To: Uarporn Nopmongcol [unopmongcol@environcorp.com]; reg Yarwood [gyarwood@environcorp.com]
Cc: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;snw@rti.org[]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;snw@rti.org[]; N=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;snw@rti.org[]; nw@rti.org[]
From: CN=Michael Feldman/OU=R6/O=USEPA/C=US
Sent: Wed 7/11/2012 3:58:42 PM
Subject: STARS emission inventory
STARS_2010_v2_PM_forRegHaze-R6_RHsources.zip

The original email was too large for Ou and Greg to receive. Hopefully this file will get through.

Michael Feldman
Environmental Engineer
Air Planning Section
U.S. EPA Region 6, 6PD-L
Phone: 214-665-9793
feldman.michael@epa.gov

Pre-decisional and Deliberative

Attached is the emission inventory data from TCEQ for 2010. This data includes lat, long, sic, scc and fips.

The worksheet labeled "facilities of interest" contains all the point sources with emissions at the facilities we've identified. In addition to the original list of sources, we added three sources : Pegasus Gas Plant, Newman Station, and Keystone Compressor Station. These are NOx sources with potential impacts at Carlsbad Caverns/Guadalupe Mountains.

The worksheet labeled "2010 facility emissions tpy" contains facility-wide annual emissions of VOC along with other key pollutants. Only one source has large VOC emissions. This facility is located in area with large biogenic VOC emissions and would likely contribute a very small percentage to the overall VOC emissions in the area.

Please let me know if you have any questions.

Michael Feldman
Environmental Engineer
Air Planning Section
U.S. EPA Region 6, 6PD-L
Phone: 214-665-9793
feldman.michael@epa.gov

To: Michael Feldman/R6/USEPA/US@EPA;Uarporn Nopmongcol [unopmongcol@environcorp.com]; arporn Nopmongcol [unopmongcol@environcorp.com]
Cc: Ellen Belk/R6/USEPA/US@EPA;Joe Kordzi/R6/USEPA/US@EPA;Erik Snyder/R6/USEPA/US@EPA;"snw@rti.org" [snw@rti.org]; oe Kordzi/R6/USEPA/US@EPA;Erik Snyder/R6/USEPA/US@EPA;"snw@rti.org" [snw@rti.org]; rik Snyder/R6/USEPA/US@EPA;"snw@rti.org" [snw@rti.org]; snw@rti.org" [snw@rti.org]
From: Greg Yarwood
Sent: Wed 7/11/2012 6:26:39 PM
Subject: RE: STARS emission inventory
feldman.michael@epa.gov
feldman.michael@epa.gov

Michael

Ex. 4 - CBI

is

Regards - Greg

From: Michael Feldman [mailto:Feldman.Michael@epamail.epa.gov]
Sent: Wednesday, July 11, 2012 8:59 AM
To: Uarporn Nopmongcol; Greg Yarwood
Cc: Ellen Belk; Joe Kordzi; Erik Snyder; snw@rti.org
Subject: STARS emission inventory

The original email was too large for Ou and Greg to receive. Hopefully this file will get through.

Michael Feldman
Environmental Engineer
Air Planning Section
U.S. EPA Region 6, 6PD-L
Phone: 214-665-9793
feldman.michael@epa.gov

Pre-decisional and Deliberative

Ex. 4 - CBI

Please let me know if you have any questions.

Michael Feldman
Environmental Engineer
Air Planning Section
U.S. EPA Region 6, 6PD-L
Phone: 214-665-9793
feldman.michael@epa.gov

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To: Michael Feldman/R6/USEPA/US@EPA[]
Cc: Ellen Belk/R6/USEPA/US@EPA;Joe Kordzi/R6/USEPA/US@EPA;Erik Snyder/R6/USEPA/US@EPA;"snw@rti.org" [snw@rti.org]; oe Kordzi/R6/USEPA/US@EPA;Erik Snyder/R6/USEPA/US@EPA;"snw@rti.org" [snw@rti.org]; rik Snyder/R6/USEPA/US@EPA;"snw@rti.org" [snw@rti.org]; snw@rti.org" [snw@rti.org]; reg Yarwood [gyarwood@environcorp.com]
From: Uarporn Nopmongcol
Sent: Thur 7/12/2012 7:45:29 PM
Subject: RE: STARS emission inventory
CENRAP_emissions_for_39selected.xlsx
Hotspot
image003.jpg

All,

Ex. 4 - CBI

Please let me know any questions you may have.

Regards,

Ou

Uarporn Nopmongcol | Manager

ENVIRON International Corporation
773 San Marin Drive | Suite 2115

Novato, CA 94998
T: +1 415 899 0700 | F: +1 415 899 0707

unopmongcol@environcorp.com

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To: Uarporn Nopmongcol [unopmongcol@environcorp.com]
Cc: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;Greg Yarwood [gyarwood@environcorp.com]; N=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;Greg Yarwood [gyarwood@environcorp.com]; reg Yarwood [gyarwood@environcorp.com]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;"snw@rti.org" [snw@rti.org]; snw@rti.org" [snw@rti.org]
From: CN=Michael Feldman/OU=R6/O=USEPA/C=US
Sent: Thur 7/12/2012 9:40:06 PM
Subject: RE: STARS emission inventory
CENRAP_emissions_for_39selected.xlsx
Hotspot
(embedded image)

Ex. 4 - CBI

Michael Feldman
Environmental Engineer
Air Planning Section
U.S. EPA Region 6, 6PD-L
Phone: 214-665-9793
feldman.michael@epa.gov

From: Uarporn Nopmongcol <unopmongcol@environcorp.com>
To: Michael Feldman/R6/USEPA/US@EPA
Cc: Ellen Belk/R6/USEPA/US@EPA, Joe Kordzi/R6/USEPA/US@EPA, Erik Snyder/R6/USEPA/US@EPA, "snw@rti.org" <snw@rti.org>, Greg Yarwood <gyarwood@environcorp.com>
Date: 07/12/2012 02:46 PM
Subject: RE: STARS emission inventory

All,

Ex. 4 - CBI

Regards,
Ou

Uarporn Nopmongcol | Manager
ENVIRON International Corporation
773 San Marin Drive | Suite 2115
Novato, CA 94998
T: +1 415 899 0700 | F: +1 415 899 0707
unopmongcol@environcorp.com

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To: Greg Yarwood [gyarwood@environcorp.com]; ichael Feldman/R6/USEPA/US@EPA;Ellen Belk/R6/USEPA/US@EPA;Joe Kordzi/R6/USEPA/US@EPA;Erik Snyder/R6/USEPA/US@EPA;"snw@rti.org" [snw@rti.org]; llen Belk/R6/USEPA/US@EPA;Joe Kordzi/R6/USEPA/US@EPA;Erik Snyder/R6/USEPA/US@EPA;"snw@rti.org" [snw@rti.org]; oe Kordzi/R6/USEPA/US@EPA;Erik Snyder/R6/USEPA/US@EPA;"snw@rti.org" [snw@rti.org]; rik Snyder/R6/USEPA/US@EPA;"snw@rti.org" [snw@rti.org]; snw@rti.org" [snw@rti.org]
From: Uarporn Nopmongcol
Sent: Fri 7/13/2012 10:22:28 PM
Subject: Agenda: next conference call 7/17
Hotspot
image002.jpg

All,

Below is the agenda we would like to discuss during the next conference call:

Ex. 4 - CBI

Please add to the list if I am missing anything.

Regards,

Ou

Uarporn Nopmongcol | Manager

ENVIRON International Corporation
773 San Marin Drive | Suite 2115

Novato, CA 94998
T: +1 415 899 0700 | F: +1 415 899 0707

unopmongcol@environcorp.com

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To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Mon 7/16/2012 1:49:27 PM
Subject: Changes/adjustments to RTI WA - draft email to RTI

Erik / Michael,

Ex. 5 - Deliberative

Thanks,
Ellen

****

Dear Susan,

Ex. 5 - Deliberative

Our understanding is that you are able to make these adjustments with no change in cost.

Thank you very much.

Sincerely,

Ellen Belk

To: Uarporn Nopmongcol [unopmongcol@environcorp.com]; yarwood@environcorp.com[]
Cc: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"snw@rti.org" [snw@rti.org]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"snw@rti.org" [snw@rti.org]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"snw@rti.org" [snw@rti.org]; snw@rti.org" [snw@rti.org]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 7/17/2012 7:24:15 PM
Subject: Re: Agenda: next conference call 7/17

HI,

Sorry about missing the call today. Ellen passed along potential follow-up call times. Thursday at noon works for me. Let me know if that works and I will set things up. We can use the same teleconference numbers.

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

To: "Wolf, Susan N." [snw@rti.org]
Cc: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;Greg Yarwood [gyarwood@environcorp.com]; reg Yarwood [gyarwood@environcorp.com]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;Uarporn Nopmongcol [unopmongcol@environcorp.com]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;Uarporn Nopmongcol [unopmongcol@environcorp.com]; arporn Nopmongcol [unopmongcol@environcorp.com]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]; N=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 7/17/2012 10:24:57 PM
Subject: Texas Regional Haze Evaluation

Susan,
Thanks very much for the discussion during the call today. As a bit of a change from what we discussed, JoLynn Collins, the Project Officer had already put together an amendment to the Work Plan with the changes, so that should be coming through the system to you soon.

Also, I understand from Erik that a good time for discussion is Thursday at noon (central time?).

Best regards,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

To: Michael Feldman/R6/USEPA/US@EPA;Ellen Belk/R6/USEPA/US@EPA;Erik Snyder/R6/USEPA/US@EPA;Joe Kordzi/R6/USEPA/US@EPA[]; llen Belk/R6/USEPA/US@EPA;Erik Snyder/R6/USEPA/US@EPA;Joe Kordzi/R6/USEPA/US@EPA[]; rik Snyder/R6/USEPA/US@EPA;Joe Kordzi/R6/USEPA/US@EPA[]; oe Kordzi/R6/USEPA/US@EPA[]
Cc: Greg Yarwood [gyarwood@environcorp.com]; snw@rti.org" [snw@rti.org]
From: Uarporn Nopmongcol
Sent: Thur 7/19/2012 10:00:13 PM
Subject: 39 sources: Emissions comparison
Summary_emissions_39selected_v1.xlsx
[IMAGE]

All,
Attached is a summary of emissions from many inventories including CENRAP, Texas STARS, MATS, and CSAPR for the selected facilities.

Ex. 4 - CBI

Please let me know any questions you may have.
Regards,
Ou

[IMAGE]
Uarporn Nopmongcol | Manager
ENVIRON International Corporation
773 San Marin Drive | Suite 2115
Novato, CA 94998
T: +1 415 899 0700 | F: +1 415 899 0707
unopmongcol@environcorp.com

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********** ATTACHMENT NOT DELIVERED **********

This Email message contained an attachment named
image001.jpg
which may be a computer program. This attached computer program could contain a computer virus which could cause harm to EPA's computers, network, and data. The attachment has been deleted.

This was done to limit the distribution of computer viruses introduced into the EPA network. EPA is deleting all computer program attachments sent from the Internet into the agency via Email.

