time period especially accounts for heavy rainfall that can wash pollution into rivers, lakes or the ocean or cause sewer overflows.

The strengthened recommendations include:

- A short-term and long-term measure of bacteria levels that are to be used together to ensure that water quality is properly evaluated.

- Stronger recommendations for coastal water quality so public health is protected similarly in both coastal and fresh waters.

- A new rapid testing method that states can use to determine if water quality is safe within hours of water samples being taken.

- An early-alert approach for states to use to quickly issue swimming advisories for the public.

- Tools that allow states to predict water quality problems and identify sources of pollution, as well as to develop criteria for specific beaches.

More information: http://water.epa.gov/scitech/swguidance/standards/criteria/health/recreation/index.cfm

Travis Loop

Director of Communications
Office of Water

U.S. Environmental Protection Agency

202-870-6922

loop.travis@epa.gov

From: Kopocis, Ken
Sent: Tuesday, July 15, 2014 5:36 PM
To: Loop, Travis
Subject: Press

Travis,

Can you send me the press statements or TP's or whatever on the cooling waters intake rule and the recreational water criteria?

I need to cut and paste a brief description.

Thanks,

Ken Kopocis

Office of Water

U.S. EPA

(202) 564-5700

To: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]
From: Kopocis, Ken
Sent: Wed 6/18/2014 6:04:12 PM
Subject: 316(b) Discussion

Timing prognosis?

Ken Kopocis

Office of Water

U.S. EPA

(202) 564-5700

To: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]
From: Kopocis, Ken
Sent: Mon 6/16/2014 5:05:06 PM
Subject: Need to talk on 316(b).

Earliest convenienceÿ

To: Garbow, Avi[Garbow.Avi@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]; Reynolds, Thomas[Reynolds.Thomas@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]; Vaught, Laura[Vaught.Laura@epa.gov]
From: Kopocis, Ken
Sent: Sat 5/17/2014 1:01:26 AM
Subject: Re: 316b stmt

Back on line.
I agree.

From: Garbow, Avi
Sent: Friday, May 16, 2014 5:05:30 PM
To: Beauvais, Joel; Reynolds, Thomas; Feldt, Lisa; Vaught, Laura; Kopocis, Ken
Subject: Re: 316b stmt

Will do.

Sent from my BlackBerry 10 smartphone.

From: Beauvais, Joel
Sent: Friday, May 16, 2014 5:04 PM
To: Reynolds, Thomas; Feldt, Lisa; Vaught, Laura; Kopocis, Ken; Garbow, Avi
Subject: RE: 316b stmt

This seems fine to me.

Avi, we discussed after you dropped off the call that the Riverkeeper call needs to happen before Tom pushes this out to press. Can you let Tom know when that will happen/has happened, so he can hit send?

Tom, Laura and I have basically completed the stakeholder calls that we needed to do, so we're ok on that front.

From: Reynolds, Thomas
Sent: Friday, May 16, 2014 4:55 PM
To: Beauvais, Joel; Feldt, Lisa; Vaught, Laura; Kopocis, Ken; Garbow, Avi
Subject: 316b stmt

Pls feel free to edit.

EPA and its federal partners are working through the final details regarding Endangered Species Act consultations relating to 316(b). We now expect to finalize and release the final rule on Monday.

Tom Reynolds

Associate Administrator for External Affairs

Environmental Protection Agency

202-566-0717 – direct

202-568-0705 – cell

Reynolds.thomas@epa.gov

To: Penman, Crystal[Penman.Crystal@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]
From: Kopocis, Ken
Sent: Thur 5/15/2014 10:47:17 AM
Subject: 316(b) Update

Call-in # **Non-Responsive**

To: Garbow, Avi[Garbow.Avi@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]
From: Kopocis, Ken
Sent: Thur 5/15/2014 2:47:04 AM
Subject: 316(b) Update

I can't seem to set a meeting through blackberry. Love technology.
Let's do a call at 9:30 tomorrow. Others may participate.
Call-in **Non-Responsive**
Ken. ÿ

To: Neugeboren, Steven[Neugeboren.Steven@epa.gov]
From: Kopocis, Ken
Sent: Wed 5/14/2014 9:34:24 PM
Subject: 316(b) Timeline

Is the 16th a settlement date the court was involved in?
Am I remembering a status conference? ÿ

To: Senn, John[Senn.John@epa.gov]
From: Kopocis, Ken
Sent: Wed 5/14/2014 5:37:07 PM
Subject: RE: off the record with Wall Street Journal

She just arrived.

-----Original Message-----
From: Senn, John
Sent: Wednesday, May 14, 2014 1:36 PM
To: Kopocis, Ken
Subject: RE: off the record with Wall Street Journal

I believe so--Monica told me she was en route to your office 10-15 minutes ago.

From: Kopocis, Ken
Sent: Wednesday, May 14, 2014 1:35 PM
To: Lee, Monica; Senn, John
Subject: RE: off the record with Wall Street Journal

Is this happening?
Ken

From: Lee, Monica
Sent: Wednesday, May 14, 2014 12:45 PM
To: Kopocis, Ken; Senn, John
Cc: Magruder, DeMara
Subject: off the record with Wall Street Journal

Hey Ken/John we re all set to talk to Alicia Mundy from the Wall Street Journal at 1:30. This will be off the record she s looking for general information on 316(b), because she s going to be covering it, but isn t particularly familiar with everything that s leading up to Friday s announcement.

Ken, I know John flagged her initial question for you, but as a reminder she s looking for information on why utility industry is worried, since it looks like EPA will offer travelling screen & collection return system as one of the choices.

I ll come up to your office, Ken, and we ll call John to talk through some things before we call Alicia. Let me know if there are any questions, otherwise we ll all talk soon.

Thanks,

Monica Lee
Deputy Press Secretary
Office of the Administrator
Environmental Protection Agency
Direct: 202-564-0645
Cell: 202-713-6902
lee.monica@epa.gov<mailto:lee.monica@epa.gov>

ÿ

To: Lee, Monica[Lee.Monica@epa.gov]; Senn, John[Senn.John@epa.gov]
From: Kopocis, Ken
Sent: Wed 5/14/2014 5:35:03 PM
Subject: RE: off the record with Wall Street Journal

Is this happening?

Ken

From: Lee, Monica
Sent: Wednesday, May 14, 2014 12:45 PM
To: Kopocis, Ken; Senn, John
Cc: Magruder, DeMara
Subject: off the record with Wall Street Journal

Hey Ken/John – we're all set to talk to Alicia Mundy from the Wall Street Journal at 1:30. This will be off the record – she's looking for general information on 316(b), because she's going to be covering it, but isn't particularly familiar with everything that's leading up to Friday's announcement.

Ken, I know John flagged her initial question for you, but as a reminder she's looking for information on why utility industry is worried, since it looks like EPA will offer travelling screen & collection return system as one of the choices.

I'll come up to your office, Ken, and we'll call John to talk through some things before we call Alicia. Let me know if there are any questions, otherwise we'll all talk soon.

Thanks,

Monica Lee

Deputy Press Secretary

Office of the Administrator

Environmental Protection Agency

Direct: 202-564-0645

Cell: 202-713-6902

lee.monica@epa.gov

To: Beauvais, Joel[Beauvais.Joel@epa.gov]; Vaught, Laura[Vaught.Laura@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]
From: Kopocis, Ken
Sent: Tue 5/13/2014 11:26:01 PM
Subject: TP's for calls
Talking points re 316(b).docx

In my spare time, attached is the first cut of TP's for the Administrator re electric industry.

Comments (constructive) welcome.

Ken Kopocis

Office of Water

U.S. EPA

(202) 564-5700

To: Feldt, Lisa[Feldt.Lisa@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]
Cc: Beauvais, Joel[Beauvais.Joel@epa.gov]
From: Kopocis, Ken
Sent: Tue 5/13/2014 2:24:59 PM
Subject: RE: Tuesday Morning Call on ESA Matter

Yes. And Joel said he has some discussion items.

It looks as though it needs to be at noon.

From: Feldt, Lisa
Sent: Tuesday, May 13, 2014 9:22 AM
To: Wood, Robert; Kopocis, Ken; Garbow, Avi
Cc: Beauvais, Joel
Subject: RE: Tuesday Morning Call on ESA Matter

Thanks, Ken, do you want to schedule some time after the 11 am call for all of us to hear the current state of play on this issue?

Lisa Feldt

Associate Deputy Administrator

Office of the Administrator

202-564-4711

feldt.lisa@epa.gov

From: Wood, Robert
Sent: Tuesday, May 13, 2014 9:20 AM
To: Kopocis, Ken; Garbow, Avi; Feldt, Lisa
Subject: FW: Tuesday Morning Call on ESA Matter

Call was rescheduled for 11AM

From: Wood, Robert
Sent: Monday, May 12, 2014 6:04 PM
To: kopocis.ken@epa.gov; Garbow, Avi; Feldt, Lisa
Cc: Elizabeth Southerland; Neugeboren.steven@epa.gov
Subject: FW: Tuesday Morning Call on ESA Matter

Ken, Avi and Lisa,

FYI, Message below. Call is set for 9AM tomorrow.

From: Wood, Robert
Sent: Monday, May 12, 2014 5:57 PM
To: Gary Frazer; Paul Souza; Lois J. Schiffer; 'Boling, Edward'; donna.wieting@noaa.gov; cathy.tortorici@noaa.gov; Drew Crane; Pamela Lawrence - NOAA Federal; Barsky, Seth (ENRD)
Cc: Neugeboren.steven@epa.gov; Elizabeth Southerland
Subject: Tuesday Morning Call on ESA Matter

Hi Everybody,

We would like to convene a call tomorrow (Tuesday) morning to discuss ESA and 316(b). I believe Avi will be sending a note to Lois and to Hilary this evening and tomorrow's call will follow that. I'll send a meeting invitation for 9AM with a call in number in a minute. Steve Neugeboren and I will lead the call for EPA. Thanks,

Rob

Robert K. Wood, Director

Engineering and Analysis Division

U.S. EPA Office of Water

202-566-1822

To: Beauvais, Joel[Beauvais.Joel@epa.gov]
From: Kopocis, Ken
Sent: Fri 5/9/2014 8:28:54 PM
Subject: RE: You joining this 316(b) call with Lisa, Laura and me?

Sorry, I didn t realize there was a call.
Is there an action item for OW?
I have not yet heard anything more from yesterday.

-----Original Message-----
From: Beauvais, Joel
Sent: Friday, May 09, 2014 3:39 PM
To: Kopocis, Ken
Subject: You joining this 316(b) call with Lisa, Laura and me?

Call in info:

Non-Responsive

y

To: Beauvais, Joel[Beauvais.Joel@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]
From: Kopocis, Ken
Sent: Thur 5/8/2014 5:55:55 PM
Subject: RE: 316(b) and incidental take

I'll set it for 3:30.

From: Beauvais, Joel
Sent: Thursday, May 08, 2014 1:53 PM
To: Garbow, Avi; Kopocis, Ken; Feldt, Lisa
Subject: RE: 316(b) and incidental take

Same here

From: Garbow, Avi
Sent: Thursday, May 08, 2014 1:53 PM
To: Kopocis, Ken; Feldt, Lisa; Beauvais, Joel
Subject: RE: 316(b) and incidental take

3:30 is better for me, but could make 3 work as well.

Avi Garbow

General Counsel

U.S. Environmental Protection Agency

(202) 564-8040

From: Kopocis, Ken
Sent: Thursday, May 08, 2014 1:51 PM
To: Garbow, Avi; Feldt, Lisa; Beauvais, Joel
Subject: 316(b) and incidental take

Ex. 5 - Deliberative

Ken Kopocis

Office of Water

U.S. EPA

(202) 564-5700

To: Vaught, Laura[Vaught.Laura@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]; Reynolds, Thomas[Reynolds.Thomas@epa.gov]
From: Kopocis, Ken
Sent: Wed 5/7/2014 8:22:29 PM
Subject: RE: 316(b)

Can't make it. Already booked.