If the message sender is known and the attachment was legitimate, you should contact the sender and request that they rename the file name extension and resend the Email with the renamed attachment. After receiving the revised Email, containing the renamed attachment, you can rename the file extension to its correct name.

For further information, please contact the EPA Call Center at (866) 411-4EPA (4372). The TDD number is (866) 489-4900.

********** ATTACHMENT NOT DELIVERED **********

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image001.jpg
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extension and resend the Email with the renamed attachment. After receiving the revised Email, containing the renamed attachment, you can rename the file extension to its correct name.

For further information, please contact the EPA Call Center at (866) 411-4EPA (4372). The TDD number is (866) 489-4900.

********** ATTACHMENT NOT DELIVERED **********

To: gyarwood@environcorp.com[]
Cc: unopmongcol@environcorp.com;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;"Wolf, Susan N. (snw@rti.org)" [snw@rti.org]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;"Wolf, Susan N. (snw@rti.org)" [snw@rti.org]; Wolf, Susan N. (snw@rti.org)" [snw@rti.org]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 7/24/2012 1:37:19 PM
Subject: meeting today

Hi,

I wanted to touch base about today's meeting. We are still working on things here and don't have a lot of updates at this point. Michael is out on travel for a couple of days, so it would be a small crew here. I think we should cancel the call today and we should have a number of things wrapped up by the scheduled call time next Tuesday.

Thanks,
Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

To: Erik Snyder/R6/USEPA/US@EPA[]
Cc: Uarporn Nopmongcol [unopmongcol@environcorp.com]; oe Kordzi/R6/USEPA/US@EPA;"Wolf, Susan N. (snw@rti.org)" [snw@rti.org]; Wolf, Susan N. (snw@rti.org)" [snw@rti.org]; ynde Schoellkopf/R6/USEPA/US@EPA[]
From: Greg Yarwood
Sent: Tue 7/24/2012 5:02:49 PM
Subject: RE: meeting today
snyder.erik@epa.gov

Erik

OK – thanks for letting us know

Greg

From: Erik Snyder [mailto:Snyder.Erik@epamail.epa.gov]
Sent: Tuesday, July 24, 2012 6:37 AM
To: Greg Yarwood
Cc: Uarporn Nopmongcol; Joe Kordzi; Wolf, Susan N. (snw@rti.org); Lynde Schoellkopf
Subject: meeting today

Hi,

I wanted to touch base about today's meeting. We are still working on things here and don't have a lot of updates at this point. Michael is out on travel for a couple of days, so it would be a small crew here. I think we should cancel the call today and we should have a number of things wrapped up by the scheduled call time next Tuesday.

Thanks,
Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

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IN THE UNITED STATES COURT OF APPEALS
FOR DISTRICT OF COLUMBIA CIRCUIT

NATIONAL PARKS CONSERVATION ASSOCIATION and SIERRA CLUB, Petitioners, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY and LISA P. JACKSON, Administrator, United States Environmental Protection Agency, Respondents.	)	No. _____

PETITION FOR REVIEW

Pursuant to Section 307(b)(1) of the Clean Air Act, 42 U.S.C. § 7607(b)(1), Federal Rule of Appellate Procedure 15, and Circuit Rule 15, the National Parks Conservation Association and the Sierra Club hereby petition the United States Court of Appeals for the District of Columbia Circuit for review of the final action of Respondents United States Environmental Protection Agency and Lisa P. Jackson, Administrator of the United States Environmental Protection Agency, entitled "Regional Haze: Revisions to Provisions Governing Alternatives to Source-Specific Best Available Retrofit Technology (BART) Determinations,

Limited SIP Disapprovals, and Federal Implementation Plans," published on June 7, 2012 at 77 Fed. Reg. 33642 (attached hereto).

Dated: August 3, 2012

Respectfully submitted,

Abigail Dillen
Jocelyn D'Ambrosio
EARTHJUSTICE
156 William Street
Suite 800
New York, New York 10038
212-791-1881
adillen@earthjustice.org
jdambrosio@earthjustice.org

Counsel for Petitioners National Parks Conservation Association and Sierra Club

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

NATIONAL PARKS CONSERVATION ASSOCIATION and SIERRA CLUB,	)	
Petitioners,	)	
v.	)	No. _____
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY and LISA P. JACKSON, Administrator, United States Environmental Protection Agency,	)	
Respondents.	)	

PETITIONERS' RULE 26.1 STATEMENT

Pursuant to Federal Rule of Appellate Procedure 26.1 and Circuit Rule 26.1, Petitioners make the following disclosures:

National Parks Conservation Association: National Parks Conservation Association has no parent companies, and there are no publicly held companies that have a 10% or greater ownership interest in National Parks Conservation Association.

National Parks Conservation Association, a corporation organized and existing under the laws of the District of Columbia, is a nonprofit organization

dedicated to protecting and enhancing America's National Parks for present and future generations.

Sierra Club: Sierra Club has no parent companies, and there are no publicly held companies that have a 10% or greater ownership interest in Sierra Club.

Sierra Club, a corporation organized and existing under the laws of the State of California, is a national nonprofit organization dedicated to the protection and enjoyment of the environment.

Dated: August 3, 2012

Respectfully submitted,

Abigail Dillen
Jocelyn D'Ambrosio
EARTHJUSTICE
156 William Street
Suite 800
New York, New York 10038
212-791-1881
adillen@earthjustice.org
jdambrosio@earthjustice.org

Counsel for Petitioners National Parks Conservation Association and Sierra Club

CERTIFICATE OF SERVICE

I hereby certify that on this 3rd day of August, 2012, a copy of the foregoing **Petition for Review** and **Petitioners' Rule 26.1 Statement** was served on each of the following by first-class United States mail:

Administrator Lisa P. Jackson
Office of the Administrator
United States Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

United States Environmental Protection Agency
Office of General Counsel
Room 4000
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Attorney General Eric H. Holder, Jr.
United States Department of Justice
950 Pennsylvania Avenue, N.W.
Washington, D.C. 20530

Abigail Dillen
Earthjustice

Insured amount not over	Fee	Insured amount not over	Fee
$500	4.00		
$600	5.00		
$700	6.00		
$800	7.00	$2,499 max	$24.00.

Value Limit (*212.1*)

The maximum value of a GXG shipment to this country is $2,499 or a lesser amount if limited by content or value.

Size Limits (*211.22*)

The surface area of the address side of the item to be mailed must be large enough to completely contain the Global Express Guaranteed Air Waybill/Shipping Invoice (shipping label), postage, endorsement, and any applicable markings. The shipping label is approximately 5.5 inches high and 9.5 inches long.

Maximum length: 46 inches
Maximum width: 35 inches
Maximum height: 46 inches
Maximum length and girth combined: 108 inches

General Conditions for Mailing

See Publication 141, *Global Express Guaranteed Service Guide*, for information about areas served in the destination country, allowable contents, packaging and labeling requirements, tracking and tracing, service standards, and other conditions for mailing.

Express Mail International (*220*)

Not Available

Priority Mail International *(230)* Price Group 6

Refer to *Notice 123*, Price List, for the applicable retail, commercial base, or commercial plus price.
Weight Limit: 44 lbs.

Note: Ordinary Priority Mail International includes indemnity at no cost based on weight. (See *230*.)

Priority Mail International—Flat Rate

Flat Rate Envelopes or Small Flat Rate Priced Boxes: The maximum weight is 4 pounds. Refer to *Notice 123*, Price List, for the applicable retail, commercial base, or commercial plus price.

Flat Rate Boxes—Medium and Large: The maximum weight is 20 pounds, or the limit set by the individual country, whichever is less. Refer to *Notice 123*, Price List, for the retail, commercial base, or commercial plus price.

Insurance (*232.92*)

NOT Available

Size Limits (*231.22*)

Maximum length: 42 inches
Maximum length and girth combined: 79 inches

First-Class Mail International (*240*) Price Group 6

For the prices and maximum weights for letters, large envelopes (flats), packages (small packets), and postcards, see *Notice 123, Price List*.

Size Limits

Letters: See *241.212*
Postcards: See *241.221*
Large Envelopes (Flats): See *241.232*
Packages (Small Packets): See *241.242* and *241.243*

Airmail M-Bags (*260*)—

Direct Sack to One Addressee Price Group 6

Refer to *Notice 123*, Price List, for the applicable retail, commercial base, or commercial plus price.
Weight Limit: 66 lbs.

Matter for the Blind (*270*)

Free when sent as First-Class Mail International, including Priority Mail International Flat Rate Envelopes and Small Flat Rate Priced Boxes. Weight limit: 4 pounds.

Free when sent as Priority Mail International. Weight limit: 15 pounds.

Extra Services

Certificate of Mailing (*313*)

Individual Pieces	Fee
Individual article (PS Form 3817)	$1.15
Firm mailing books (PS Form 3877), per article listed (minimum 3)	0.44
Duplicate copy of PS Form 3817 or PS Form 3877 (per page) ...	1.15
Bulk Quantities	Fee
First 1,000 pieces (or fraction thereof)	6.70
Each additional 1,000 pieces (or fraction thereof)	0.80
Duplicate copy of PS Form 3606	1.15

COD and Certified

NOT for International Mail

International Business Reply Service (*382*)

Fee: Envelopes up to 2 ounces $1.50; Cards $1.00

International Postal Money Order (*371*)

NOT Available

International Reply Coupons (*381*)

Fee: $2.20

Registered Mail (*330*)

Fee: $11.75
Maximum Indemnity: $47.33
Available for First-Class Mail International, including postcards and Flat Rate Envelopes and Small Flat Rate Priced Boxes, and matter for the blind or other physically handicapped persons. Not applicable to M-bags.

Restricted Delivery (*350*)

Fee: $4.55
Available for Registered Mail with a return receipt.
Endorsements: A remettre en main propre.

Return Receipt (*340*)

Fee: $2.35
Available for Registered Mail only.

* * * * *

Stanley F. Mires,
Attorney, Legal Policy & Legislative Advice.

[FR Doc. 2012–13637 Filed 6–6–12; 8:45 am]
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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 51 and 52

[EPA–HQ–OAR–2011–0729; FRL–9672–9]

RIN 2060–AR05

Regional Haze: Revisions to Provisions Governing Alternatives to Source-Specific Best Available Retrofit Technology (BART) Determinations, Limited SIP Disapprovals, and Federal Implementation Plans

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The EPA is finalizing revisions to our rules pertaining to the

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regional haze program. In this action, the EPA is finalizing our finding that the trading programs in the Transport Rule, also known as the Cross-State Air Pollution Rule (CSAPR), achieve greater reasonable progress towards the national goal of achieving natural visibility conditions in Class I areas than source-specific Best Available Retrofit Technology (BART) in those states covered by the Transport Rule. In this action, the EPA is also finalizing a limited disapproval of the regional haze State Implementation Plans (SIPs) that have been submitted by Alabama, Georgia, Indiana, Iowa, Louisiana, Michigan, Mississippi, Missouri, North Carolina, Ohio, Pennsylvania, South Carolina, Virginia and Texas because these states relied on requirements of the Clean Air Interstate Rule (CAIR) to satisfy certain regional haze requirements. To address deficiencies in CAIR-dependent regional haze SIPs, in this action the EPA is promulgating Federal Implementation Plans (FIPs) to replace reliance on CAIR with reliance on the Transport Rule in the regional haze SIPs of Georgia, Indiana, Iowa, Kentucky, Michigan, Missouri, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia and West Virginia.

DATES: This final rule is effective on August 6, 2012.

ADDRESSES: *Docket.* The EPA has established a docket for this action under docket ID No. EPA–HQ–OAR–2011–0729. All documents in the docket are listed in the *www.regulations.gov* index. Although listed in the index, some information is not publicly available, *e.g.*, confidential business information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in *www.regulations.gov* or in hard copy at the Air and Radiation Docket and Information Center, EPA/DC, EPA West Building, Room 3334, 1301 Constitution Ave. NW., Washington, DC The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 566–1742.

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SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

This action affects state and local air pollution control agencies located within the geographic areas covered by the Transport Rule [1] and whose regional haze SIP relied on CAIR [2] as an alternative to BART for sulfur dioxide (SO_2) and/or nitrogen oxide (NO_X) for electric generating units (EGUs) subject to BART requirements, or whose regional haze SIP relied on the Transport Rule. Some of the EGUs located in such geographic areas may also be affected by this action in that affected states now have the option of not requiring such EGUs to meet source-specific BART emission limits to which these EGUs otherwise could be subject.

These sources are in the following groups:

Industry group	SIC [a]	NAICS [b]
Electric Services	492	221111, 221112, 221113, 221119, 221121, 221122

[a] Standard Industrial Classification.
[b] North American Industry Classification System.

B. Where can I get a copy of this document and other related information?

In addition to being available in the docket, an electronic copy of this notice will be posted at *http://www.epa.gov/ttn/oarpg/new.html* under "Recent Actions."

C. How is this notice organized?

The information presented in this notice is organized as follows:

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[1] *See* Federal Implementation Plans to Reduce Interstate Transport of Fine Particulate Matter and Ozone, 76 FR 48208 (August 8, 2011).

[2] *See* Rule to Reduce Interstate Transport of Fine Particulate Matter and Ozone (Clean Air Interstate Rule); Revisions to Acid Rain Program; Revisions to the NO_X SIP Call; Final Rule, 70 FR 25162 (May 12, 2005).

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II. Background and General Legal Considerations for the EPA's Final Action

A. Background

Section 169A(b)(2)(A) of the CAA requires states to revise their SIPs to contain such measures as may be necessary to make reasonable progress towards the natural visibility goal, including a requirement that certain categories of existing major stationary sources built between 1962 and 1977 procure, install, and operate BART as determined by the state.[3] Under the Regional Haze Rule, states are directed to conduct BART determinations for such "BART-eligible" sources that may be anticipated to cause or contribute to any visibility impairment in a Class I area. Rather than requiring source-specific BART controls, states also have the flexibility to adopt an emissions trading program or other alternative program as long as the alternative provides greater reasonable progress towards improving visibility than BART. 40 CFR 51.308(e)(2). The EPA provided states with this flexibility in the Regional Haze Rule, adopted in 1999, and further refined the criteria for assessing whether an alternative program provides for greater reasonable progress in three subsequent rulemakings. 64 FR 35714 (July 1, 1999); 70 FR 39104 (July 6, 2005); 71 FR 60612 (October 13, 2006). These criteria are described below.

1. Criteria for Developing an Alternative Program to BART

Specific criteria for determining if an alternative measure achieves greater reasonable progress than source-specific BART are set out in the Regional Haze Rule at §51.308(e)(3).[4] The "better-than-BART" test may be satisfied as follows: If the distribution of emissions is not substantially different than under BART, and the alternative measure results in greater emission reductions, then the alternative measure may be deemed to achieve greater reasonable progress. If the distribution of emissions is significantly different, then states are directed to conduct an air quality modeling study to determine differences in visibility between BART and the alternative program for each impacted Class I area for the worst and best 20 percent of days.[5] A test with the following two criteria (the "two-pronged visibility test") would demonstrate "greater reasonable progress" under the alternative program if both prongs of the test are met:

—Visibility does not decline in any Class I area,[6] and
—There is an overall improvement in visibility, determined by comparing the average differences between BART and the alternative over all affected Class I areas.

2. What is the relationship between BART and CAIR?

In May 2005, the EPA published CAIR, which required 28 states and the District of Columbia to reduce emissions of SO_2 and NO_X that significantly contribute to, or interfere with maintenance of, the 1997 national ambient air quality standards (NAAQS) for fine particulates and/or ozone in any downwind state. The CAIR established emission budgets for SO_2 and NO_X for states that contribute significantly to nonattainment in downwind states and required the significantly contributing states to submit SIP revisions that implemented these budgets. Because such SIP revisions were already overdue, the EPA subsequently promulgated CAIR FIPs for the affected states establishing cap and trade programs for EGUs with opt-in provisions for other sources. States had the flexibility to subsequently adopt SIP revisions mirroring CAIR requirements or otherwise providing emission reductions sufficient to address emissions that significantly contribute to nonattainment or interfere with maintenance of the NAAQS in other states. Many affected states adopted CAIR-mirroring SIPs, while others chose to remain under CAIR FIPs.

As noted above, the Regional Haze Rule allows states to implement an alternative program in lieu of BART so long as the alternative program has been demonstrated to achieve greater reasonable progress toward the national visibility goal than would BART. The EPA made just such a demonstration for CAIR in revisions to the regional haze program made in 2005. 70 FR 39104. In those revisions, we amended our regulations to provide that states participating in the CAIR cap-and-trade programs under 40 CFR part 96 pursuant to an EPA-approved CAIR SIP or states that remain subject to a CAIR FIP in 40 CFR part 97 need not require affected BART-eligible EGUs to install, operate and maintain BART for emissions of SO_2 and NO_X. 40 CFR 51.308(e)(4).

As a result of our determination that CAIR was "better-than-BART," a number of states in the CAIR region, fully consistent with our regulations, relied on the CAIR cap-and-trade programs as an alternative to BART for EGU emissions of SO_2 and NO_X in designing their regional haze implementation plans. These states also relied on CAIR as an element of a long-term strategy for achieving their reasonable progress goals for their regional haze programs.

3. Remand of CAIR and Implications for State Regional Haze Implementation Plans

Following our determination in 2005 that CAIR was "better-than-BART," the D.C. Circuit Court ruled on several petitions for review challenging CAIR on various grounds. As a result of this litigation, the D.C. Circuit Court remanded CAIR to the EPA but later decided not to vacate the rule.[7] The court thereby left CAIR and CAIR FIPs in place in order to "temporarily preserve the environmental values covered by CAIR" until the EPA replaced it with a rule consistent with the court's opinion. 550 F.3d at 1178.

[3] The preamble to the proposed rule provides additional background on the visibility requirements of the Clean Air Act and the EPA's Regional Haze Rule. 76 FR 82221–22.

[4] The Regional Haze Rule also allows for a demonstration that an alternative program provides for greater reasonable progress to be based on the clear weight of evidence. 40 CFR 51.308(e)(2)(E). We concluded that a more general test may be appropriate in certain circumstances, such as where, for example, technical or data limitations limit the ability of a state (or the EPA) to undertake a robust comparison using the test set out in 40 CFR 51.308(e)(3).

[5] While the Regional Haze Rule directs the state to conduct the air quality modeling study, as described in section III.C.2, the EPA itself conducted such a study for CAIR and through a notice-and-comment rulemaking codified the conclusion that the stated criteria were met by adding specific provisions allowing the use of CAIR in lieu of source-specific BART. We have now done the same for the Transport Rule.

[6] The "decline" is relative to modeled future baseline visibility conditions in the absence of any BART or alternative program control requirements.

[7] *See North Carolina* v. *EPA*, 531 F.3d 896; modified by 550 F.3d 1176 (D.C. Cir. 2008).

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On August 8, 2011, EPA promulgated the Transport Rule, which was to replace CAIR.[8] As promulgated, the Transport Rule would have addressed emissions in 2012 and later years and would have left the requirements of CAIR and the CAIR FIPs in place to address emissions through the end of 2011. The D.C. Circuit, however, on December 30, 2011, stayed the Transport Rule (including the provisions that would have sunset CAIR and the CAIR FIPs) and instructed the EPA to continue to administer CAIR pending the outcome of the court's decision on the petitions for review challenging the Transport Rule. *EME Homer City* v. *EPA,* No. 11–1302 (Order).

Many states relied on CAIR as an alternative to BART for SO_2 and NO_X for subject EGUs, as allowed under the then-current BART provisions at 40 CFR 51.308(e)(4). These states also relied on the improvement in visibility expected to result from controls planned or already installed on sources in order to meet CAIR provisions in developing their long-term visibility strategy. In addition, many states relied upon their own CAIR SIPs or the CAIR FIPs for their states as legal justification for these planned controls and consequently did not include separate enforceable measures in their long-term strategies (a required element of a regional haze SIP submission) to ensure these EGU reductions. These states also submitted demonstrations showing that no additional controls on EGUs beyond CAIR would be reasonable for the first 10-year implementation period of the regional haze program.

In summary, many of the states in the CAIR-affected region have based a number of required elements of their regional haze programs on CAIR. However, as CAIR has been remanded and only remains in place temporarily, we cannot fully approve these regional haze SIP revisions that have relied on the now-temporary reductions from CAIR. Although CAIR is currently in effect as a result of the December 30, 2011 Order by the U.S. Court of Appeals for the D.C. Circuit staying the Transport Rule, this does not affect the substance of the D.C. Circuit's ruling in 2008 remanding CAIR to the EPA.

4. The Transport Rule and Regional Haze SIPs

The Transport Rule as promulgated would establish Transport Rule trading programs to replace the CAIR trading programs and would sunset the requirements of CAIR and the CAIR FIPs. The Transport Rule, as promulgated, requires 28 states in the eastern half of the United States to significantly improve air quality by reducing EGU SO_2 and NO_X emissions that cross state lines and significantly contribute to ground-level ozone and/or fine particle pollution in other states. The rule allows allowance trading among covered sources, utilizing an allowance market infrastructure modeled after existing allowance trading programs. The Transport Rule allows sources to trade emissions allowances with other sources within the same program (*e.g.,* ozone season NO_X) in the same or different states, while firmly constraining any emissions shifting that may occur by establishing an emission ceiling for each state.

In our proposal, we described a technical analysis that we conducted to determine whether compliance with the Transport Rule would satisfy regional haze BART-related requirements. This technical analysis is the basis of this final action in which we are finalizing our determination that the Transport Rule achieves greater reasonable progress towards the national goal of achieving natural visibility conditions than source-specific BART. For this final rule, an updated sensitivity analysis was conducted to account for subsequent revisions to certain state budgets in the Transport Rule. This analysis is described in section III.B.4 of this notice.