From: Vaught, Laura
Sent: Wednesday, May 07, 2014 3:38 PM
To: Beauvais, Joel; Feldt, Lisa; Reynolds, Thomas
Cc: Kopocis, Ken
Subject: Re: 316(b)

Good here.

From: Beauvais, Joel
Sent: Wednesday, May 7, 2014 3:15:32 PM
To: Feldt, Lisa; Reynolds, Thomas
Cc: Kopocis, Ken; Vaught, Laura
Subject: RE: 316(b)

OK. + Tom

From: Feldt, Lisa
Sent: Wednesday, May 07, 2014 2:27 PM
To: Beauvais, Joel
Cc: Kopocis, Ken; Vaught, Laura
Subject: RE: 316(b)

Works for me. I would also include Tom at this juncture.

Lisa Feldt

Associate Deputy Administrator

Office of the Administrator

202-564-4711

feldt.lisa@epa.gov

From: Beauvais, Joel
Sent: Wednesday, May 07, 2014 1:10 PM
To: Vaught, Laura; Kopocis, Ken; Feldt, Lisa
Subject: 316(b)

Talked to Dan U and we need to touch base on some stakeholder-related stuff. Would it be possible to caucus for a few minutes after Senior Policy this afternoon?

To: Wood, Robert[Wood.Robert@epa.gov]
Cc: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Shriner, Paul[Shriner.Paul@epa.gov]
From: Kopocis, Ken
Sent: Mon 5/5/2014 8:14:49 PM
Subject: RE: 316(b) Papers and Tabbed Binder

Just did. I will look it over and see if I need anything else.
Thanks for all the work on it.
Ken

-----Original Message-----
From: Wood, Robert
Sent: Monday, May 05, 2014 4:14 PM
To: Kopocis, Ken
Cc: Southerland, Elizabeth; Shriner, Paul
Subject: 316(b) Papers and Tabbed Binder

Ken,

Paul Shriner will drop off to you shortly the two ESA papers we discussed along with a binder containing the tabbed rule and preamble.

Rob

Robert K. Wood
Director,
Engineering and Analysis Division
U.S. EPA Office of Water
202-566-1822
ÿ

To: Feldt, Lisa[Feldt.Lisa@epa.gov]
Cc: Beauvais, Joel[Beauvais.Joel@epa.gov]
From: Kopocis, Ken
Sent: Mon 4/21/2014 10:18:55 PM
Subject: RE: 316B

No.

From: Feldt, Lisa
Sent: Monday, April 21, 2014 5:15 PM
To: Kopocis, Ken
Cc: Beauvais, Joel
Subject: 316B

Ken, Just checking whether still on track to send e-mail to Administrator today to give her information/data that she can share with Howard S?

Lisa Feldt

Associate Deputy Administrator

Office of the Administrator

202-564-4711

feldt.lisa@epa.gov

To: Loop, Travis[Loop.Travis@epa.gov]; Wiedeman, Allison[Wiedeman.Allison@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]; Woodward, Cheryl[Woodward.Cheryl@epa.gov]
Cc: Magruder, DeMara[Magruder.Demara@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]
From: Kopocis, Ken
Sent: Tue 4/1/2014 7:13:23 PM
Subject: RE: ag outreach

Let's look at 11:30, immediately following the Ag stakeholder mtg.

From: Loop, Travis
Sent: Tuesday, April 01, 2014 2:38 PM
To: Wiedeman, Allison; Kopocis, Ken; Penman, Crystal; Woodward, Cheryl
Subject: ag outreach

I have a meeting on 316B comms at 9 tomorrow. I can meet any other time from 10-2 and 230-5.

Travis Loop

Director of Communications
Office of Water

U.S. Environmental Protection Agency

202-870-6922

loop.travis@epa.gov

To: Beauvais, Joel[Beauvais.Joel@epa.gov]
From: Kopocis, Ken
Sent: Mon 3/31/2014 12:57:41 AM
Subject: Re: 316(b)

Actually ran into heavy snow and traffic coming home.
Best time tomorrow probably between 12:30 and 1:00.

From: Beauvais, Joel
Sent: Sunday, March 30, 2014 5:06:31 PM
To: Kopocis, Ken
Subject: RE: 316(b)

I am around and available for the rest of the day if you have a chance to call: Ex. 5 - Deliberative
Otherwise, I'll catch you tomorrow.

From: Kopocis, Ken
Sent: Friday, March 28, 2014 10:25 PM
To: Beauvais, Joel
Subject: Re: 316(b)

I am out of town.
Let's look at Sunday afternoon.

From: Beauvais, Joel
Sent: Friday, March 28, 2014 6:52:14 PM
To: Kopocis, Ken
Subject: 316(b)

Hi, Ken – Can we check in on a few things on 316(b) this weekend? I'm pretty flexible on timing so let me know what works for you.

Joel

To: Wood, Robert[Wood.Robert@epa.gov]
From: Kopocis, Ken
Sent: Wed 3/12/2014 2:21:45 PM
Subject: RE: EO12866_Cooling Water Intakes
EO12866_Cooling Water Intakes_2040-AE95_Preamble_compare 20131127 to 20140307 (3).docx

And here is the entire document. I can tell a lot of work went into it.

From: Wood, Robert
Sent: Wednesday, March 12, 2014 9:17 AM
To: Kopocis, Ken
Subject: RE: EO12866_Cooling Water Intakes

Thanks. Team will take this up immediately

Robert K. Wood, Director

Engineering and Analysis Division

U.S. EPA Office of Water

202-566-1822

From: Kopocis, Ken
Sent: Wednesday, March 12, 2014 8:42 AM
To: Wood, Robert
Subject: EO12866_Cooling Water Intakes

Rob, I am only through page 413, but I thought your team could get started before I am finished.

I am going through it quickly and focusing on areas of particular interest. So, I won't claim to have read every word.

All of my comments and edits are in bubbles so they are easy to find.

I am continuing through the rest of the document and will get it to you later today.

Ken

To: Wood, Robert[Wood.Robert@epa.gov]
From: Kopocis, Ken
Sent: Wed 3/12/2014 2:20:30 PM
Subject: RE: 1:30 Meeting

You can plan on attending.

-----Original Message-----
From: Wood, Robert
Sent: Wednesday, March 12, 2014 8:14 AM
To: Kopocis, Ken
Subject: 1:30 Meeting

Let me know if you want me to participate in 1:30 meeting on 316(b) and ESA.

Robert K. Wood
Director,
Engineering and Analysis Division
U.S. EPA Office of Water
202-566-1822
ÿ

To: Wood, Robert[Wood.Robert@epa.gov]
From: Kopocis, Ken
Sent: Wed 3/12/2014 12:42:28 PM
Subject: EO12866_Cooling Water Intakes
EO12866_Cooling Water Intakes_2040-AE95_Preamble_compare 20131127 to 20140307 (3).docx

Rob, I am only through page 413, but I thought your team could get started before I am finished.

I am going through it quickly and focusing on areas of particular interest. So, I won't claim to have read every word.

All of my comments and edits are in bubbles so they are easy to find.

I am continuing through the rest of the document and will get it to you later today.

Ken

To: Garbow, Avi[Garbow.Avi@epa.gov]
From: Kopocis, Ken
Sent: Wed 3/12/2014 12:35:25 PM
Subject: 316(b) meeting today

Are you bringing anyone with you?

If so, I could ask Rob to come along.

Whichever you prefer is fine with me.

Ken Kopocis

Office of Water

U.S. EPA

(202) 564-5700

To: Administrator B6 @epa.gov]
From: Kopocis, Ken
Sent: Tue 3/11/2014 7:28:58 PM
Subject: Accepted: Meeting re: 316b

To: Wood, Robert[Wood.Robert@epa.gov]
From: Kopocis, Ken
Sent: Tue 3/11/2014 4:39:16 PM
Subject: EO12866_Cooling Water Intakes_2040-AE95_Final_Rule_compare 20131127 to 20140307 (2).docx
EO12866_Cooling Water Intakes_2040-AE95_Final_Rule_compare 20131127 to 20140307 (2).docx

Rob, sorry for the delay on this. Truly minor comments from the weekend.

I will give a look to the preamble this afternoon.

To: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]
From: Kopocis, Ken
Sent: Wed 3/5/2014 7:20:36 PM
Subject: FW: 316(b)

When: Wednesday, March 05, 2014 5:00 PM-5:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: 4000

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

This showed up on my calendar. Please coordinate and plan to attend.
Ken

-----Original Appointment-----
From: Garbow, Avi
Sent: Wednesday, March 05, 2014 11:59 AM
To: Garbow, Avi; Neugeboren, Steven; Kopocis, Ken; Feldt, Lisa; Wade, Alexis; Witt, Richard; Levine, MaryEllen
Subject: 316(b)
When: Wednesday, March 05, 2014 5:00 PM-5:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: 4000

To: Wood, Robert[Wood.Robert@epa.gov]
Cc: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]
From: Kopocis, Ken
Sent: Fri 2/28/2014 1:51:24 AM
Subject: RE: Would like to Meet Friday

Will see about it.

-----Original Message-----
From: Wood, Robert
Sent: Thursday, February 27, 2014 6:45 PM
To: Kopocis, Ken
Cc: Southerland, Elizabeth; Neugeboren, Steven
Subject: Would like to Meet Friday

Ken,

I would like to meet with you tomorrow (Friday) on 316(b) next steps and include Steve. We met today and would like to go over some ideas and recommendations. Steve is checking Avi's availability so maybe he can make it too. Betsy will call in whatever time we set. Could you have Demaura or Crystal find a time good for you and invite Steve, Avi, Betsy and me? Thanks.

Rob

Robert K. Wood
Director,
Engineering and Analysis Division
U.S. EPA Office of Water
ÿ

To: Magruder, DeMara[Magruder.Demara@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]
From: Kopocis, Ken
Sent: Fri 2/28/2014 1:51:05 AM
Subject: FW: Would like to Meet Friday

Please accommodate.

-----Original Message-----
From: Wood, Robert
Sent: Thursday, February 27, 2014 6:45 PM
To: Kopocis, Ken
Cc: Southerland, Elizabeth; Neugeboren, Steven
Subject: Would like to Meet Friday

Ken,

I would like to meet with you tomorrow (Friday) on 316(b) next steps and include Steve. We met today and would like to go over some ideas and recommendations. Steve is checking Avi's availability so maybe he can make it too. Betsy will call in whatever time we set. Could you have Demaura or Crystal find a time good for you and invite Steve, Avi, Betsy and me? Thanks.

Rob

Robert K. Wood
Director,
Engineering and Analysis Division
U.S. EPA Office of Water
ÿ

To: Tarquinio, Ellen[Tarquinio.Ellen@epa.gov]
From: Kopocis, Ken
Sent: Thur 2/6/2014 9:03:24 PM
Subject: RE: Briefing Materials: 316(B)

There will be materials. They will likely come through Lisa F. They will likely be later than the cutoff.

From: Tarquinio, Ellen
Sent: Thursday, February 06, 2014 4:02 PM
To: Kopocis, Ken
Subject: FW: Briefing Materials: 316(B)

HI Ken-

A quick question for you – as I'm being asked about the 316(B) materials. I know the SA for OGC and I checked in with them on materials for this meeting but haven't heard back. Any idea if there will be materials (from either OW or OGC) provided for the meeting tomorrow with the Administrator?

Thank you!

Ellen

Ellen Tarquinio

Special Assistant

Office of the Administrator

WJC North 3313

202-566-2267

From: Burley, Veronica

Sent: Thursday, February 06, 2014 3:39 PM
To: Tarquinio, Ellen; Baldwin, Mark; Ingram, Amir; Geller, Michael; Gaber, Noha; Smith, Kelley
Cc: Herckis, Arian; Bluhm, Kate; Rivera, Keylin; Kukla, Alison
Subject: Briefing Materials

Hi All,

Please let me know the status of the following briefing materials not yet received, thanks.

Ex. 5 - Deliberative

4. 316B Meeting

Veronica Burley

US Environmental Protection Agency

Office of the Administrator

202-564-7084 (direct)

202-564-1225 (main ofc.)

burley.veronica@epa.gov

To: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]
From: Kopocis, Ken
Sent: Tue 2/4/2014 2:58:56 PM
Subject: Meeting today with IBEW
316(b) Letter to EPA 2011.pdf

Anything special I should know concerning the attached letter?

Ken Kopocis

Office of Water

U.S. EPA

(202) 564-5700

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS

900 Seventh Street, NW
Washington, DC 20001
202.833.7000
www.ibew.org

EDWIN D. HILL
International President

SAM J. CHILIA
International Secretary-Treasurer

August 16, 2011

Water Docket
United States Environmental Protection Agency
Mail Code: 4203M
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Attn: Docket ID No. EPA-HQ-OW-2008-0667

Dear Administrator Jackson:

On behalf of the approximately 725,000 members of the International Brotherhood of Electrical Workers (IBEW), I write to comment on the Environmental Protection Agency's (EPA) recently proposed cooling water intake structure rule for existing facilities, published on April 20, 2011 at 76 Fed. Reg. 22174.

The proposed rule, which implements Section 316(b) of the Clean Water Act, would require hundreds of electric generating and manufacturing facilities to meet an array of new technology, monitoring, and reporting requirements. As the IBEW represents employees at 83 percent of all organized utilities in the United States and Canada, I am very concerned about the proposed rule's impact on our members' livelihoods.

I commend EPA for not mandating the retrofitting of closed-cycle cooling at all facilities covered by the proposed rule. I am also thankful the EPA has chosen a site-specific approach to the problem of aquatic entrainment. EPA's approach appropriately allows site-by-site determination of what constitutes "best technology available" based on data provided by state and local wildlife management agencies.

However, regarding aquatic impingement, EPA has proposed a uniform numeric national standard for marine life mortality and water intake velocity that appear to be unrealistic. These numbers are likely to be unachievable or prohibitively expensive in many cases. This inflexible approach takes the technology determination out of states' hands, fails to consider the unique circumstances of each site affected, and provides no credit for impingement reduction methods that have already been approved by states as the best technology available.

I am very concerned that the inflexibility of the proposed regulation will result in facilities being forced to close or cut jobs in order to comply. Operation of coal-fired and nuclear electricity generating facilities is labor intensive. Closures of these facilities would result in the loss of many high-skilled middle-class jobs, reduced electricity supply, and degraded reliability of the electric grid.

FOIA 2014-009508 Interim 2

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS®

I highly recommend EPA revise its impingement provision to mirror the entrainment provision, allowing site-by-site determination of what constitutes best technology available. The site-by-site determination should include a cost-benefit analysis, based on reports of state and local wildlife management agencies. This approach would allow EPA to make the best judgment regarding impingement technology. The individualized nature of this approach would prevent facilities from closing or cutting jobs because of compliance costs.

Thank you for your consideration in this matter.

Sincerely yours,

Edwin D. Hill
International President

EDH:bmm

Copy to William R. Daley, Assistant to the President and Chief of Staff
Nate Tamarin, Associate Director, Office of Public Engagement and Intergovernmental Affairs
The Honorable Cass R. Sunstein, Administrator, Office of Information and Regulatory Affairs
Michael Goo, Associate Administrator, Environmental Protection Agency
Jim Laity, Policy Analyst, Officer of Management and Budget

ED_000110PST_00005035-00002

To: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]
From: Kopocis, Ken
Sent: Tue 2/4/2014 2:31:39 PM
Subject: RE: Your comments on 316b?
EO12866_Cooling Water Intakes_2040_Final_Preamble_20140131 TrackChanges.docx
EO12866_Cooling Water Intakes_2040-AE95_Final_Rule_20140131 TrackChanges (2).docx

Here you go.

Some of my bullets are just notations to me as to where certain discussions are, so nothing else required.

Hopefully others are self-explanatory. In one case, the bullet is actually referring to the footnote.

From: Southerland, Elizabeth
Sent: Tuesday, February 04, 2014 9:24 AM
To: Kopocis, Ken
Subject: Your comments on 316b?

When you get a chance, send us your weekend comments on the rule and preamble. By tomorrow we will circulate new ESA text for review and could have your newest comments incorporated in that draft if we have time.

Elizabeth Southerland, Director

Office of Science & Technology

Office Water

Room 5233A - MC - 4301T

Washington, D. C. 20460

Direct: (202) 566-0328

Fax: (202) 566-0441

To: Garbow, Avi[Garbow.Avi@epa.gov]
Cc: Feldt, Lisa[Feldt.Lisa@epa.gov]
From: Kopocis, Ken
Sent: Tue 1/28/2014 11:31:15 PM
Subject: RE: 316(b) and Administrator.

Thanks.

-----Original Message-----
From: Garbow, Avi
Sent: Tuesday, January 28, 2014 5:33 PM
To: Kopocis, Ken
Cc: Feldt, Lisa
Subject: RE: 316(b) and Administrator.

I will at least send down the Ex. 5 - Deliberative doc we discussed the other day. I think folks are still working on some potential annotations to the December 19th email paper.

Avi Garbow
General Counsel
U.S. Environmental Protection Agency
(202) 564-8040

-----Original Message-----
From: Kopocis, Ken
Sent: Tuesday, January 28, 2014 4:32 PM
To: Garbow, Avi
Cc: Feldt, Lisa
Subject: 316(b) and Administrator.

Avi, is OGC forwarding materials for tomorrow's meeting?
Thanks.
ÿ

Ex. 5 - Deliberative

Laura,

Here is the public opinion survey exchange. The 316(b) exchange is also included at the bottom of this email. Thanks

Mr . SIMPSON. I understand that the EPA is starting to use more what you call public opinion surveys to do a cost –benefit analysis rather than traditional cost - benefit analyses, and we are asking people how much would you be willing to pay to, you know, do X, Y, or Z and stuff like that. And in the theoretical, oftentimes people are a lot more willing to say they are willing to pay for stuff than they actually are. Is this an appropriate direction to go in doing a true cost - benefit analysis?

Mr. PERCIASEPE. Well, first, we are not replacing our traditional cost - benefit analyses. In fact, we are continuing to improve on that, refining how we--

Mr. SIMPSON. How does this play into that?

Mr. PERCIASEPE. Right. You said instead of and I want to make sure--

Mr. SIMPSON. Okay.

Mr. PERCIASEPE. --Mr. Chairman, you understand we are not doing that. One of the things we have always struggled with, and this relates perhaps to the questions we had on the closed loop cooling systems.

Mr. SIMPSON. Right.

Mr. PERCIASEPE. We have a more difficult time of calculating the benefits. We are very good at calculating the costs and I think with a pretty good track record on that . But the benefits are harder. So there is a technique in economics called contingent valuation , and you may call it a public opinion survey, but it is an actual tool that is used by economists to determine benefits in some instances. So we do not want to not use that tool, but I think the key is to what extent do you use that tool? Do you use it for broad policy or do you use it for some site- specific decision? And if you are going to do a site-specific decision, you are likely to need--and the economists who work on these models will tell you--you are likely to need information that is much more tailored to that local decision. So your survey of people, whether it is focus groups or more traditional technical surveying , is focused on the issues at hand in the local area. But we will use and have used in the past-- I remember when I was at EPA and the '90s, we looked at contingent valuation types of analysis that were emerging back then on how people value visibility in the West in the national parks. Right now, we keep it as a different class of benefits. It is not as tightly wound as like the health benefits we might get in the cost - benefit analysis. But we do use it, have used it in the past . The key I think really is making sure the level of effort or the level that the survey addresses is used at the proper level in whatever decision -making you make.

Mr. SIMPSON. Because it is obviously subject to some subjectivity . Using that method of it became the primary method of trying to do public opinion surveys.

Mr. PERCIASEPE. You know, I am not the expert on contingent valuation. I think my only thing is a policymaker is that we avail ourselves of all the technical tools that are out there that use it in the right way.

Cooling Water Intakes (316(b))

Mr. VALADAO. Thank you, Mr. Chair, Mr. Administrator. I wanted to ask you about a regulation EPA is currently working on related to once-through cooling at major industrial and

power facilities. The more I learn about it, the more I am concerned about the implication depending on how this final rule is written. Last year, a bipartisan group of 100 of my colleagues sent the letter I have here to the EPA. And Mr. Chairman, I would like to ask unanimous consent to enter this letter into the record.

Mr. SIMPSON. Without objection.

Mr. VALADAO . Thank you.

On this Rule 316(b) , we already have a rule in place in my state on this topic, so it is an issue I am aware of from my time serving in the state legislature. And I have two brief questions for you . First, a simple yes o r no will suffi e. Do you plan on meeting the deadline of June 27 on this rule?

Mr. PERCIASEPE. Yes .

Mr. VALADAO. Okay. The different facilities EPA is looking to regulate under this rule are also different from each other, nuclear versus natural gas, etc. And I think one of the main problems I see and the one that was raised in a letter from my colleagues is that the EPA had originally considered a one-size-fits-all approach here. And can you tell me if that is still the case or if EPA is going to instead give the states the appropriate authority they have had for years to decide what makes sense at specific locations?

Mr. PERCIASEPE. We are working very hard on a more flexible rule.

Mr. VALADAO. Thank you. Obviously, this is a concern of mine. In California, we have only got two nuclear plants running, but in my district, a quarter of the energy comes from nuclear. And when you look at trying to attract businesses or jobs or even some o f the lowest income people in my district, affordable energy is something that they need to keep their families comfortable to keep the lights on at school, to run computers. Those are all things that severely affect my constituents, and it is something I would like you to take some serious look into. So thank you.

Mr. PERCIASEPE. Yes, you know, just a little bit of context for you, Congressman, because I want you to--we are very aware of the issues that you have brought up. We have an ongoing process with stakeholders, including the Edison Electric Institute. We are looking across the spectrum of what the states are currently doing and how we have perhaps a really much smoother than was looked at in the proposal approach to dealing with these issues, providing the flexibility where there are issues with aquatic ecosystem that are important that the state would have the ability to work with the utility there to deal with, but it would not have to be the same thing in every location everywhere around the country. So I want you to know that we are very keenly

focused on this issue.

Mr. VALADAO. Thank you.

Greg Spraul

Congressional Liaison

Water, Pesticides, and Toxics Team

Office of Congressional Affairs

U.S. Environmental Protection Agency

email: spraul.greg@epa.gov

Ph: 202.564.0255

To: Stoner, Nancy[Stoner.Nancy@epa.gov]; Gilinsky, Ellen[Gilinsky.Ellen@epa.gov]
Cc: Penman, Crystal[Penman.Crystal@epa.gov]
From: Kopocis, Ken
Sent: Wed 5/8/2013 12:39:35 PM
Subject: RE: review of 316(b) package

Yes. Either tomorrow or Friday will work for me.
Crystal, please set it up.
Thanks.

From: Stoner, Nancy
Sent: Wednesday, May 08, 2013 7:09 AM
To: Kopocis, Ken; Gilinsky, Ellen
Subject: Re: review of 316(b) package

Ken and I should be plenty. Should we schedule a mtg w/Goo?

From: Kopocis, Ken
Sent: Tuesday, May 07, 2013 10:54:37 PM
To: Gilinsky, Ellen; Stoner, Nancy
Subject: Re: review of 316(b) package

I should probably take a look.
I expect a conversation with Michael G will also be in order.

From: Gilinsky, Ellen
Sent: Tuesday, May 07, 2013 10:51:29 PM
To: Stoner, Nancy; Kopocis, Ken
Subject: Re: review of 316(b) package

I have taken back seat on this one but will read if ytou want

---

From: Stoner, Nancy
Sent: Tuesday, May 07, 2013 7:32:31 PM
To: Kopocis, Ken; Gilinsky, Ellen
Subject: Fw: review of 316(b) package

Checking out your level of interest

From: Lousberg, Macara
Sent: Tuesday, May 07, 2013 4:09:48 PM
To: Stoner, Nancy
Subject: review of 316(b) package

Nancy – we're expecting the 316(b) package from OST sometime on Thursday, with parts of the package possibly available for review before that. Do you want to review the whole package before signing? Specific parts? None of it? We'd like to give you as much time as possible to review whatever you'd like to see, so just trying to get a sense of what you're looking for. Also, do you want Ken or Ellen to take a look, either instead of or in addition to you?