B. Summary of the EPA Response to General and Legal Issues Raised in Public Comments

The EPA has based its determination that the Transport Rule will achieve greater reasonable progress than BART on the approach used by the EPA in evaluating whether a similar program, CAIR, would satisfy the regional haze BART-related requirements. As noted above, the Regional Haze Rule, promulgated in 1999, provides states with the flexibility to adopt an emissions trading program rather than requiring source-by-source BART. 40 CFR 51.308(e)(2). Some commenters supported our general approach and agreed that the Transport Rule will provide for greater reasonable progress. Other commenters, however, disagreed with our conclusion that the Transport Rule can be used as an alternative to BART. These commenters argued that we lack authority to make such a determination and that we cannot rely on the Transport Rule because of the current stay of that rule, and that the Transport Rule does not meet the necessary regulatory requirements for an alternative program in lieu of BART. Some commenters argued that we could not conclude that the Transport Rule provides for greater reasonable progress without considering each state's reasonable progress goals. Other commenters took the position that we should fully approve the regional haze SIPs that relied on CAIR to satisfy certain regional haze requirements and that our proposed limited disapproval of the regional haze SIPs was unnecessary.

1. Authority for an Alternative Trading Program

As described above, in 2005 (70 FR 39104) the EPA amended its Regional Haze Rule to provide that states participating in the CAIR cap-and-trade programs need not require affected BART-eligible EGUs to install, operate and maintain BART for emissions of SO_2 and NO_X. 40 CFR 51.308(e)(4). As EPA noted in explaining its reasons for adopting this approach, "[nothing] in the CAA or relevant case law prohibits a State from considering emissions reductions required to meet other CAA requirements when determining whether source-by-source BART controls are necessary to make reasonable progress. Whatever the origin of the emission reduction requirement, the relevant question for BART purposes is whether the alternative program makes greater reasonable progress." 70 FR at 39143.

The EPA's authority to establish non-BART alternatives in the regional haze program and the specific methodology outlined above for assessing such alternatives have been previously challenged and upheld by the D.C. Circuit. In the first case challenging the provisions in the Regional Haze Rule allowing for states to adopt alternative programs in lieu of BART, the court affirmed our interpretation of CAA section 169A(b)(2) as allowing for alternatives to BART where those alternatives will result in greater reasonable progress than BART. *Center for Energy and Economic Development* v. *EPA,* 398 F.3d 653, 660 (D.C. Cir. 2005) ("*CEED*") (finding reasonable the EPA's interpretation of CAA section 169(a)(2) as requiring BART only as necessary to make reasonable progress). In the second case, *Utility Air Regulatory Group* v. *EPA,* 471 F.3d 1333 (D.C. Cir. 2006) ("*UARG*"), the court specifically upheld our determination that states could rely on CAIR as an alternative program to BART for EGUs in the CAIR-affected states. The court concluded that the EPA's two-pronged test for determining whether an alternative program achieves greater

[8] See Federal Implementation Plans to Reduce Interstate Transport of Fine Particulate Matter and Ozone. 76 FR 48208.

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reasonable progress was a reasonable one and also agreed with EPA that nothing in the CAA required the EPA to "impose a separate technology mandate for sources whose emissions affect Class I areas, rather than piggy-backing on solutions devised under other statutory categories, where such solutions meet the statutory requirements." *Id.* at 1340.

Notwithstanding the decisions of the D.C. Circuit, several commenters argued that the plain language of the CAA precludes the EPA from allowing an alternative to BART. In their comments, these groups claimed that there is no statutory authority to exempt a source from BART, except as provided for in CAA section 169A(c). Under the interpretation of the CAA urged by these commenters, BART must be required at each BART source that causes or contributes to visibility impairment at any Class I area. The commenters point to recent decisions post-dating *CEED* and *UARG* in support of their arguments.

The commenters' arguments that the plain language of the CAA precludes reliance on the Transport Rule to satisfy the BART requirements were raised in *UARG* v. *EPA* and rejected by the D.C. Circuit when it denied the petitions for review of the EPA's determination that CAIR provided for greater reasonable progress than BART. While the commenter argues that the court's decision "has been undermined by subsequent D.C. Circuit decisions," we disagree. The decisions cited by the commenter, *North Carolina* v. *EPA,* 531 F.3d 896, 906–08 (D.C. Cir. 2008) and *NRDC* v. *EPA,* 571 F.3d 1245, 1255–58 (D.C. Cir. 2009) address the requirements of sections 110(a)(2)(D)(i)(I) and 172(c)(1), respectively. Given the differences between the language of these statutory provisions and that of section 169A(b)(2), the courts' interpretation of these other provisions of the CAA do not undermine the two previous rulings of the D.C. Circuit interpreting the visibility provisions of the Act. Similarly, the Supreme Court's conclusions in *Massachusetts* v. *EPA,* 549 U.S. 497, 528–29 (2007) regarding the meanings of "each" and "any" do not conflict with or impact the EPA's reading of section 169A(b)(2) of the CAA or the D.C. Circuit's conclusion that the agency's interpretation of the statute is a reasonable one. As the *CEED* court explained, the EPA interprets this provision to mean that "each SIP's 'emission limits, schedules of compliance, and other measures' must 'include' BART only 'as may be necessary to make reasonable progress toward' national visibility goals." 398 F.3d 653, *quoting* 42 U.S.C. 7491(b)(2); *see also Central Arizona Water Conservation District* v. *EPA,* 990 F.2d 1531, 1543 (9th Cir. 1993) (upholding the same interpretation of section 169A(b)(2)). We do not agree, therefore, that the EPA's regulations allowing for the adoption of a trading program that provides for greater reasonable progress than BART in place of source-specific BART are inconsistent with the CAA.

These commenters also argue that the EPA can exempt sources from BART only if the EPA complies with the requirements of CAA section 169A(c)(1). This provision of the CAA allows the EPA to exempt a source from the BART requirements, by rule, upon a determination that the source is not reasonably anticipated to cause or contribute to significant visibility impairment. As the commenters note, the appropriate Federal Land Manager(s) must agree with the exemption before it can go into effect.

We do not agree that the provisions governing exemptions to BART apply to our determination that the Transport Rule will make greater reasonable progress than BART. Section 169A(b)(2) of the CAA requires each visibility SIP to contain "such emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward the national goal * * * including * * * a requirement that [certain major stationary sources] * * * procure, install, and operate * * * [BART]." Based on this language, in 1999, the EPA concluded that if an alternative program can be shown to make greater reasonable progress toward eliminating or reducing visibility impairment, then installing BART for the purpose of making reasonable progress toward the national goal is no longer necessary. This interpretation of the visibility provisions of the CAA has been upheld three times by the courts, as noted above.

We also received comments arguing that the EPA cannot rely on the Transport Rule as an alternative to BART because the emission reductions do not meet the requirement of 40 CFR 51.308(e)(2)(iv) which provides that "the emission reductions resulting from the emissions trading program * * * will be surplus to those reductions resulting from measures adopted to meet requirements of the CAA as of the baseline date of the SIP."

We do not agree with the comments that the emissions reductions resulting from the Transport Rule must be "surplus to those measures adopted to meet requirements of the CAA as of the baseline date of the SIP." We note that the requirements of 40 CFR 51.308(e)(2) are not directly applicable to this action, as the special provisions in the Regional Haze Rule addressing the Transport Rule are codified at 40 CFR 51.308(e)(4). Nonetheless, our determination that the Transport Rule will result in greater visibility improvement than BART is fully consistent with the requirement in 40 CFR 51.308(e)(2)(iv). In promulgating the Regional Haze Rule in 1999, the EPA explained that the "baseline date of the SIP" in this context means "the date of the emissions inventories on which the SIP relies," 64 FR 35742, which is "defined as 2002 for regional haze purposes," 70 FR 39143. Any measure adopted after 2002 is accordingly "surplus" under 40 CFR 51.308(e)(2)(iv). This is consistent with the discussion in the preamble to the 1999 Regional Haze Rule indicating that the regional haze program "is being promulgated in a manner that facilitates integration of emission management strategies for regional haze with the implementation of programs for [the 1997 ozone and $PM_{2.5}$] NAAQS." 64 FR 35719. The EPA took this approach in the Regional Haze Rule to allow measures needed to attain the then new NAAQS to be "counted" as making "reasonable progress" toward the visibility goal. The Transport Rule was adopted to help areas come into attainment with and maintain the 1997 ozone and PM NAAQS, as well as the 2006 24-hour $PM_{2.5}$ NAAQS. The EPA accordingly does not view the requirement in 40 CFR 51.308(e)(2)(iv) as limiting our ability to demonstrate that the Transport Rule reductions are surplus, as defined in the Regional Haze Rule.

2. Effect of the Transport Rule Stay

Several commenters contended that the EPA cannot rely on the Transport Rule as a BART alternative because implementation of the rule has been stayed. These commenters argue that an alternative program in place of BART must constitute a "requirement," and be enforceable, and that as long as the Transport Rule is stayed, it cannot qualify as a "requirement" nor can it be enforced. These commenters also claim that because the rule may change if affirmed only in part, the EPA cannot find that the Transport Rule will make greater reasonable progress than BART.

We do not agree that the EPA cannot rely on the Transport Rule because of the stay imposed by the D.C. Circuit. We base this conclusion on both the structure of 40 CFR 51.308(e)(4) and on the long-term focus of our analysis underlying today's rule.

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Neither our regulations in 2005 addressing CAIR, nor our regulations in this rule addressing the Transport Rule, require states to participate in or implement these programs or to otherwise include enforceable measures in their *regional haze* SIPs. In 2005, having determined that CAIR would provide for greater reasonable progress toward the national goal than would BART, the EPA promulgated regulations providing that a state participating in one of the CAIR trading programs "need not require" EGUs to put on BART controls. Similarly, our regulations in this rule provide that a state subject to a Transport Rule FIP (or approved Transport Rule SIP) need not require BART controls on its EGUs. Accordingly, today's regulations addressing the Transport Rule are not "requirements" that a state participate in the interstate transport trading programs. Similarly, a *regional haze* SIP or FIP that relies on 40 CFR 51.308(e)(4) does not impose enforceable requirements on EGUs. However, a state may take advantage of this provision only if it is subject to an underlying Transport Rule FIP (or SIP approved as meeting the requirements of the trading program). We note that the underlying Transport Rule FIP or SIP does contain the applicable requirements that will ensure that the emissions reductions from the Transport Rule will occur.

We also note that while the Transport Rule is not currently enforceable, the air quality modeling analysis underlying our determination that the Transport Rule will provide for greater reasonable progress than BART is based on a forward-looking projection of emissions in 2014. However, any year up until 2018 (the end of the first regional haze planning period) would have been an acceptable basis for comparing the two programs under the Regional Haze Rule. *See* 40 CFR 51.308(e)(2)(iii). We anticipate that requirements addressing all significant contribution and interference with maintenance identified in the Transport Rule will be implemented prior to 2018.