Macara

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Penman, Crystal
Sent: Wed 5/8/2013 12:35:14 PM
Subject: RE: Fwd: Endangered Species Act Consultation for 316(b) _ cooling Water Intake Call in Non-Responsive

Non-Responsive

Added Ron to invite.

From: Stoner, Nancy
Sent: Wednesday, May 08, 2013 7:35 AM
To: Penman, Crystal
Subject: Fw: Fwd: Endangered Species Act Consultation for 316(b) _ cooling Water Intake Call in Non-Responsive

Non-Responsive

Not sure who scheduled, but if not you, pls pass along, thx

From: Ron Dean - NOAA Federal
Sent: Tuesday, May 07, 2013 11:04:41 AM
To: Stoner, Nancy
Subject: Fwd: Endangered Species Act Consultation for 316(b) _ cooling Water Intake Call in Non-Responsive

Non-Responsive

Hi:

Please add me to this invite list for any future updates, I am the Team Leader on the CWA Consultation Team for NMFS on this Action and work with Jenny Schultz and Pam Lawrence.

Thank you,

-Ron

---------- Forwarded message ----------
From: **Jennifer Schultz - NOAA Federal** <jennifer.schultz@noaa.gov>
Date: Tue, May 7, 2013 at 10:58 AM
Subject: Fwd: Endangered Species Act Consultation for 316(b) _ cooling Water Intake Call in 1-

Non-Responsive

To: Ron Dean - NOAA Federal <ron.dean@noaa.gov>

Hi Ron,

I don't know why she keeps sending these out...it doesn't look like the date or time is changing.

Jenny

Jennifer Schultz, Ph.D.
Endangered Species Act Interagency Cooperation Division
Office of Protected Resources
NOAA Fisheries
U.S. Department of Commerce
301-427-8443

jennifer.schultz@noaa.gov
www.nmfs.noaa.gov

---------- Forwarded message ----------
From: **Stoner, Nancy** <Stoner.Nancy@epa.gov>

Date: Tue, May 7, 2013 at 10:57 AM
Subject: Endangered Species Act Consultation for 316(b) _ cooling Water Intake Call in Non-Responsive

Non-Responsive

To: "Gilinsky, Ellen" <Gilinsky.Ellen@epa.gov>, "Southerland, Elizabeth" <Southerland.Elizabeth@epa.gov>, "Wood, Robert" <Wood.Robert@epa.gov>, "Hewitt, Julie" <Hewitt.Julie@epa.gov>, "Wade, Alexis" <Wade.Alexis@epa.gov>, "Born, Tom" <Born.Tom@epa.gov>, "Neugeboren, Steven" <Neugeboren.Steven@epa.gov>, "Levine, MaryEllen" <levine.maryellen@epa.gov>, "Nagle, Deborah" <Nagle.Deborah@epa.gov>, "Zobrist, Marcus" <Zobrist.Marcus@epa.gov>, "Witt, Richard" <Witt.Richard@epa.gov>, "pizarro, luis" <pizarro.luis@epa.gov>, "Messier, Dawn" <Messier.Dawn@epa.gov>, "Saxena, Juhi" <Saxena.Juhi@epa.gov>, "lois.schiffer@noaa.gov" <lois.schiffer@noaa.gov>, "gary_frazer@fws.gov" <gary_frazer@fws.gov>, "rick_sayers@fws.gov" <rick_sayers@fws.gov>, "drew_crane@fws.org" <drew_crane@fws.org>, "patrice_ashfield@fws.org" <patrice_ashfield@fws.org>, "paul_souza@fws.org" <paul_souza@fws.org>, "jennifer.schultz@noaa.gov" <jennifer.schultz@noaa.gov>,

"pamela.lawrence@noaa.gov" <pamela.lawrence@noaa.gov>, "helen.golde@noaa.gov" <helen.golde@noaa.gov>
Cc: "Srinivasan, Gautam" <Srinivasan.Gautam@epa.gov>, "Piziali, Jamie" <Piziali.Jamie@epa.gov>, "Penman, Crystal" <Penman.Crystal@epa.gov>, "Clark, Donetta" <Clark.Donetta@epa.gov>, "Skane, Elizabeth" <Skane.Elizabeth@epa.gov>

When: Wednesday, May 15, 2013 9:00 AM-11:00 AM (GMT-05:00) Eastern Time (US & Canada).

Where: 3233 EPA EAST

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*

--
Ron Dean
Office of Protected Resources
NOAA National Marine Fisheries Service
1315 East-West Highway Rm. 13755
Silver Spring, MD 20910
301.427.8445

To: Hanley, Mary[Hanley.Mary@epa.gov]; Stoner, Nancy[Stoner.Nancy@epa.gov]
Cc: Penman, Crystal[Penman.Crystal@epa.gov]
From: Sussman, Bob
Sent: Tue 4/30/2013 5:46:43 PM
Subject: Re: Waiting for line to open on 1:30 mtg on 316b and ESA

Not yet.

From: Hanley, Mary
Sent: Tuesday, April 30, 2013 1:46:10 PM
To: Sussman, Bob; Stoner, Nancy
Cc: Penman, Crystal
Subject: RE: Waiting for line to open on 1:30 mtg on 316b and ESA

The line should be open.

-----Original Message-----
From: Sussman, Bob
Sent: Tuesday, April 30, 2013 1:46 PM
To: Stoner, Nancy
Cc: Penman, Crystal; Hanley, Mary
Subject: Waiting for line to open on 1:30 mtg on 316b and ESA

Is mtg happening? Am dialing in.
ÿ

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
Cc: Penman, Crystal[Penman.Crystal@epa.gov]; Hanley, Mary[Hanley.Mary@epa.gov]
From: Sussman, Bob
Sent: Tue 4/30/2013 5:45:52 PM
Subject: Waiting for line to open on 1:30 mtg on 316b and ESA

Is mtg happening? Am dialing in. ÿ

To: Stoner, Nancy[Stoner.Nancy@epa.gov]
From: Kopocis, Ken
Sent: Tue 4/23/2013 3:10:27 PM
Subject: Re: updated 316b powerpoint

Just starting.

From: Stoner, Nancy
Sent: Tuesday, April 23, 2013 10:59:38 AM
To: Wood, Robert
Cc: Penman, Crystal; Gilinsky, Ellen; Southerland, Elizabeth; Hewitt, Julie; Levine, MaryEllen; Neugeboren, Steven; Wade, Alexis; Kopocis, Ken; Zipf, Lynn
Subject: Re: updated 316b powerpoint

Am on my way in a cab from the doctor, so please start w/o me, thx

---

From: Wood, Robert
Sent: Tuesday, April 23, 2013 9:19:11 AM
To: Stoner, Nancy
Cc: Penman, Crystal; Gilinsky, Ellen; Southerland, Elizabeth; Hewitt, Julie; Levine, MaryEllen; Neugeboren, Steven; Wade, Alexis; Kopocis, Ken; Zipf, Lynn
Subject: FW: updated 316b powerpoint

Attached is the briefing paper revised to include approaches to consultation (formal and informal). We will bring copies to the briefing. Thanks.

From: Zipf, Lynn
Sent: Tuesday, April 23, 2013 9:01 AM
To: Skane, Elizabeth
Cc: Wood, Robert; Hewitt, Julie
Subject: updated 316b powerpoint

Elizabeth - could you please request to have this version of the ppt attached to the Bob P. invitation? Thanks.

Lynn Zipf, Deputy Director

Engineering and Analysis Division

Office of Science and Technology

Office of Water

EPA West Room 6233A

(202) 564-1509

To: Garbow, Avi[Garbow.Avi@epa.gov]
Cc: Feldt, Lisa[Feldt.Lisa@epa.gov]
From: Kopocis, Ken
Sent: Tue 1/28/2014 9:32:04 PM
Subject: 316(b) and Administrator.

Avi, is OGC forwarding materials for tomorrow's meeting?
Thanks. ÿ

To: Tarquinio, Ellen[Tarquinio.Ellen@epa.gov]
From: Kopocis, Ken
Sent: Tue 1/28/2014 9:29:34 PM
Subject: Re: Status of Briefing Materials

Those should come from Avi. I'll confirm.

From: Tarquinio, Ellen
Sent: Tuesday, January 28, 2014 4:26:39 PM
To: Kopocis, Ken
Subject: Fw: Status of Briefing Materials

Hi Ken-

Will you be sending any materials up for 316(b)? Happy to help send those along.
Ellen

From: Burley, Veronica
Sent: Tuesday, January 28, 2014 4:22:39 PM
To: Tarquinio, Ellen; Baldwin, Mark; Ingram, Amir; Smith, Kelley; Geller, Michael; Gaber, Noha; Ganesan, Arvin
Cc: Herckis, Arian; Bluhm, Kate; Rivera, Keylin; Kukla, Alison
Subject: Status of Briefing Materials

Hello,

Please let me know the status of the briefing materials listed below, thank you!

1. Meeting with ECOS Officers
2. Meet/Greet w/NARUC President
3. Bristol Bay
4. Meeting re: 316B

Veronica Burley

US Environmental Protection Agency

Office of the Administrator

202-564-7084 (direct)

202-564-1225 (main ofc.)

burley.veronica@epa.gov

To: Feldt, Lisa[Feldt.Lisa@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]
From: Kopocis, Ken
Sent: Fri 1/24/2014 11:48:31 PM
Subject: RE: 316(b) CEO Letter Regarding Nuclear Units

Yes, I was expecting it.

Ex. 5 - Deliberative

From: Feldt, Lisa
Sent: Friday, January 24, 2014 2:59 PM
To: Kopocis, Ken; Garbow, Avi; Beauvais, Joel
Subject: FW: 316(b) CEO Letter Regarding Nuclear Units

We had a heads up that this was coming. Have not read but I'm sure Administrator will want our take when she is back in office (Monday).

Lisa Feldt

Associate Deputy Administrator

Office of the Administrator

Environmental Protection Agency

office: 202-564-4711

From: Michael Bradley [mailto:mbradley@mjbradley.com]
Sent: Friday, January 24, 2014 2:55 PM
To: Mccarthy, Gina
Cc: Feldt, Lisa; Vaught, Laura; Carrie Jenks
Subject: 316(b) CEO Letter Regarding Nuclear Units

Gina,

Please find attached a letter from the CEOs of Dominion, Exelon, NextEra, PG&E, and PSEG highlighting the potential implications of the Endangered Species Act provisions in the 316(b) rule, as we understand them, for the U.S. nuclear fleet. Please let me know if you have any questions.

Thank you and have a good weekend,

Michael

To: Neugeboren, Steven[Neugeboren.Steven@epa.gov]
From: Kopocis, Ken
Sent: Fri 1/24/2014 3:58:52 PM
Subject: RE: 316b

Most likely Monday, and Avi will be setting it up.

-----Original Message-----
From: Neugeboren, Steven
Sent: Friday, January 24, 2014 10:58 AM
To: Kopocis, Ken
Subject: 316b

Are we gonna be able to have a mtg today?
ÿ

To: Magruder, DeMara[Magruder.Demara@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]
From: Kopocis, Ken
Sent: Fri 1/24/2014 2:42:50 AM
Subject: Fw: meeting tomorrow on 316b

Please coordinate a meeting for Friday.

From: Kopocis, Ken
Sent: Thursday, January 23, 2014 5:54:51 PM
To: Neugeboren, Steven
Subject: RE: meeting tomorrow on 316b

No, when you left, it was going to be Avi because of his schedule.

We will take the lead on it.

From: Neugeboren, Steven
Sent: Thursday, January 23, 2014 5:31 PM
To: Kopocis, Ken
Cc: Garbow, Avi
Subject: meeting tomorrow on 316b

Ken – you were gonna try to get it scheduled for tomorrow but I don't recall seeing an invite yet. Need any assistance from us?

Steven Neugeboren

Associate General Counsel for Water

U.S. EPA

1200 Penn Ave., NW

Washington DC 20460

202-564-5488

To: Feldt, Lisa[Feldt.Lisa@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]
From: Kopocis, Ken
Sent: Wed 1/22/2014 7:58:43 PM
Subject: Re: 316B

Agreed. I am around both days.