We do not agree with the comment that because the Transport Rule is subject to review by the D.C. Circuit, we cannot move ahead with our determination that it provides for greater reasonable progress than BART. We do not view the stay imposed by the D.C. Circuit pending review of the underlying rule as undermining our conclusion that the Transport Rule will have a greater overall positive impact on visibility than BART both during the period of the first long-term strategy for regional haze and going forward into the future. We recognize, as one commenter suggests, that we may be obliged to revisit the regional haze plans that rely on the Transport Rule if the rule is not upheld, or if it is remanded and subsequently revised. However, we do not consider it appropriate to await the outcome of the D.C. Circuit's decision on the Transport Rule before moving forward with the regional haze program as we believe the Transport Rule has a strong legal basis, and given the judicial decree requiring the EPA to meet its statutory obligations to have a FIP or an approved SIP meeting the Regional Haze Rule requirements in place for most states before the end of 2012.

3. Rationale for Disapproval of SIPs Based on CAIR

We received comments that our proposed limited disapproval of the regional haze SIPs that rely on CAIR and the proposed FIPs is not necessary. Commenters noted that CAIR remains in place and that SIPs that rely on CAIR are fully consistent with our existing regulations. Some commenters suggested that we revise the Regional Haze Rule to allow states to rely on either CAIR or the Transport Rule to meet the BART requirements.

While the regional haze program is a long-term program that requires states to submit SIPs every 10 years to assure continued reasonable progress toward natural background conditions, the BART requirements or alternatives to BART must be fully implemented by 2018. The required establishment of BART limits, or an alternative to BART, is accordingly undertaken only once. Although CAIR is currently in place as a result of the D.C. Circuit's stay of the Transport Rule, we do not anticipate that CAIR will continue in effect indefinitely. As a result, our determination that CAIR provides for greater reasonable progress than BART is no longer valid. This is because, as a general matter, any source required to install BART controls must maintain the BART control equipment and meet the BART emission limit established in the SIP so long as the source continues to operate. *See* 40 CFR 51.308(e). As BART would result in emission reductions going forward beyond 2018, our determination that CAIR provides for greater reasonable progress than BART was based on the assumption that the reductions required by CAIR would be enforceable requirements that would also apply going forward to 2018 and beyond. That assumption is no longer appropriate. We are issuing a limited disapproval rather than a full disapproval, however, to allow the states to rely on the emission reductions from CAIR for so long as CAIR is in place.

4. The Relationship Between a Better-Than-BART Determination and Reasonable Progress

Each state with a Class I area is required to set goals for each Class I area that provide for reasonable progress towards improving visibility. There must be one goal for the 20 percent best visibility days and one goal for the 20 percent worst visibility days. States take into account a number of factors in establishing reasonable progress targets, including in some cases an analysis of the measures needed to achieve the "uniform rate of progress" [9] over the 10-year period of the SIP and a determination of the reasonableness of such measures. 40 CFR 51.308(d)(1). The Regional Haze Rule does not mandate specific milestones or rates of progress, but instead calls for states to establish goals that provide for "reasonable progress" toward achieving natural background conditions.

Several commenters argued that our determination that the Transport Rule provides for greater reasonable progress than BART is improper because it considers BART in isolation, without reference to the consideration of the reasonable progress goals in the regional haze plans. These commenters contend that BART is critical to the state's ability to reach its reasonable progress goals and that the EPA should have considered the impact of our proposed determination in instances where the states relied on emissions reductions consistent with presumptive BART to meet reasonable progress goals.

The EPA disagrees with the argument that we cannot compare the visibility improvements from Transport Rule against those from BART without considering the reasonable progress goals of each affected regional haze SIP. BART is one measure for addressing visibility impairment, but it is not "the mandatory vehicle of choice." CEED, 398 F.3d at 660. As such, BART is not a required element of the regional haze SIPs so long as an appropriate alternative achieves greater reasonable progress.

The commenters' suggestion that reasonable progress goals are defined and that each regional haze SIP must accordingly ensure a certain rate of progress toward natural visibility also mischaracterizes the regional haze program. As noted above, the reasonable

[9] For each Class I area, the uniform rate of progress is based on the calculation of the steady rate of improvement in visibility needed to achieve natural background conditions by 2064.

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progress goals for each Class I area are set by the states. States, both in and out of the CAIR region, set their reasonable progress goals based, in part, on anticipated reductions in emissions due to CAIR. In setting reasonable progress goals, these states estimated future emissions in 2018 from a number of sources and source categories, including emissions from EGUs. For sources in the CAIR region, states relied on emissions reductions from CAIR—not BART—to estimate future EGU emissions. As a result, source-specific BART across the CAIR region is clearly not critical to the states' ability to meet the goals in their SIPs. For the small handful of states that were not subject to CAIR but are now subject to the Transport Rule, today's determination that the Transport Rule provides for greater reasonable progress than BART gives those states the opportunity to consider revising their regional haze SIPs to substitute participation in the Transport Rule for source-specific BART. Whether such a revision meets the requirements of the Regional Haze Rule, including the requirement that a plan include such measures as may be necessary to make reasonable progress toward the national goal, would be addressed in a notice and comment rulemaking that would provide an opportunity for review of the adequacy of such an approach. We disagree with the commenters' statement, however, that source-specific BART as a general matter is necessary to ensure reasonable progress.

III. Technical Analysis Supporting the Determination of the Transport Rule as an Alternative to BART

A. What analysis did we rely on for our proposed determination?

The technical analysis that the EPA relied on for our proposed and now final determination that the Transport Rule is better than BART is described in detail in the preamble of the proposed rule and in the Technical Support Document (TSD).[10] To provide context for the summary of the public comments and our responses to them, we are providing a summary of the technical analysis in the following sections.

1. Application of the Two-Pronged Test

The two-pronged test for determining if an alternative program achieves greater reasonable progress than source-specific BART is set out in the Regional Haze Rule at 40 CFR 51.308(e)(3). The underlying purpose of both prongs of the test is to assess whether visibility at Class I areas would be better with the alternative program in place than without it. Under the first prong, visibility must not decline at any affected Class I area on either the best 20 percent or the worst 20 percent days as a result of implementing the Transport Rule; and, under the second prong the 20 percent best and 20 percent worst days should be considered in determining whether the alternative program under consideration (in the case of this rulemaking, the Transport Rule) produces greater average improvement than source-specific BART over all affected Class I areas. Together, these tests ensure that the alternative program provides for greater reasonable progress than would source-specific BART.

In applying the two-pronged test to the Transport Rule control scenario and the source-specific BART control scenario, we used a future (2014) projected baseline. The 2014 baseline does not include the Transport Rule, BART, or CAIR control programs. As described in the preamble to the proposed rule, the 2014 baseline allows a comparison of visibility conditions as they are expected to be at the time of the program implementation, but in the absence of the program. This ensures that the visibility improvement or possible degradation is due to the programs being compared—source-specific BART and the Transport Rule alternative—and not to other extrinsic factors. Also, under the Regional Haze Rule any program adopted after 2002 is considered "surplus" and eligible to be counted as all or part of an alternative program in place of BART.

2. Identification of Affected Class I Areas

As described above, under the second prong of the test, the visibility comparison is over all "affected" Class I areas. The EPA added the term "affected" to clarify that visibility need not be evaluated nationwide. 71 FR 60620. We considered two approaches to identify the Class I areas "affected" by the Transport Rule as an alternative control program to source-specific BART. First, we identified 140 Class I areas represented by 96 Interagency Monitoring of Protected Visual Environments (IMPROVE) monitors in the 48 contiguous states with sufficiently complete monitoring data available to support the analysis. In the first "eastern" approach, we identified as affected Class I areas the 60 Class I areas contained in the eastern portion of the Transport Rule modeling domain. The second approach we considered was a "national" approach in which visibility impacts on 140 Class I areas across the 48 contiguous states were evaluated (including the 60 contained within the Transport Rule region). Consideration of this national region accounted for the possibility that the Transport Rule might have the effect of increasing EGU emissions in the most western portion of the United States due to shifts in electricity generation or other market effects. We noted that the "eastern" Transport Rule modeling grid used a horizontal resolution of 12 km (all 60 "eastern" Class I areas were contained within the 12 km grid). The modeling grid for areas outside of the eastern Transport Rule region used a more coarse horizontal resolution of 36 km.

We requested comment on whether the "affected Class I areas" should be considered to be the 60 Class I areas located in the Transport Rule eastern modeling domain, the larger set of 140 Class I areas in the larger national domain, or some other set. We noted that given the modeling results, the choice between the 60 Class I areas or the 140 Class I areas did not affect our proposed conclusion that both prongs of the two-pronged test are met.

3. Control Scenarios Examined

The Transport Rule requires 28 states in the eastern half of the United States to reduce EGU SO_2 and NO_X emissions that cross state lines and contribute to ground-level ozone and fine particle pollution in other states. BART, on the other hand, is applicable nationwide and covers 26 industrial categories, including EGUs, of a certain vintage. In our comparison, we sought to determine whether the Transport Rule cap-and-trade program for EGUs will achieve greater reasonable progress than would BART for EGUs only. Therefore, we examined two relevant control scenarios. The first control scenario examined SO_2 and NO_X emissions from all EGUs nationwide after the application of BART controls to all BART-eligible EGUs ("Nationwide BART"). In the second scenario, EGU SO_2 and NO_X emissions reductions attributable to the Transport Rule were applied in the Transport Rule region and BART controls were applied to all BART-eligible EGUS outside the Transport Rule region ("Transport Rule + BART elsewhere"). For the first prong of the test, the "Transport Rule + BART elsewhere" scenario was compared to the 2014 future year base case. The comparison to the 2014 future year "Base Case" allows the EPA to ensure that the Transport Rule would not cause degradation in visibility from conditions predicted for the year 2014 in the

[10] Technical Support Document for Demonstration of the Transport Rule as a BART Alternative, Docket EPA–HQ–OAR–2011–0729.

absence of the Transport Rule, BART and CAIR.

For both the "Nationwide BART" scenario and the "Transport Rule + BART elsewhere" scenario, we modeled the presumptive EGU BART limits for SO_2 and NO_X emission rates as specified in the BART Guidelines (Guidelines for BART Determinations Under the Regional Haze Rule, 70 FR 39104, July 6, 2005), unless an actual emission rate at a given unit with existing controls is lower. In the latter case, we modeled the lower emission rates. Our analysis assumed that all BART-eligible EGUs were actually subject to BART requirements and that presumptive BART limits would be applied to 100 megawatt (MW) EGUs for SO_2 and 25 MW EGUs for NO_X, regardless of the magnitude of their annual total emissions. In our analysis, in both scenarios we constrained certain EGUs by emission limits other than presumptive limits due to a proposed or final regional haze SIP, a proposed or final regional haze FIP, a final consent decree, or state rules. Where we had evidence of more stringent emission limits than the presumptive BART limits, we used them. These units and their emission limits are detailed in the TSD.

There are five states that are subject to the Transport Rule requirements during the ozone season only (Oklahoma, Arkansas, Louisiana, Mississippi and Florida). For these states, in the "Transport Rule + BART elsewhere" scenario post-combustion NO_X controls were assumed to operate outside of the ozone season only when required to do so for a reason other than Transport Rule requirements, *e.g.*, a permit condition or a provision of a consent decree. In the "National BART" scenario, BART NO_X controls were assumed to operate year-round.

4. Emission Projections

To estimate emissions expected from the scenarios described in section IV, we used the Integrated Planning Model (IPM).[11] The IPM was used in this case to evaluate the emissions impacts of the described scenarios limiting the emissions of SO_2 and NO_X from EGUs. The IPM projections of annual NO_X and SO_2 emissions from EGUs for the "Transport Rule + BART elsewhere" control scenario were used as inputs to the air quality model to assess the visibility impacts of the emission changes. The IPM projections were based on the state budgets prescribed in the final Transport Rule published on August 8, 2011, and the supplemental proposal published on July 11, 2011.[12] We noted that on October 14, 2011, the EPA issued a proposed notice that would increase NO_X and SO_2 budgets for certain states in accordance with revisions to certain unit-level input data. 76 FR 63860. We requested comment on the potential effect of the proposed increases to state budgets. We noted that even with the proposed increases to certain state budgets, we believed that the two-pronged test is satisfied given the still-substantial reductions in emissions under the Transport Rule.

5. Air Quality Modeling Results

To assess the air quality metrics that are part of the two-pronged test, we used the IPM emission projections as inputs, to an air quality model to determine the impact of "Transport Rule + BART elsewhere" and "Nationwide BART" controls on visibility in the affected Class I areas. To project air quality impacts we used the Comprehensive Air Quality Model with Extension (CAMx) version 5.3. The air quality modeling analysis and related analyses to project visibility improvement are described in more detail in the TSD for the Transport Rule.[13] The visibility projections for each Class I area are presented in the TSD for our proposed action.

We proposed that the "Transport Rule + BART elsewhere" control scenario passed the first prong of the visibility test considering affected Class I areas located in both the "eastern" region of 60 Class I areas and the "national" region of 140 Class I areas We also proposed our determination that the "Transport Rule + BART elsewhere" alternative measure passed the second prong of the test that assesses whether the alternative results in greater average visibility improvement at affected Class I areas compared to the "Nationwide BART" scenario. The "Transport Rule + BART elsewhere" alternative passed the second prong of the test, regardless of which way affected Class I areas are identified.

B. Summary of the EPA Responses to Comments on the Technical Analysis

Many comments supported the EPA's technical analysis and our determination that the Transport Rule satisfies the requirements for an alternative to source-specific BART. Other commenters raised objections to the EPA's determination. Some of these were general legal objections related to the EPA's legal authority for its action and its interpretation of authorizing regulations and statutes. The EPA's response to those general legal objections is discussed above in section III.A. Other objections raised technical issues related to the EPA's emissions and air quality modeling scenarios that were used to compare the results of the Transport Rule control scenario with the source-specific BART control scenario. In this section of the preamble we provide an overview of the EPA's review of these technical comments. Our responses are discussed in detail in the Response to Comments document, which is included in the docket for this rulemaking.

1. Comments Related to the Emissions Scenarios Used in the EPA's Analysis

As noted above, the EPA developed two emissions scenarios: A 2014 "Nationwide BART" scenario and a 2014 "Transport Rule + BART elsewhere" scenario. Nationwide emissions were substantially lower under the "Transport Rule + BART elsewhere" scenario. Some commenters asserted that the emissions results for these two scenarios were skewed in favor of the Transport Rule. These commenters asserted that the EPA underestimated the emissions reductions from BART, and overestimated the emission reductions from the Transport Rule. These commenters raise issues generally with the use of presumptive BART limits in the "Nationwide BART" scenario and questioned whether the EPA correctly applied the presumptive BART limits.

The EPA disagrees with commenters asserting that the presumptive BART limits were inappropriate for use in this analysis. While the EPA recognizes that a case-by-case BART analysis may, in some source-specific assessments, result in emission limits more stringent than the presumptive limits, these limits are reasonable and appropriate for use in assessing regional emissions reductions from the BART scenario. This has been the EPA position since 2005. 71 FR 60619 ("the presumptions represent a reasonable estimate of a stringent case BART * * * because * * * they would be applied across the board to a wide

[11] Extensive documentation of the IPM platform may be found at *http://www.epa.gov/airmarkets/progsregs/epa-ipm/transport.html*.

[12] *See* Federal Implementation Plans To Reduce Interstate Transport of Fine Particulate Matter and Ozone 76 FR 48208 (August 8, 2011). The ozone season state budgets for the states affected by the supplemental proposal published on July 11, 2001 (76 FR 40662) are included in the "Transport Rule + BART elsewhere" control scenario.

[13] *See* Air Quality Modeling Final Rule Technical Support Document, U.S. EPA, June 2011, which is found at: *http://www.epa.gov/airtransport/pdfs/AQModeling.pdf*.

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variety of units with varying impacts on visibility, at power plants of varying size and distance from Class I areas"). Moreover, as discussed in detail in the Response to Comment document, the EPA believes that these comments overestimate the emissions reductions that would be associated with case-by-case BART because the commenters' assertions of "best" technology for BART ignore other factors, including cost of control and resulting visibility improvement, that are critical components of a source-specific BART analysis.

The EPA also received numerous comments concerning specific units for which the commenters believed the BART limits for SO_2 had been incorrectly applied in IPM. Our review of these comments, which is presented in detail in the Response to Comments document, shows that (with minor exceptions) the EPA correctly applied these presumptive limits. After reviewing these comments and the IPM outputs, we conclude that many of these comments stemmed from an apparent misunderstanding of the EPA's application of the presumptive limits in IPM. Some of the unit-level comments pertained to units less than 100 MW for which the presumptive limits did not apply. Other comments pertained to units that did not meet both the 95 percent removal efficiency and the 0.15 lb/MMBtu rate. For BART-affected units greater than or equal to 100 MW, the EPA's IPM modeling required that they meet a SO_2 emission rate limit of 0.15 lbs/MMBtu *or* a removal efficiency of 95 percent. As sources are only required to comply with one of these metrics (emission rate or percent removal), the IPM correctly determined that some BART sources could comply with an emission rate higher than 0.15 lb/MMBtu (while meeting the 95 percent FGD removal efficiency requirement) and some could comply with a removal efficiency less than 95 percent (while meeting the emission rate requirement).

The EPA also disagrees with the commenters' assertion that our application of presumptive limits for NO_X should have provided for the installation of add-on equipment such as selective catalytic reduction (SCR). For all types of boilers other than cyclone units, the presumptive NO_X limits in the EPA's BART guidelines are based only on the use of current combustion control technology including low NO_X burners, over-fire air, and coal reburning.[14] 70 FR 39134.

Finally, the EPA disagrees with commenters who expressed concerns that the "no-CAIR" base case was inappropriate for use in this analysis. The EPA agrees with commenters' observation that the 2014 base case leads to emission increases relative to current emissions. However, as explained in detail in the preamble to the final Transport Rule, the EPA believes this is a reasonable and appropriate case to use for estimating emissions reductions that are attributable to the Transport Rule, and for estimating air quality concentrations in absence of the Transport Rule. 76 FR 48223.

2. Identification of Affected Class I Areas

Under the Regional Haze Rule, the reasonable progress achieved by an alternative program in "affected Class I areas" is compared to the reasonable progress achieved by source-specific BART. In our proposal, the EPA requested comment on whether the "affected Class I areas" should be considered to be (1) The 60 Class I areas located in the Transport Rule eastern modeling domain, (2) the larger set of 140 Class I areas, or (3) some other set. We noted that our air quality modeling results showed that the choice between the 60 Class I areas or the 140 Class I areas did not affect our proposed conclusion that both prongs of the two-pronged test are met.

Some commenters agreed that the EPA can properly rely on an assessment of the 60 Class I areas without referring to the results of the additional 80 Class I areas. These commenters noted, as did the EPA, that because both assessment approaches support the Transport Rule as a lawful and reasonable BART alternative, the EPA may appropriately confirm its determination based on either approach. Other commenters argued that the EPA improperly averaged across all Class I areas. These commenters argued that both the 60 Class I area region and the 140 Class I area region are too broad. These commenters presented information illustrating the "Nationwide BART" scenario to be superior to the Transport Rule alternative if the EPA averaged visibility improvement at the 27 Class I areas west of the Mississippi River but east of the Rocky Mountains. These commenters asserted that the EPA should not average across states, but rather should assume Transport Rule changes in one state at a time, and average the results for areas in (and nearby) that state.

The EPA agrees with comments supporting our approach to identifying the "affected" Class I areas. The EPA agrees that in either case, the analysis shows that the two-pronged test for determining a BART alternative is satisfied. The EPA does not agree that it is necessary to evaluate results for a sub-region such as the 27 Class I areas suggested by some commenters. Given that the Transport Rule affects emissions and air quality over a large region, the EPA believes it is reasonable to consider that entire region in evaluating the Class I areas that are also "affected" by this rule. The possibility of greater visibility improvement due to source-specific BART in specific Class I areas within the region of "affected Class I areas" is inherent to the two-pronged test that has been upheld by the D.C. Circuit Court. As long as the average visibility improves over the *entire* region and no Class I area experiences degradation, the alternative is an appropriate and approvable alternative to source-specific BART. *See* 471 F.3d 1333 (D.C. Cir. 2006) ("*UARG*") ("nothing in §169A(b)'s 'reasonable progress' language requires as least as much improvement in each and every individual area as BART itself would achieve").

3. Ozone Season-Only Transport Rule States

Some commenters noted that five states—Arkansas, Florida, Louisiana, Mississippi and Oklahoma—are covered by the Transport Rule ozone season only, and thus these states are only required to hold allowances and limit statewide NO_X emissions during May through September. Commenters expressed concerns that while imposition of BART would require year-round operation of NO_X controls, under the Transport Rule there would be no assurance that NO_X emission controls would operate during the remaining 7 months of the year. Accordingly, the commenters asserted that for these states the Transport Rule is not "better than BART" because it would allow for a potential degradation during these months, and thus the EPA should consider the Transport Rule to fail the first prong of the two-pronged test.

The EPA carefully considered this comment, and we reviewed the results of our technical analysis to evaluate whether such seasonal differences could occur. For programs which regulate ozone season NO_X only, seasonal differences in the emissions rate (lb/

[14] The EPA notes that a BART determination made under the regional haze program is distinct from a best available control technology (BACT) determination made under the prevention of significant deterioration (PSD) program. 42 U.S.C. 7475. The fact that a control technology has been determined to be BART does not mean that the same controls would be found to meet the requirements for BACT.

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MMBtu) can be seen where a source installs post-combustion controls such as selective catalytic reduction (SCR) or selective non-catalytic reduction (SNCR). It is probable that source owners would not operate the controls in non-ozone season months to avoid the extra cost of control. These effects are indeed seen in the data reported to the EPA. However, where a program results in the imposition of combustion controls such as low-NO_X burners and overfire air, the controls are an integral part of the operational design of the EGU. Accordingly, where combustion controls are installed in response to an ozone season-only requirement, the EPA does not expect to see seasonal differences in the lb/MMBtu NO_X emission rate.