From: Feldt, Lisa
Sent: Wednesday, January 22, 2014 2:07:01 PM
To: Garbow, Avi
Cc: Kopocis, Ken
Subject: 316B

Avi, do you want to take lead to get us back together with yours and Ken's folks to talk through this jeopardy/no jeopardy construct. Strikes me that we should do something tomorrow if possible but Friday for sure.

Lisa Feldt

Associate Deputy Administrator

Office of the Administrator

Environmental Protection Agency

office: 202-564-4711

To: Beauvais, Joel[Beauvais.Joel@epa.gov]
From: Kopocis, Ken
Sent: Tue 1/21/2014 1:18:39 AM
Subject: RE: touch base

Just left you a message.

I'll keep my blackberry with me, call whenever.

From: Beauvais, Joel
Sent: Saturday, January 18, 2014 10:39 AM
To: Kopocis, Ken
Subject: Re: touch base

Just tried you. I'm going to be out of pocket for a few hours starting at about 11. Shall I just try you again this afternoon?

From: Kopocis, Ken
Sent: Friday, January 17, 2014 7:56:29 PM
To: Beauvais, Joel
Subject: Re: touch base

Done.

From: Beauvais, Joel
Sent: Friday, January 17, 2014 7:44:18 PM
To: Kopocis, Ken
Subject: Re: touch base

Sure - I'll call you on your cel

From: Kopocis, Ken
Sent: Friday, January 17, 2014 7:32:13 PM
To: Beauvais, Joel
Subject: Re: touch base

You want to shoot for mid-morning tomorrow? I will probably just be reading the WOTUS preamble.

From: Beauvais, Joel
Sent: Friday, January 17, 2014 7:29:24 PM
To: Kopocis, Ken
Subject: Re: touch base

I can do pretty much any before 5 Saturday, any time 12-5 Sunday, or any time Monday.

From: Kopocis, Ken
Sent: Friday, January 17, 2014 7:20:07 PM
To: Beauvais, Joel
Subject: Re: touch base

I can give you ring at your convenience this weekend. What window works for you?

From: Beauvais, Joel
Sent: Friday, January 17, 2014 3:59:53 PM
To: Kopocis, Ken
Subject: touch base

Hi, Ken – Sorry we missed each other today. I'm trying to follow up on something Gina wants us to work on related to 316(b) and am hoping we can connect today or over the weekend. Can you give me a ring at Ex. 6 - Personal Privacy or let me know a time this weekend we can connect? Thanks.

Joel

To: Beauvais, Joel[Beauvais.Joel@epa.gov]
From: Kopocis, Ken
Sent: Sat 1/18/2014 12:32:13 AM
Subject: Re: touch base

You want to shoot for mid-morning tomorrow? I will probably just be reading the WOTUS preamble.

From: Beauvais, Joel
Sent: Friday, January 17, 2014 7:29:24 PM
To: Kopocis, Ken
Subject: Re: touch base

I can do pretty much any before 5 Saturday, any time 12-5 Sunday, or any time Monday.

From: Kopocis, Ken
Sent: Friday, January 17, 2014 7:20:07 PM
To: Beauvais, Joel
Subject: Re: touch base

I can give you ring at your convenience this weekend. What window works for you?

From: Beauvais, Joel
Sent: Friday, January 17, 2014 3:59:53 PM
To: Kopocis, Ken
Subject: touch base

Hi, Ken – Sorry we missed each other today. I'm trying to follow up on something Gina wants us to work on related to 316(b) and am hoping we can connect today or over the weekend. Can you give me a ring at Ex. 6 - Personal Privacy or let me know a time this weekend we can connect? Thanks.

Joel

To: Beauvais, Joel[Beauvais.Joel@epa.gov]
From: Kopocis, Ken
Sent: Sat 1/18/2014 12:20:07 AM
Subject: Re: touch base

I can give you ring at your convenience this weekend. What window works for you?

From: Beauvais, Joel
Sent: Friday, January 17, 2014 3:59:53 PM
To: Kopocis, Ken
Subject: touch base

Hi, Ken – Sorry we missed each other today. I'm trying to follow up on something Gina wants us to work on related to 316(b) and am hoping we can connect today or over the weekend. Can you give me a ring at Ex. 6 - Personal Privacy or let me know a time this weekend we can connect? Thanks.

Joel

To: Tarquinio, Ellen[Tarquinio.Ellen@epa.gov]
From: Kopocis, Ken
Sent: Wed 1/15/2014 11:54:16 PM
Subject: Fw: Talking Points re 316(b) and ESA
011514 Talking Points for Administrator 316(b)clean.docx

FYI

From: Kopocis, Ken
Sent: Wednesday, January 15, 2014 6:36:01 PM
To: Administrator B6
Cc: Garbow, Avi; Feldt, Lisa; Beauvais, Joel; Stoner, Nancy
Subject: Talking Points re 316(b) and ESA

Administrator,

Attached are your talking points. These have been coordinated through OGC, OP, and Lisa.

Please let me know if you have any questions or need additional information.

Ken

To: Feldt, Lisa[Feldt.Lisa@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]; Beauvais, Joel[Beauvais.Joel@epa.gov]
From: Kopocis, Ken
Sent: Wed 1/15/2014 10:10:57 PM
Subject: Fw: Talking Points
011514 Talking Points for Administrator 316b.docx

I will be looking at hs for edits, but am in meetings and don't want you to wait.
I'll coordinate comments if you send them.

From: Wood, Robert
Sent: Wednesday, January 15, 2014 4:31:38 PM
To: Kopocis, Ken
Cc: Southerland, Elizabeth; Neugeboren, Steven; Levine, MaryEllen; Stoner, Nancy
Subject: Talking Points

Attached are the talking points with OGC comments reflected. I will stand by.

To: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]
From: Kopocis, Ken
Sent: Wed 1/15/2014 7:09:10 PM
Subject: RE: draft Admin TPs on 316b URGENT!

Nice e-mail. Didn't see much of an attachment.

From: Southerland, Elizabeth
Sent: Wednesday, January 15, 2014 2:08 PM
To: Kopocis, Ken
Cc: Wood, Robert
Subject: FW: draft Admin TPs on 316b URGENT!

I just sent this to Steve and Mary Ellen for their review. You can wait until I send the next version to look at or you can give me comments now. I just want to make sure you had more time to review this.

Elizabeth Southerland, Director
Office of Science & Technology
Office Water
Room 5233A - MC - 4301T
Washington, D. C. 20460
Direct: (202) 566-0328
Fax: (202) 566-0441

To: Magruder, DeMara[Magruder.Demara@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]
From: Kopocis, Ken
Sent: Mon 1/13/2014 5:25:23 PM
Subject: OW Responses to Issues Raised in EEI Letter of December 20 011014 commentsfinal.docx
OW Responses to Issues Raised in EEI Letter of December 20 011014 commentsfinal.docx

Use this one instead for Administrator's people.

To: Magruder, DeMara[Magruder.Demara@epa.gov]; Penman, Crystal[Penman.Crystal@epa.gov]
From: Kopocis, Ken
Sent: Mon 1/13/2014 5:22:55 PM
Subject: OW Responses to Issues Raised in EEI Letter of December 20 011014 commentsfinal.docx
OW Responses to Issues Raised in EEI Letter of December 20 011014 commentsfinal.docx

This needs to get to the Administrator's people to be put in her book for our 9:00 meeting tomorrow morning.

I will also send it to her directly.

Thanks.

To: Garbow, Avi[Garbow.Avi@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]
From: Kopocis, Ken
Sent: Sun 1/12/2014 11:36:13 PM
Subject: RE: 316(b) ESA revisions from DOI/DOC?

Thanks. Based on their prior revisions, I am not sure if I am looking forward to it.

-----Original Message-----
From: Garbow, Avi
Sent: Sunday, January 12, 2014 6:34 PM
To: Kopocis, Ken; Feldt, Lisa
Subject: Re: 316(b) ESA revisions from DOI/DOC?

Emailed ted - he said they have been working on it over the weekend and should get it to us sometime tonight.

From: Kopocis, Ken
Sent: Sunday, January 12, 2014 6:22:25 PM
To: Garbow, Avi; Feldt, Lisa
Subject: RE: 316(b) ESA revisions from DOI/DOC?

Neither Betsy Southerland nor Rob Wood have received anything either.
Ken

-----Original Message-----
From: Garbow, Avi
Sent: Sunday, January 12, 2014 2:40 PM
To: Feldt, Lisa; Kopocis, Ken
Subject: Re: 316(b) ESA revisions from DOI/DOC?

I have not received anything myself.
Avi

From: Feldt, Lisa
Sent: Sunday, January 12, 2014 2:17:24 PM
To: Kopocis, Ken; Garbow, Avi
Subject: Re: 316(b) ESA revisions from DOI/DOC?

I sent similar e-mail this morning but have not heard. May be good to check in with Betsy S. as well. Lisa

---

From: Kopocis, Ken
Sent: Sunday, January 12, 2014 1:30:31 PM
To: Garbow, Avi; Feldt, Lisa
Subject: 316(b) ESA revisions from DOI/DOC?

Did we get revised thinking or language from the services?
Thanks.
Ken.
ÿ

To: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]
From: Kopocis, Ken
Sent: Sun 1/12/2014 11:17:38 PM
Subject: RE: 316(b) ESA revisions from DOI/DOC?

Thanks as well.

-----Original Message-----
From: Southerland, Elizabeth
Sent: Sunday, January 12, 2014 6:17 PM
To: Kopocis, Ken; Wood, Robert
Subject: Re: 316(b) ESA revisions from DOI/DOC?

I have nothing!

From: Kopocis, Ken
Sent: Sunday, January 12, 2014 5:19:48 PM
To: Southerland, Elizabeth; Wood, Robert
Subject: FW: 316(b) ESA revisions from DOI/DOC?

Avi and Lisa both replied that they have received nothing.
Have you folks?
Ken

-----Original Message-----
From: Kopocis, Ken
Sent: Sunday, January 12, 2014 1:31 PM
To: Garbow, Avi; Feldt, Lisa
Subject: 316(b) ESA revisions from DOI/DOC?

Did we get revised thinking or language from the services?
Thanks.
Ken.
ÿ

To: Wood, Robert[Wood.Robert@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]
From: Kopocis, Ken
Sent: Sun 1/12/2014 11:01:36 PM
Subject: RE: 316(b) ESA revisions from DOI/DOC?

Thanks.

-----Original Message-----
From: Wood, Robert
Sent: Sunday, January 12, 2014 6:01 PM
To: Kopocis, Ken; Southerland, Elizabeth
Subject: Re: 316(b) ESA revisions from DOI/DOC?

I have not.

Robert K. Wood
Director,
Engineering and Analysis Division
U.S. EPA Office of Water

From: Kopocis, Ken
Sent: Sunday, January 12, 2014 5:19:48 PM
To: Southerland, Elizabeth; Wood, Robert
Subject: FW: 316(b) ESA revisions from DOI/DOC?

Avi and Lisa both replied that they have received nothing.
Have you folks?
Ken

-----Original Message-----
From: Kopocis, Ken
Sent: Sunday, January 12, 2014 1:31 PM
To: Garbow, Avi; Feldt, Lisa
Subject: 316(b) ESA revisions from DOI/DOC?

Did we get revised thinking or language from the services?
Thanks.
Ken.
ÿ

To: Garbow, Avi[Garbow.Avi@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]
From: Kopocis, Ken
Sent: Sun 1/12/2014 6:30:31 PM
Subject: 316(b) ESA revisions from DOI/DOC?

Did we get revised thinking or language from the services?
Thanks.
Ken. ÿ

To: Beauvais, Joel[Beauvais.Joel@epa.gov]
Cc: Barron, Alex[Barron.Alex@epa.gov]
From: Kopocis, Ken
Sent: Wed 1/8/2014 12:57:27 PM
Subject: FW: OW Responses to Issues Raised in EEI Letter of December 20 010714 clean.docx
OW Responses to Issues Raised in EEI Letter of December 20 010714 clean.docx

Joel, note changes in the **Ex. 5 - Deliberative** s in particular.

Let me know if you have any comments.

Thanks,

Ken

To: Beauvais, Joel[Beauvais.Joel@epa.gov]; Feldt, Lisa[Feldt.Lisa@epa.gov]; Garbow, Avi[Garbow.Avi@epa.gov]
Cc: Porterfield, Teri[Porterfield.Teri@epa.gov]
From: Kopocis, Ken
Sent: Tue 1/7/2014 9:44:44 PM
Subject: RE: 316b

FYI.
Just to let you know that I will be out of the office Wednesday through Friday this week and most likely cannot make a conference call. I would like to participate if it can be carried over until Monday.
(I removed the Administrator from my reply.)
Ken

-----Original Message-----
From: Administrator B6
Sent: Tuesday, January 07, 2014 1:12 PM
To: Kopocis, Ken; Beauvais, Joel; Feldt, Lisa; Garbow, Avi
Cc: Porterfield, Teri
Subject: 316b

Lets set up a call or meeting to talk thru the EEI options later this week. Thanks.
ÿ

To: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]
From: Kopocis, Ken
Sent: Tue 1/7/2014 5:59:53 PM
Subject: FW: 316b option memo
OW Responses to Issues Raised in EEI Letter of December 20 010614 550pm OP comments (2).docx
316b Ex. 5 - Deliberative paper 01062014 547pm clean OP comments.docx

As we discussed.

ÿ

To: Beauvais, Joel[Beauvais.Joel@epa.gov]
Cc: Barron, Alex[Barron.Alex@epa.gov]; Balserak, Paul[Balserak.Paul@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]
From: Kopocis, Ken
Sent: Tue 1/7/2014 12:34:28 AM
Subject: OW Responses to Issues Raised in EEI Letter of December 20 010614 550pm.docx
OW Responses to Issues Raised in EEI Letter of December 20 010614 550pm.docx

Please review and provide any comments.

Thank you,

Ken

To: Beauvais, Joel[Beauvais.Joel@epa.gov]
Cc: Barron, Alex[Barron.Alex@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Wood, Robert[Wood.Robert@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]
From: Kopocis, Ken
Sent: Mon 1/6/2014 11:35:41 PM
Subject: 316b 50 MGD paper 01062014 547pm clean.docx
316b 50 MGD paper 01062014 547pm clean.docx

Please review the attached for submission to the Administrator. Let me know of any comments.

Thanks,

Ken

To: Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Levine, MaryEllen[levine.maryellen@epa.gov]; Witt, Richard[Witt.Richard@epa.gov]
From: Kopocis, Ken
Sent: Mon 1/6/2014 3:54:28 PM
Subject: 316(b) Update Discussion

When: Monday, January 06, 2014 11:15 AM-11:45 AM (UTC-05:00) Eastern Time (US & Canada).
Where: 3233 WJC-East

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

To: Wood, Robert[Wood.Robert@epa.gov]
Cc: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Neugeboren, Steven[Neugeboren.Steven@epa.gov]; Spraul, Greg[Spraul.Greg@epa.gov]
From: Kopocis, Ken
Sent: Fri 1/3/2014 9:03:32 PM
Subject: RE: follow up from meeting with SEPW minority on 316(b) and ESA

Thanks. Does OCIR believe we have to send them as soon as Monday?

I am not suggesting delay, I am just inquiring.

Ken

From: Wood, Robert
Sent: Friday, January 03, 2014 3:54 PM
To: Kopocis, Ken
Cc: Southerland, Elizabeth; Neugeboren, Steven; Spraul, Greg
Subject: FW: follow up from meeting with SEPW minority on 316(b) and ESA

Ken,

The attached documents were requested by SEPW in follow up to their meeting with Betsy and Steve on 12/19. I have provided the documents to Greg Spraul in OCIR with the note below. He said he plans to send them Monday. Numbers 3 and 4 are already in the public domain. OGC advises that number 2 is not deliberative because it is from an outside party. FWS advises they consider their letter under number 1 to be releasable to the public and I am awaiting confirmation from NMFS (Monday) whether they consider their letter under number 1 to be releasable and I expect they will confirm that it is.

Rob

Robert Wood

Director

Engineering and Analysis Division

Office of Water

202-566-1822

From: Wood, Robert
Sent: Friday, January 03, 2014 3:18 PM
To: Spraul, Greg
Cc: Levine, MaryEllen; Witt, Richard; Neugeboren, Steven; Southerland, Elizabeth; Wade, Alexis; Hewitt, Julie
Subject: RE: follow up from meeting with SEPW minority on 316(b) and ESA

Ex. 5 - Deliberative

Robert Wood

Engineering and Analysis Division

Office of Water

202-566-1822

From: Neugeboren, Steven
Sent: Friday, December 20, 2013 9:53 AM
To: Spraul, Greg; Southerland, Elizabeth; Wade, Alexis; Wood, Robert
Cc: Levine, MaryEllen; Witt, Richard
Subject: RE: follow up from meeting with SEPW minority on 316(b) and ESA

Ex. 5 - Deliberative

Thank you both for coming to the meeting today. It's amazing to think that one of my first memories during my first year at the agency was helping to brief Christine Todd Whitman on 316(b) and here we are, still working on it. Ex. 5 - Deliberative

Ex. 5 - Deliberative

To: Neugeboren, Steven[Neugeboren.Steven@epa.gov]
From: Kopocis, Ken
Sent: Sat 12/28/2013 4:15:12 PM
Subject: RE: Are you available for a call?

Let's talk at 10:00 if that works for you.

From: Neugeboren, Steven
Sent: Friday, December 27, 2013 4:23 PM
To: Kopocis, Ken
Subject: Re: Are you available for a call?

Ok. Let's do monday since that's ok . Ill be in. Want to set up a time?

From: Kopocis, Ken
Sent: Friday, December 27, 2013 3:34:56 PM
To: Neugeboren, Steven
Subject: RE: Are you available for a call?

Quite understandable.

The call is to be you and me.

It would only take a few minutes, and can either be today or on Monday if that works for you.

316(b) and ESA question.

Ken

From: Neugeboren, Steven
Sent: Friday, December 27, 2013 3:22 PM
To: Kopocis, Ken
Subject: Re: Are you available for a call?

Just saw your message. With my son at the newseum. Did it happen?

From: Kopocis, Ken
Sent: Friday, December 27, 2013 1:13:02 PM
To: Neugeboren, Steven
Subject: Are you available for a call?

Thanks,

Ken

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 18 2013

OFFICE OF WATER

Donna Wieting
Director, Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway, F/PR3
Silver Spring, MD 20910

Gary Frazer
Assistant Director, Endangered Species
United States Fish and Wildlife Service
4401 North Fairfax Drive
Arlington, VA 22203

Subject: Initiation of Formal Consultation on the EPA's Final Regulations to Establish Requirements for Cooling Water Intake Structures at Existing Facilities and Amend Requirements at Phase I Facilities

Dear Ms. Wieting and Mr. Frazer:

The U.S. Environmental Protection Agency is requesting formal consultation, pursuant to Section 7(a)(2) of the Endangered Species Act and implementing regulations at 50 CFR § 402.14(c), with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service (the Services) on the EPA's "Final Regulations to Establish Requirements for Cooling Water Intake Structures at Existing Facilities and Amend Requirements at Phase I Facilities." Pursuant to 40 C.F.R. § 402.12, I have sent under separate cover the EPA's Biological Evaluation. The BE evaluates the potential effects of the EPA's action on listed and proposed species and designated and proposed critical habitat and assesses whether any such species or habitat are likely to be adversely affected by the action.

Thank you for the considerable time and effort that you and your staff have devoted to the informal consultation process that we initiated in July 2012 with NMFS and in October 2012 with FWS, including multiple briefings on the contents of the draft 316(b) rule, discussion of the proposed outline and methodological approach for a biological evaluation, and review of two drafts of the BE.

As we have discussed, the 316(b) rule when promulgated will reduce the current mortality of aquatic organisms, including threatened and endangered species, at cooling water intake structures. The magnitude of mortality reduction, however, will depend on the type, size, and location of facilities, the degree of improvement in CWIS performance required by the rule, the nature and number of T&E species in the vicinity of CWISs, as well as other site-specific factors. Because the 316(b) rule will reduce impacts to listed species from cooling water take structures, the Agency continues to believe that it will not cause adverse effects and will benefit affected

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species whether threatened, endangered, or otherwise. Nonetheless, the EPA has decided to request formal consultation to ensure full and expeditious consideration of the impacts to listed species under section 7(a)(2). Consequently, the EPA is requesting initiation of formal consultation under Section 7 of the ESA because, as discussed in the BE, after promulgation and implementation of the 316(b) rule, the rule may allow as many as 215 T&E species and 30 critical habitats of T&E species to continue to be affected.

The sections below provide the necessary information for initiating consultation pursuant to 50 CFR 402.14(c).

I. Description of Agency Actions

The action on which the EPA requests formal consultation is a regulation the EPA is in the process of finalizing, to implement CWA Section 316(b). Section 316(b) requires that the EPA establish standards for cooling water intake structures that reflect the best technology available for minimizing adverse environmental effects. The final rule will be implemented through conditions included in NPDES (National Pollutant Discharge Elimination System) permits, required under section 402 of the CWA, for facilities that withdraw cooling water from waters of the United States.

On April 20, 2011, the EPA published proposed standards for cooling water intake structures at all existing power generating facilities and existing manufacturing and industrial facilities. The proposal included requirements for facilities that have a design intake flow of greater than two million gallons per day from waters of the United States and use at least 25 percent of the water they withdraw exclusively for cooling purposes on an actual intake flow basis. The proposal included provisions to address impingement (pinning of organisms against intake screens) and entrainment (organisms sucked through intake screens). While the proposal included an impingement mortality performance standard, the EPA did not propose uniform entrainment controls. Rather, the EPA proposed that entrainment requirements should be established by NPDES permitting authorities on a site-specific basis. In connection with the development of these requirements, facilities with an average intake flow of more than 125 mgd would need to develop an entrainment characterization study to help permit Directors determine facility-specific entrainment requirements.

The EPA has included in the BE a description of the number of facilities subject to the rule. The EPA has accurate information on the location of electric generators, but does not have complete information on the location of all manufacturing facilities with a CWIS. To compensate for this, the EPA has included information in the BE on all manufacturers in the industries known to use cooling water, even though some of these facilities will not have a CWIS.

II. Description of Action Area

The action area for the 316(b) rule includes "waters of the United States," defined in 40 CFR§ 122.2 as certain inland waters and the territorial sea extending three miles from shore. As discussed in the BE, the EPA's analysis examined CWIS impacts and regulatory benefits in seven aquatic study regions: California, North Atlantic, Mid-Atlantic, South Atlantic, Gulf of

Mexico, Great Lakes, and Inland. The study regions were chosen based on regional similarities within ecosystems, aquatic species, and characteristics of commercial and recreational fishing activities. Based on the delineation between marine and freshwater ecosystems, these seven study regions were broadly categorized into Coastal, Great Lakes, and Inland regions.

III. Description of Listed Species or Designated Critical Habitat That May Be Affected

As discussed in the BE, the 316(b) rule is likely to affect 215 T&E species with habitat ranges that overlap with at least one CWIS. Additionally, the critical habitats of 30 T&E species overlap with at least one CWIS. Few data are available for the EPA to estimate the mortality of T&E species at CWISs subject to the 316(b) final rule. Consequently, to assess the potential for impacts of the 316(b) rule on T&E species, the EPA identified current spatial overlap between the locations of CWISs subject to the rule and the location of federally designated critical habitats or habitat ranges of T&E species. The overlap analysis was conducted for all life history stages for all aquatic T&E species with available data. However, due to the uncertainty regarding the location of all CWISs, the EPA was not able to conclusively identify all listed species or associated life stages that could be potentially affected. Accordingly, the EPA followed ESA regulations requiring the assumption of a reasonable worst case analysis when more accurate data are unavailable.

The BE addresses aquatic T&E species as well as aquatic-dependent T&E species which include reptiles, birds, and terrestrial mammals whose diet contains an appreciable proportion of aquatic organisms. These species are likely to be only indirectly affected by the 316(b) rule.