Our review of the IPM predictions of how EGUs are likely to comply with the Transport Rule indicated that in the "Transport Rule + BART elsewhere" scenario, NO_X control in the five ozone season-only states is achieved predominantly by combustion controls rather than post-combustion controls. In the Transport Rule scenario, for four of the five states (Arkansas, Louisiana, Mississippi and Oklahoma), the EPA projects that any additional NO_X controls resulting from the Transport Rule would be combustion controls only. Furthermore, as explained above, for the "Nationwide BART" control scenario we applied the presumptive NO_X limits to all BART-eligible sources nationwide that were not already equipped with post-combustion controls. According to the EPA's BART guidelines, for all types of boilers other than cyclone units the presumptive BART limits for NO_X are based on the use of current combustion control technology.[15] 70 FR 39134. For BART sources already equipped with post-combustion controls, we assumed under BART those controls would operate year-round. Therefore, the "Nationwide BART" scenario would result in generally uniform emission rates throughout the year in the five ozone season-only states. As a result, with the exception of Florida, there is no seasonal difference in NO_X emission rates between the "Transport Rule + BART-elsewhere" scenario and the "Nationwide BART" scenario. In Florida, the one instance where IPM indicates a season-dependent difference between the two control scenarios, there are some EGUs with existing post-combustion controls (SCR) that the EPA projects would not operate at all unless incentivized to do so by either a source-specific BART requirement or by the Transport Rule, and under the Transport Rule would operate only during the ozone season. Our analysis of the two scenarios appropriately considered this seasonal difference by accounting for higher NO_X emissions from those Florida units outside of the ozone season when these controls are projected not to operate in the "Transport Rule + BART elsewhere" scenario. That is, our analysis assumed that post-combustion NO_X controls would operate year-round under the "Nationwide BART" scenario and only during May through September in the "Transport Rule + BART elsewhere" scenario. When we analyzed the overall regional emissions reductions under the two scenarios, this did not affect our conclusion that the two-pronged test was satisfied. This outcome is very understandable because over a geographic region this small relative decrease during part of the year in emissions of NO_X in the "Transport Rule + BART elsewhere" scenario compared to the "Nationwide BART" scenario has much less effect than the visibility improvement attributable to the very large relative decrease in SO_2 emissions between the two scenarios.

Finally, the EPA notes that in a previous rulemaking that established that CAIR was "better-than-BART" it was also the case that some states subject to CAIR were subject only to ozone-season NO_X budgets. In that rulemaking, our air quality analysis had similar results and our final rule established that the CAIR could be relied upon as an alternative to source-specific BART for those states.

4. Comments Asserting That the EPA Needs To Re-Do the Analysis

Some commenters asserted that the EPA could not issue a final determination that the Transport Rule achieves greater reasonable progress than BART without conducting a new modeling analysis that would correct an error in the emissions for the "Nationwide BART" scenario and that would take into account certain adjustments that the EPA made to some state budgets under the Transport Rule after the air quality modeling runs were completed. Specifically, the commenters noted that the EPA acknowledged in the TSD for the proposal that the emissions analysis for the "Nationwide BART" scenario should have, but did not, apply presumptive BART controls on BART-eligible Gerald Gentleman Unit 2 and that the EPA acknowledged that the Transport Rule scenario in the analysis did not take into account budget revisions for a number of states that were published or proposed subsequent to the promulgation of the Transport Rule in August 2011. The commenters believe that because of these two acknowledged discrepancies in the emissions values used in the air quality modeling for the two scenarios, in combination with additional alleged errors, the EPA cannot issue a final determination unless and until a new analysis is conducted that takes these discrepancies into account.

The EPA disagrees that a re-analysis of the two-pronged test using new air quality modeling is necessary. As noted in the TSD, the EPA does not believe that the omission of Gerald Gentleman Unit 2 from the BART-eligible inventory of 489 units would affect the outcome of our national analysis.[16] This is because the emission reductions from a single EGU in the BART control scenario would not change the average visibility improvement across all affected Class I areas, which is the basis for our determination. The SO_2 emission reduction in question (roughly 12,000 tons of SO_2 per year) represents a relatively small emission change compared to the emissions from the area encompassed by Nebraska and the surrounding six states. Our response to other alleged errors in the BART inventory is presented in the Response to Comment document.

With respect to revisions in state budgets, as we discussed in the TSD accompanying the December 30, 2011 proposal, the post-analysis increases in the state budgets under the Transport Rule had a relatively small impact on the emissions comparison between the two scenarios. 76 FR 8227. We note that in addition to the Transport Rule revisions we discussed in the proposed rule, there have been proposed subsequent adjustments to state budgets. On February 21, 2012, based on comments received on its previous rulemaking proposal, the EPA published revisions to 2012 and 2014 state budgets in Arkansas, Georgia, Indiana, Kansas, Louisiana, Mississippi, Missouri, New York, Nebraska, Ohio, Oklahoma, South Carolina and Texas, along with revisions to new unit set-asides in Arkansas, Louisiana and Missouri. 77 FR 10342 and 77 FR 10350.[17] While

[15] There are no coal-fired cyclone units located in any of the five ozone season-only states so the presumptive limits for cyclone units do not apply.

[16] Technical Support Document for Demonstration of the Transport Rule as a BART Alternative, Docket EPA–HQ–OAR–2011–0729. p. 10.

[17] These revisions were originally published in a direct final rule on February 21, 2012. 77 FR 10342. The EPA published a parallel proposal simultaneously with the direct final rule and

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individual state adjustments vary, overall, the total budget increase over the entire Transport Rule region is very small. The EPA believes it is a reasonable expectation that these adjustments would lead to very small impacts on annual and 24-hour $PM_{2.5}$ concentrations and, as a consequence, would not have a meaningful impact on the two-pronged test satisfied by the analysis conducted for this rule. A technical analysis of these adjustments may be found in the docket (Docket ID No. EPA–HQ–OAR–2011–0729: Sensitivity Analysis Accounting for Increases in Texas and Georgia Transport Rule State Budgets).

After reviewing the public comments on the proposed rule, the EPA is finalizing its finding that the Transport Rule trading programs will provide greater progress towards regional haze goals than source-specific BART. This finding is based on the results of the two-pronged test for an alternative program. In this case, our analysis demonstrated that the trading programs of the Transport Rule do not cause degradation in any affected Class I area, thus passing the first prong of the test. The second prong of the test assesses whether the "Transport Rule + BART elsewhere" scenario results in greater average visibility improvement at affected Class I areas compared to the "Nationwide BART" scenario. The average visibility improvement of the "Transport Rule + BART elsewhere" alternative was greater than "Nationwide BART" on both the 20 percent best and 20 percent worst days, thus passing the second prong of the test. The determination that the Transport Rule trading programs will provide greater progress towards regional haze goals than source-specific BART applies only to EGUs in the Transport Rule trading programs and only for pollutants covered by the programs in each state. Accordingly, we are revising 40 CFR 51.308(e)(4) by essentially replacing the name of the CAIR with the name of the Transport Rule.

We are also finalizing our proposal that a state that chooses to meet the emissions reduction requirements of the Transport Rule by submitting a complete SIP revision that is approved as meeting the requirements of 40 CFR 52.38 and/or 52.39 also need not require BART-eligible EGUs in the state to install, operate and maintain BART for the pollutants covered by such a trading program in the state.

The results of the "Transport Rule + BART elsewhere" control scenario analysis demonstrate that the use of NO_X controls during ozone season only, in the states for which this Transport Rule requirement applies, results in greater visibility improvement than source-specific BART for NO_X. Thus, we are finalizing our proposal that a state in the Transport Rule region whose EGUs are subject to the requirements of the Transport Rule trading program only for ozone season NO_X is allowed to rely on our determination that the Transport Rule makes greater reasonable progress than source-specific BART for NO_X. The states to which this aspect of our final rule applies are Arkansas, Florida, Louisiana, Mississippi and Oklahoma.

IV. Reasonably Attributable Visibility Impairment (RAVI)

A. What did the EPA propose?

We proposed to preserve the language in the regional haze regulations at 40 CFR 51.308(e)(4) that allows states to include in their SIPs geographic enhancements to the trading program to address a situation where BART is required based on RAVI at a Class I area.[18]

B. Public Comments Related to RAVI

We received comments recommending that we explicitly state that the Transport Rule as an alternative to BART does not replace the BART analysis that is required to address RAVI certification. The commenter contends that the BART determination for RAVI needs to address the impairment at the specific Class I area or areas, a requirement that is not addressed by the demonstration of regionally-averaged visibility improvement. Other commenters agreed that RAVI BART is critical to remedying existing impairment and must be implemented. This commenter also pointed out that RAVI BART is reactive as it requires FLM to voluntarily take action to address an existing problem. As such, RAVI BART will not result in proactive permitting to avoid degradation and it cannot be relied on to prevent hot spots. Furthermore, according to this commenter, the EPA in its finding that CAIR was better-than-BART explained that even under a BART alternative "* * * CAA section 169A(b)(2)'s trigger for BART based on impairment at any Class I area remains in effect, because a source may become subject to BART based on 'reasonably attributable visibility impairment' at any area" (citing 40 CFR 51.302).

The EPA proposed to leave unchanged the existing regulatory language regarding geographic enhancements. The purpose of this language is to allow a market-based system to accommodate actions taken under the RAVI provisions. The EPA first adopted such language in the 1999 Regional Haze Rule, 64 FR 35757, and used it again in issuing regulations addressing our determination that CAIR provides for greater reasonable progress than BART, 70 FR 39156, and again in issuing regulations addressing trading program alternatives to BART in general, 71 FR 60612, 60627. In light of the fact that our proposal did not request comment on the interplay of the RAVI requirements in 40 CFR 51.302–306 with the requirements of the Regional Haze Rule, we are not adopting any clarifying interpretation at this time. As a result, this rulemaking alters neither the authority of a federal land manager to certify reasonably attributable visibility impairment nor the obligation of states (or EPA) to respond to a RAVI certification under 40 CFR Part 51 Subpart P (Protection of Visibility). We expect at a later date to clarify the scope of the RAVI requirements through a rule amendment, general guidance, or action on a SIP or FIP in the context of a specific RAVI case.[19] Whatever the form, we intend to provide an opportunity for public comment before applying a new interpretation.

C. Final Action on RAVI

In this final action we are preserving the language in the regional haze regulations at 40 CFR 51.308(e)(4) that allows states to include in their SIPs geographic enhancements to the trading program to accommodate a situation where BART is required based on RAVI at a Class I area. We are not adopting any clarifying interpretation of this language at this time, but we expect at a later date to clarify the scope of the RAVI requirements through a rule amendment, general guidance, or action on a SIP or FIP in the context of a specific RAVI case.

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indicated it would withdraw the direct final rule if it received adverse comment. The EPA received adverse comments and on May 16, 2012 published a notice withdrawing the direct final rule before it went into effect. 77 FR 28785. As indicated in the parallel proposal, the EPA intends to take final action on the parallel proposal without providing an additional opportunity for public comment. 77 FR 10350.