IV. Description of How Agency Actions May Affect Listed Species

The EPA attempted to estimate the changes in mortality as a result of the 316(b) rule for all T&E species. Sufficient data, however, have not been collected at CWISs to estimate the baseline or amount of future reduction in mortality of T&E species. The 316(b) rule, as currently written, would require facilities to collect source water baseline biological characterization data, entrainment biological characterization data, and where applicable, biological performance studies over a two year period prior to submission of an application for a permit. These data will enable permit Directors, and the Services, to determine whether T&E species are present, whether they are being harmed, and to require appropriate CWIS controls.

V. Next Steps

My staff and I have appreciated the positive, collaborative effort among our agencies during the informal consultation process of developing the BE. We look forward to continuing that relationship through formal consultation. Separate from this letter, we are providing you with a predecisional, deliberative copy of the draft 316(b) rule along with a copy of the BE. Additionally, my staff are providing the Services with the raw data files used to produce the BE. As we have discussed, we will schedule reoccurring biweekly meetings with the Services to assist with your preparation of the biological opinion. We will also schedule regular check-in meetings with senior management at our respective agencies to ensure steady progress throughout this consultation.

Please do not hesitate to call me at (202) 566-1822 or Julie Hewitt at (202) 566-1031 if you or anyone on your staff has questions regarding this matter.

Sincerely,

Robert K. Wood, Director
Engineering and Analysis Division

To: Wood, Robert[Wood.Robert@epa.gov]; Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]; Hewitt, Julie[Hewitt.Julie@epa.gov]
From: Kopocis, Ken
Sent: Thur 12/26/2013 4:42:43 PM
Subject: 316(b) Call

When: Friday, December 27, 2013 10:30 AM-11:15 AM (UTC-05:00) Eastern Time (US & Canada).
Where: Call in: **Non-Responsive**

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

Non-Responsive

To: Wood, Robert[Wood.Robert@epa.gov]
Cc: Southerland, Elizabeth[Southerland.Elizabeth@epa.gov]
From: Kopocis, Ken
Sent: Mon 12/23/2013 2:22:34 PM
Subject: FW: Follow-up to December 18 316(b) Meeting
316b McCarthy Letter 122013.pdf
316b McCarthy Letter 091713 final.pdf

See the new attached letter from EEI to the Administrator.

After the policy paper is complete, let's discuss.

Ken

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Power by Association℠

EEI Edison Electric Institute

December 20, 2013

The Honorable Regina A. McCarthy
Administrator
U.S. Environmental Protection Agency
William Jefferson Clinton Federal Building
1200 Pennsylvania Ave., NW
Washington, DC 20460-0001

Dear Administrator McCarthy:

On behalf of the Board of Directors and member companies of the Edison Electric Institute (EEI), as well as our partners at the Nuclear Energy Institute (NEI), Clean Energy Group's 316(b) Initiative (CEG), and Utility Water Act Group (UWAG), we want to extend our sincere thanks to Ken Kopocis and his team for meeting with our staff on December 18, 2013 to discuss remaining electric power sector concerns with the Clean Water Act (CWA) § 316(b) cooling water intake structures rulemaking for existing facilities which is expected to be completed by January 14, 2014. Last week's meeting was attended by Howard Shelanski, Dan Utech, and Gary Guzy and their respective teams, allowing for frank and open dialogue on the remaining issues.

Earlier in the year, you asked for feedback on certain issues of importance to the electric utility industry. Our September 17th response (attached) outlined our concerns about the proposed rule. Since that time, we understand that language in the rule has continued to be refined and that several of the issues we raised at that time have been the subject of revision. It is our understanding that several of these issues remain to be resolved and a new issue regarding permit application requirements has arisen. We are writing to explain those concerns and offer our recommendations on how best to resolve them in the final rule.

Endangered Species Act (ESA) Consultation and ESA-Related Regulatory Requirements

In a prior communication with you (see Utility Water Act Group letter dated October 25, 2013), we have stated that the proposed § 316(b) rule will have only beneficial effects on listed species and the Services should conclude consultation with either a "not likely to adversely affect" concurrence, or a biological opinion finding that no jeopardy or adverse modification will occur as a result of the rule. Nevertheless, it is our understanding that in response to the ESA consultation, the rule could require permittees to provide vastly expanded information to permitting authorities on the potential for direct and indirect impacts to threatened and endangered species. We have further concerns that any new ESA framework would raise considerable practical and legal problems and impose potential liabilities on the permittees. Trying to address species that may be in the area, but have no risk of being impinged or indirectly affected, and are potential prey of a listed species is much broader than the current ESA applications in the NPDES permitting process. To address these concerns, we request that:

- The Services reach a "not likely to adversely affect" concurrence, and

- Any focus in the rule, both in terms of monitoring and study requirements, must be on organisms inhabiting or likely to inhabit the zone of influence of the intake and thus likely to be *directly* affected by the intake.

ESA issues have long been evaluated and addressed at each our facilities as required by the Endangered Species Act. It is essential that EPA reconsider and not include this new scope of monitoring and study requirements in the final rule.

Definition of Closed-Cycle Cooling and Waters of the United States (WOUS)

We remain very concerned that EPA has not resolved this issue according to established legal and regulatory precedent. Whether an existing facility is open-cycle or closed-cycle is a function of design choices made at the time of construction, not the jurisdictional classification assigned to any man-made ponds or impoundments included in its design. In addition to maintaining the current regulatory exemption for waste treatment systems, we recommend that EPA specify that cooling ponds or impoundments lawfully created principally to serve as part of a closed-cycle cooling system can continue to serve that purpose and will satisfy § 316(b) for both impingement and entrainment. To do otherwise would result in stranding these assets because these impoundments would no longer be usable for the purpose for which they were designed. Requiring that their status as a compliance technology hinge on their jurisdictional status as WOUS is wholly inconsistent with the statements EPA explicitly made in justifying its 1979 NPDES rule defining WOUS, which **explicitly** acknowledged that an impoundment could function as a compliance technology even if classified as a WOUS. 44 Fed. Reg. 32,585, col. 1.

Use of Cost-Benefit Analysis and Willingness-to-Pay (WTP) Survey Issues

EPA's proposal appropriately requires permitting authorities to consider a variety of factors, including costs and benefits, when making a best technology available (BTA) determination. We understand that EPA's most recent thinking restores costs and benefits in BTA determinations to the list of mandatory actions to be considered by the Director. This is a positive step. However, there remain certain concerns regarding the continued reference to and endorsement of the use of WTP surveys on an individual permit basis despite the significant, demonstrable problems with the use of such surveys.

To resolve these remaining concerns we ask that EPA take the following actions:

- Moderate the language which encourages the quantification of non-use benefits of reducing entrainment. It must be clear that states are not required to conduct a WTP survey to consider a permit application. This can be accomplished by (1) adding language acknowledging that in many cases, non-use benefits may not occur, (2) acknowledging the substantial issues involved in developing WTP surveys capable of producing reliable information, and thus the inherent uncertainty in monetizing non-use benefits through the WTP methodology, and (3) in the discussion of social benefit evaluation, endorsing the use of qualitative descriptions and adding language similar to that included in the preamble to the Phase II rule, which specifically provided that monetization of non-use benefits was not warranted unless the entrainment characterization study indicated substantial harm to listed threatened and endangered species, to the sustainability of populations of important species of fish, shellfish, and wildlife, or to maintenance of community structure and function in a facility's waterbody or watershed. 69 Fed. Reg. 41,648, col. 1,

- Ensure that the preamble and the rule clearly state that all non-water quality impacts are to be equally considered and weighed in determining whether further entrainment controls are justified, and

- Modify the "backstop" provisions that require the Director to require closed-cycle cooling if any portion of the permit application is viewed to be "inadequate." Currently, these provisions could be interpreted as requiring closed-cycle cooling if a facility does not conduct and submit a WTP survey as part of a cost-benefit study.

Definition of New and Existing Units at Existing Facilities

As stated in our September 17, 2013 letter, the electric power sector strongly believes that EPA should distinguish between "new" and "existing" units at exis ting facilities consistent with the 2011 proposed rule. We understand that the most recent iteration of the draft rule proposes to pinpoint the moment a modification renders an existing unit a new unit when three things occur: (1) the unit is repowered, replaced or rebuilt; (2) both the turbine and condenser are replaced; and (3) the location of the cooling water intake structure or design intake flow is changed. When these conditions are met, a mandatory closed-cycle cooling requirement would be establis hed. Closed-cycle cooling is not BTA for modified units for the same reasons –land constraints, reliability impacts, non-water quality environmental impacts, etc.—closed-cycle cooling is not BTA for new units. Further, this process establishes a "New Source Review" type program that will discourage future efficiency improvements such as nuclear uprates. There is no evidence that the modifications will result in adverse environmental impact. Of course, states have the opportunity upon every permit renewal to determine if additional protection is warranted as a result of a plant modification. In making this determination, states must consider the same factors that they apply to site-specific decisions for existing facilities. We recommend that the provisi on be modified to mirror the language of the 2011 proposal which stated that new units at existing facilities should expressly exclude "repowered, rebuilt or replaced" units.

***De Minimis* Concerns**

We appreciate that the Agency has taken a number of positive steps to recognize the importance of including language exempting facilities that have a *de minimis* environmental impact related to impingement. However, we understand that the language includes a broad, generalized application of the ESA in a fashion that would render the language meaningless for facilities because it prohibits the ability of facilities to qualify for the *de minimis* provision if a listed species may be present in the area rather than if the facility is impinging or entraining listed species. As a result, the ESA provisions will tie the hands of permit writers and result in unjustifiable new costs to facilities while producing no environmental benefits. The *de minimis* provision should remain focused on actual impingement, as opposed to indirect or potential impingement, while fully recognizing design and engineering protections. Accordingly, we ask that the *de minimis* provisions be modified to allow the Director to determine that no additional impingement controls may be required at facilities with a low documented rate of impingement provided the facility complies with applicable requirements of the Endangered Species Act.

Low Capacity Utilization Units

We unde rstand the revised rule allows permittees to request less stringent impingement requirements for units with a low annual average capacity utilization rate. This is another positive development. But this provision must apply to entrainment as well as impi ngement. Units that have low capacity utilization rates are required for a variety of reasons, including but not limited to grid reliability, voltage maintenance, and load balancing. These facilities are infrequently called upon to produce power for the

grid. For those reasons, additional operational costs (such as the installation of impingement and entrainment reduction technologies) could make these units uneconomic and would force closure, thus defeating the reliability purpose they serve. Entrainment control technologies are often the more expensive and capital intensive of CWIS technologies. We would request that the provision be modified to allow permittees to request less stringent impingement and entrainment requirements for low capacity utilization units.

Permit Application Requirements and Deadlines

Permit application deadlines need to be reasonable in length and should not require the selection and installation of impingement control technologies until entrainment requirements have been established. This is a necessary feature of the final rule for engineering and cost reasons. To conduct impingement and entrainment assessments, the proper sequencing and adequate time are both needed. Based on our understanding of the current version of rule, neither is currently being provided.

To ensure that the permit application process is logical and efficient, we recommend that EPA should modify the final rule language to:

- Provide a minimum of five years for all facilities to complete the permit application requirements;
- Add a provision requiring facilities to identify proposed impingement mortality control options compatible with entrainment control options for facilities that do not have in place the impingement control technology on which they plan to rely;
- Authorize permit writers to approve impingement controls based on a predictive demonstration of their performance, with any required two-year optimization study occurring after the technology has been installed; and
- Authorize permit writers to adjust permit application deadlines for cause, regardless of the expiration date of the facility's current NPDES permit.

We thank you for your continued focus on this important rule that will affect almost half of the existing U.S. generation capacity. As we reach the final stages of this process, we are committed to working with the Agency to ensure an equitable and economical final rule that achieves important environmental benefits and ecological benefits throughout the U.S.

Sincerely,

Michael W. Yackira
President & CEO
NV Energy
EEI Chair

Gerard M. Anderson
Chairman, President & CEO
DTE Energy Company
EEI Policy Committee on Environment Co-Chair

Christopher M. Crane
President & CEO
Exelon Corp.
EEI 316(b) Issue Leader

Leo P. Denault
Chairman & CEO
Entergy Corp.

Anthony F. Earley, Jr.
Chairman, President & CEO
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Thomas F. Farrell
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Lynn J. Good
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Duke Energy

Ralph Izzo
Chairman, President & CEO
Public Service Enterprise Group, Inc.
EEI Policy Committee on Environment Co-Chair

James L. Robo
Chairman, President & CEO
NextEra Energy, Inc.

cc: The Hon. Robert Perciasepe, EPA
The Hon. Howard A. Shelanski, OMB
Gary Guzy, CEQ
Ken Kopocis, EPA
Dan Utech, DPC

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Power by Association℠

Edison Electric Institute

September 17, 2013

The Honorable Regina A. McCarthy
Administrator
U.S. Environmental Protection Agency
William Jefferson Clinton Federal Building
1200 Pennsylvania Ave., NW
Washington, DC 20460-0001

Dear Administrator McCarthy:

On behalf of the Board of Directors and member companies of the Edison Electric Institute (EEI), as well as our partners at the Nuclear Energy Institute (NEI), Clean Energy Group (CEG), and Utility Water Act Group (UWAG), we want to extend our sincere thanks to you and your team for the productive meeting on September 5 regarding industry issues with the Clean Water Act (CWA) § 316(b) cooling water intake structures rulemaking for existing facilities. As you know, this rulemaking, which will impact almost half of the existing U.S. generation capacity, is expected to be completed by November 4. We believe the rule can be designed to achieve important environmental benefits with cost-effective technology solutions, while avoiding inappropriate energy and reliability impacts and without imposing unnecessary costs on consumers.

Our September 5 meeting demonstrated that a constructive relationship among you, your staff, and the electric power sector can be mutually beneficial in charting a path toward environmentally protective and cost-effective regulation. Maintaining an open dialogue leads to more reasonable results, as already evidenced by the flexibility we understand EPA has incorporated into the draft final rule based on the comments addressing the Impingement Mortality Notice of Data Availability published in 2012.

During our meeting, you and your team asked for feedback on several issues of profound importance to the electric power industry. We are writing to address your questions and to offer our recommendations on how best to craft an acceptable final rule.

Use of Cost-Benefit Analysis as a Basis for Best Technology Available (BTA) Selection for Entrainment

EPA's proposed BTA standard for entrainment establishes a process for site-specific determination of entrainment requirements at individual facilities. This reflects EPA's determination that there is no single technology that qualifies as entrainment BTA for all facilities nationwide. EPA's proposal appropriately requires permitting authorities to consider nine factors, including costs and benefits, when making a BTA determination.

We understand that EPA's most recent thinking alters this requirement by making consideration of costs and benefits in BTA determinations optional. If cost/benefit balancing is optional, then

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a permitting authority could require a cooling tower retrofit simply because it is technically feasible regardless of the huge costs and questionable benefits created by reducing impacts to life stages that typically have very high natural mortality rates. For many plants, the only realistic option would be either to install towers at a very high cost to the customers or shutter the facility.

We support site-specific entrainment BTA determinations. However, EPA should require permitting authorities to consider all nine factors, including costs and benefits, set out in the proposed rule in making entrainment decisions.

Stated Preference Survey (Willingness-to-Pay)

We understand that EPA will not rely on its national and regional stated preference survey results to justify the rulemaking, though EPA is continuing to evaluate the usefulness of the methodology to measure non-use benefits.

Use of Survey Results

For the same reasons that EPA is not using the survey results to justify the rulemaking, EPA should make clear that states cannot rely on the results in evaluating benefits in site-specific permitting decisions. There has not been any determination that the results are scientifically sound.

EPA can address this concern by stating explicitly that: (1) EPA's stated preference survey and its results have no relevance to any future application of the § 316(b) rule, including in permitting decisions and future guidance or other decisions by EPA or state permit writers; and (2) the results of EPA's national and regionally conducted survey should not be used to quantify the non-use benefits for a site-specific decision.

Use of Survey Methodology

We are also concerned about the inappropriate use of the willingness-to-pay (WTP) survey methodology in the § 316(b) context, especially since both the proposed rule and, as we understand it, the draft final rule implicitly require permittees to use this controversial methodology. For instance, as discussed in 40 C.F.R. § 125.98(e)(3), the proposed rule requires states to consider non-use benefits by requiring permitting directors to determine quantified and qualitative social benefits and social costs of available entrainment technologies, **including ecological benefits** and benefits to any threatened or endangered species. The proposed rule also requires at 40 C.F.R. § 122.21(r)(11) that the permittee conduct a *Benefits Valuation Study* that is to identify the "basis for any monetized values … assigned to changes in commercial and recreational species, forage fish, and shellfish, and to any other ecosystem or non-use benefits." It is our understanding that the draft final rule may go even further by precluding permitting directors from rejecting an entrainment technology based on the comparison of the costs and benefits if the information on benefits is inadequate, which EPA has suggested will be true if non-use benefits are not quantified. Further, it is our understanding that the draft final rule also incorporates the principle of WTP into the definition of social benefits.

Given EPA's decision to seek further review of its own WTP survey, EPA should not include any language in the final rule that might be interpreted to encourage or require states to pursue the use of such surveys, which are likely to inflate benefits and skew decision-making toward

closed-cycle cooling, in conflict with the Agency's own recognition that closed-cycle cooling is not BTA. Instead, the treatment of non-use benefits should be left to the states' discretion.

EPA can address our concerns by stating explicitly that quantification of non-use benefits is not required in site-specific decisions by state permitting authorities.

Definition of New and Existing Units at Existing Facilities

In what would be a significant change in definition, it is our understanding that EPA intends to treat units that replace the turbine and the condenser as "new units," and to require these units to install closed-cycle cooling except where the permittee has installed a high-efficiency unit. This would be true even where the modification or replacement results in no change in the capacity of an existing intake structure. However, EPA's authority under § 316(b) extends only to the *cooling water intake structure.* In the absence of a significant modification to the existing cooling water intake structure (beyond those undertaken expressly to comply with the impingement mortality and entrainment requirements of this final regulation), there is no statutory basis for regulating a modified or replacement unit any differently than an original or unmodified unit. Such a change in the definition of existing units is analogous to EPA creating a first of its kind new source review program for existing cooling water intake structures under the Clean Water Act without the legislative authority to do so. We believe that "repowered, rebuilt and replaced" units should be subject to the same impingement mortality and entrainment requirements as the rule applies to other units at existing facilities. Imposing a "cooling tower only" requirement on such units would be a disincentive to upgrade or repower facilities, which otherwise would lead to environmental benefits.

On a separate but related issue, uprates of existing nuclear facilities should not artificially be classified as "new units," thereby imposing a cooling tower requirement. Construction is presently underway at several of the nation's nuclear plants to install equipment and to increase the emissions-free electricity from these plants. These uprates have been approved by the Nuclear Regulatory Commission and involve billions of dollars of expenses that did not anticipate that the units would have to install closed-cycle cooling. The final rule language would jeopardize these current uprate projects and prevent future uprates.

The electric power sector strongly believes that EPA should define a new unit in the final rule the same way it did in its proposal—by expressly excluding "repowered, rebuilt or replaced" units from being defined as "new" units. The rule should also specify that nuclear plant uprates do not constitute a "new unit," and, therefore, do not trigger a requirement to install cooling towers. Facilities will need to replace turbines and/or condensers or component parts during the expected life of the facility. Requiring cooling towers upon replacement of these parts would prematurely close facilities and create disincentives to investments that otherwise would lead to environmental benefits.

Definition of Closed-Cycle Cooling and Waters of the United States (WOUS)

EPA has asked whether industry would find workable a rule that precludes impoundments classified as WOUS from qualifying as part of a closed-cycle cooling system as long as the Agency assures that it will not use this rule or revised WOUS guidance or rules to change the status quo as to the current exemption for waste treatment systems.

We do not think that approach would meet the concerns we discussed because EPA has not consistently recognized that waste treatment systems lawfully created in or by impounding waters of the United States are not themselves WOUS. Although EPA has acknowledged in regulations and guidance governing EPA's jurisdiction that waste treatment systems created in WOUS before passage of the CWA, and waste treatment systems lawfully created after passage of the CWA implementing regulations should not be disqualified from the waste treatment exemption, in practice the Regions have sometimes failed to abide by this policy. As a result, relying solely on the waste treatment system exemption could preclude the continued use of some impoundments specifically designed primarily for closed-cycle cooling. Such a result would be unfair, costly, and environmentally unnecessary.

In addition to maintaining the current regulatory exemption for waste treatment systems, EPA should specify that cooling ponds or impoundments lawfully created principally to serve as part of a closed-cycle cooling system can continue to serve that purpose and will satisfy § 316(b) for both impingement and entrainment.

Endangered Species Act and Section 7 Consultation

EPA and the U.S. Fish and Wildlife Service and National Marine Fisheries Service (Services) have now commenced formal consultation under Section 7 of the Endangered Species Act (ESA). In our September 5 meeting, EPA acknowledged that the consultation process should not blur the lines between the statutory authorities of the ESA and the CWA, and, further, that no new regulatory authority is envisioned for the Services.

It is our understanding, however, that EPA has added provisions in the draft final rule requiring permittees to submit permit application materials directly to the Services, and to coordinate directly with the Services for purposes of determining whether any more stringent impingement and entrainment control requirements are warranted at individual facilities. The provisions reportedly require States to impose any more stringent requirements deemed necessary by the Services.

However, EPA should remove from the rule any provisions inserting the Services directly into the § 316(b) compliance determination process. Neither the CWA nor the ESA provides the Services with any direct role in the National Pollutant Discharge Elimination System (NPDES) permitting process. Although the Services, like other federal and state agencies, are entitled to comment on draft permits, neither statute gives them any role in setting or implementing § 316(b) or determining NPDES permit provisions. The Services have ample authority to protect their interests in permit-based § 316(b) implementation by following customary procedures under the CWA and by using their enforcement authorities. Nothing further is authorized or required.

Low Capacity Utilization Units

EPA has recognized in other regulations that some low capacity utilization units (often peakers) are needed for grid reliability and local load balancing needs, and that such units are unable to economically bear the same compliance costs as baseload and other higher capacity units. Given how infrequently such facilities operate, there is little risk that any short-term impact from such units would have a material and adverse long-term impact on the environment. Therefore, EPA should specify a capacity factor or flow rate below which the final rule's requirements will not

FOIA 2014-009508 Interim 2

apply, thus recognizing the limitations of these facilities to cost-effectively install impingement and entrainment controls.

EPA should adopt a provision similar to that found in the Mercury and Air Toxics Standards (MATS) rule, which provides a limited use subcategory for certain facilities with an annual capacity factor limit of no more than 8 percent measured over a 24-month block. Alternatively, a flow rate limit of approximately 15 percent of the maximum possible withdrawal volume on an annual basis could be used. It is vital that such a provision apply to units operated for grid reliability reasons, such as units dispatched to meet seasonal peak demand and situations where fuel flexibility is necessary to offset supply restrictions in a specific geographic region. Limiting such a provision to only units used for emergency purposes would not adequately address the fundamental need to allow peaking units to continue to operate.

Again, we thank you for your continued focus on this most important utility issue and for the prior work to address a number of our concerns. We look forward to working with you and your team to satisfactorily address the remaining issues and ensure that EPA promulgates a reasonable and environmentally protective final regulation.

Sincerely,

Michael W. Yackira
President & CEO, NV Energy
EEI Chair

Lewis Hay, III
Executive Chairman, NextEra Energy, Inc.
Immediate Past EEI Chair

Thomas F. Farrell
Chairman, President & CEO
Dominion

Christopher M. Crane
President & CEO, Exelon Corp.
316(b) Issue Leader

Gerry Anderson
Chairman, President & CEO
DTE Energy Company
EEI Policy Committee on Environment Co-Chair

Ralph Izzo
Chairman, President & CEO
Public Service Enterprise Group, Inc.
EEI Policy Committee on Environment Co-Chair

cc: The Hon. Robert Perciasepe, EPA

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