[18] A geographic enhancement is a method, procedure, or process to allow a broad regional strategy, such as the Transport Rule cap-and-trade program, to satisfy BART for reasonable attributable impairment. For example, it could consist of a methodology for adjusting allowance allocations at a source which is required to install BART controls.

[19] A RAVI certification has been made for the Sherbourne County Generating Station (Sherco) in Minnesota, by the Department of the Interior on October 21, 2009.

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V. Limited Disapproval of Certain States' Regional Haze SIPs

A. What did the EPA propose?

We proposed a limited disapproval of the regional haze SIPs that have been submitted by Alabama, Florida, Georgia, Indiana, Iowa, Louisiana, Michigan, Mississippi, Missouri, North Carolina, Ohio, Pennsylvania, South Carolina, and Texas. In separate notices, the EPA also has proposed a limited disapproval of the regional haze SIP submitted by Virginia that relied on CAIR (77 FR 3691), and has finalized a limited disapproval of the regional haze SIPs submitted by Kentucky (77 FR 19098), Tennessee (77 FR 24392), and West Virginia (77 FR 16937). These states, fully consistent with the EPA's regulations at the time, relied on CAIR requirements to satisfy the BART requirement and the requirement for a long-term strategy sufficient to achieve the state-adopted reasonable progress goals.

We did not propose to disapprove the reasonable progress targets for 2018 that have been set by the states in their SIPs. The reasonable progress goals in the SIPs were set based on modeled projections of future conditions that were developed using the best available information at the time the analysis was done. Given the requirement in 40 CFR 51.308(d)(1)(vi) that states must take into account the visibility improvement that is expected to result from the implementation of other Clean Air Act requirements, states set their reasonable progress goals based, in part, on the emission reductions expected to be achieved by CAIR. As CAIR has now been remanded by the D.C. Circuit, the assumptions underlying the development of the reasonable progress targets have changed; however, because the overall EGU emission reductions from the Transport Rule are larger than the EGU emission reductions that would have been achieved by CAIR, we expect the Transport Rule to provide similar or greater benefits than CAIR. In addition, unlike the enforceable emissions limitations and other enforceable measures in the long-term strategy, *see* 64 FR 35733, reasonable progress goals are *not* enforceable measures. Given these considerations, we concluded not to propose disapproval of the reasonable progress goals in any of the regional haze SIPs that relied on CAIR. We noted our intent to act on the remaining elements of the SIP for each state in a separate notice.

B. Public Comments Related to Limited Disapprovals

Several commenters seem to have interpreted our statement that the EPA was not proposing to disapprove the reasonable progress goals set by affected states to mean that the EPA had proposed to determine that these reasonable progress goals meet the requirements of the Regional Haze Rule. The commenters stated that the EPA cannot reasonably conclude that the Transport Rule achieves reasonable progress. As noted in the proposal, we intend to evaluate the reasonable progress goals for each state when taking action on the remaining elements of their regional haze SIPs. As explained above, we do not consider the remand of CAIR to provide a basis for disapproving the reasonable progress goals set by the states. That determination, however, does not indicate that we intend to approve the targets set by the states without any further consideration. In addition, while we have concluded that the Transport Rule achieves greater reasonable progress than BART, we have not determined, as the commenters suggest, that the Transport Rule alone achieves reasonable progress towards the natural visibility goal.

C. Final Action on Limited Disapprovals

This action includes a final limited disapproval of the regional haze SIPs submitted by Alabama, Georgia, Indiana, Iowa, Louisiana, Michigan, Mississippi, Missouri, North Carolina, Ohio, Pennsylvania, South Carolina, Virginia, and Texas. We are not finalizing the limited disapproval for Florida at this time because the state has requested additional time to modify its SIP to address the change in applicability of the Transport Rule to Florida in the final rule published on August 8, 2011, (76 FR 48208) and is actively preparing SIP revisions.[20] The EPA included Florida in the proposed Transport Rule for coverage under both the SO_2 and NO_X trading programs, but removed Florida from the SO_2 trading program in the final Transport Rule. Florida was unaware of this modification until publication of the final rule. The EPA has decided to postpone action on Florida's regional haze SIP given this extenuating circumstance, Florida's request for additional time to modify its SIP to address the change in coverage under the Transport Rule, and Florida's continued progress toward submitting a SIP revision.

[20] On May 15, 2012, the EPA proposed limited approval of three revisions to the Florida SIP, including BART determinations for five facilities.

VI. FIPs

A. What did the EPA propose?

We proposed FIPs to replace reliance on CAIR requirements with reliance on the trading programs of the Transport Rule as an alternative to BART for SO_2 and NO_X emissions from EGUs in the following states' regional haze SIPs: Alabama, Georgia, Indiana, Iowa, Kentucky, Michigan, Missouri, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Virginia and West Virginia. We proposed FIPs to replace reliance on CAIR requirements with reliance on the Transport Rule as an alternative to BART for NO_X emissions from EGUs in the following states' regional haze SIPs: Florida, Louisiana, and Mississippi.

We proposed that these limited FIPs would satisfy the BART requirement and be a part of satisfying the requirement for a long-term strategy sufficient to achieve the state-adopted reasonable progress goals. The FIPs would apply only to EGUs in the affected states and only to pollutants covered by the Transport Rule program in those states. The proposed FIPs would not alter states' reasonable progress goals or replace these goals.

B. Public Comments on Proposed FIPs

Similar to the comments received regarding our proposed limited disapprovals, numerous commenters argued that the EPA should not finalize FIPs because, according to the commenters, we cannot rely on the Transport Rule because of the current stay of that rule. Other commenters took the position that we should fully approve the regional haze SIPs that relied on CAIR to satisfy certain regional haze requirements and that our proposed FIPs substituting the Transport Rule as an alternative to source-specific BART in regional haze SIPs are unnecessary.

As explained above in section II.B.2, we do not agree that the EPA cannot rely on the Transport Rule because of the temporary stay imposed by the D.C. Circuit. With respect to reliance on CAIR, as explained in section II.A.3, CAIR has been remanded and only remains in place temporarily; consequently, we cannot fully approve those regional haze SIP revisions that have relied on the now-temporary reductions from CAIR. Although CAIR is currently in place, as a result of the December 30, 2011, Order from the U.S. Court of Appeals for the D.C. Circuit staying the Transport Rule, this does not

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affect the earlier court ruling remanding CAIR to the EPA. A number of states objected to the EPA's proposed FIP as these states did not receive a finding of failure to timely submit a regional haze SIP. These states requested the allowable time to revise and resubmit their SIP. Other states which also did not receive a finding of failure to timely submit a regional haze SIP did not object to the EPA's proposed FIP. As explained in section VI.C, we have responded to this comment by granting additional time to those states that prefer to revise and resubmit their SIP to the EPA for approval and did not receive a finding of failure to timely submit their regional haze SIP.

C. Final Action on FIPs

In this action, the EPA is finalizing FIPs to replace reliance on CAIR with reliance on the Transport Rule as an alternative to BART in regional haze SIPs of Georgia, Indiana, Iowa, Kentucky, Michigan, Missouri, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia. Regional haze SIPs were due in December 2007. Under the CAA, the EPA is required to promulgate a FIP within 2 years after finding that a state has failed to make a required submission or after disapproving a SIP in whole or in part, unless the state first adopts and we have fully approved a SIP. CAA section 110(c)(1). We made a finding on January 15, 2009, that Georgia, Indiana, Michigan, Ohio, Pennsylvania, Texas, and Virginia had failed to timely submit a regional haze SIP. We are finalizing the FIPs for Iowa, Missouri, South Carolina, Tennessee, and West Virginia, even though we are not required by the CAA to do so at this time, because of our understanding based on communications with state officials that this action on our part is their preference. Our adoption of these FIPs at this time avoids the near-term need for additional administrative steps on the part of these states. That is, these states do not have to take any further action on their regional haze SIPs until SIP revisions are due in 2018. However, at any time, states may, and are encouraged to submit a revision to their regional haze SIP incorporating the requirements of the Transport Rule. At that time, we will withdraw the FIP being finalized in this action.

We are not finalizing FIPs, as proposed, for Alabama, Florida, Louisiana, Mississippi, or North Carolina. Rather than a FIP, Alabama, Louisiana, Mississippi, and North Carolina have requested additional time to correct the deficiencies in their SIPs and submit a SIP revision. As these states did not receive a finding of failure to submit a regional haze SIP, the EPA is not required to promulgate a FIP at this time. The EPA will be required to issue a FIP for each state that does not submit an approvable SIP revision that corrects the deficiencies related to reliance on CAIR in time for the EPA to review and approve it within 2 years of this final limited disapproval action. We are not finalizing a FIP, as proposed, for Texas in order to allow more time for the EPA to assess the current Texas SIP submittal. Additional time is required due to the variety and number of BART-eligible sources and the complexity of the SIP. The EPA is also deferring action on the proposed FIP for Florida for the reasons discussed in section V.C.

VII. Regulatory Text

A. What did the EPA propose?

Based on our finding that the "Transport Rule + BART elsewhere" control scenario passes the two-pronged test, we proposed to determine that the Transport Rule trading program will provide greater progress towards Regional Haze goals than source-specific BART. We noted that the proposed determination would apply only to EGUs in the Transport Rule trading programs and only for the pollutants covered by the programs in each state. Accordingly, we proposed to revise 40 CFR 51.308(e)(4) by essentially replacing the name of CAIR with the name of the Transport Rule.

We also proposed that a state that chooses to meet the emission reduction requirements of the Transport Rule by submitting a complete SIP revision substantively identical to the provisions of the EPA trading program that is approved as meeting the requirements of §52.38 and/or §52.39 also need not require BART-eligible EGUs in the state to install, operate, and maintain BART for the pollutants covered by such a trading program in the state.

B. Clarification of Final Regulatory Text

A number of the states for which we proposed a FIP had previously failed to either submit a visibility SIP or had failed to submit a SIP that could be fully approved under the visibility regulations issued in 1980. *See* 45 FR 80084 (December 2, 1980). The final regulatory text takes account of this and is not intended to change the findings that have been made in the past with respect to the relevant states' compliance with the requirements of visibility regulations found at 40 CFR 51.302–51.307.

The regulatory text also accounts for final limited approval of the regional haze SIPs of Indiana, Ohio and Virginia that the EPA is finalizing separately, on or about the same day as this action. Including regulatory text that accounts for the final limited approval in this action avoids the need for additional overlapping revisions to the CFR for these states. To ensure that the relevant regulatory text is appropriately revised, we are amending certain regulatory provisions for these states in this action only.[21]

We are also making conforming changes to the regulatory text for the regional haze SIPs of Kentucky, Tennessee and West Virginia as the EPA has previously promulgated a final limited approval and final limited disapproval of these SIPs. For Kentucky, in this action we are making conforming changes to the regulatory text in 40 CFR 52.936(a) regarding the limited approval and limited disapproval of Kentucky's SIP. These conforming changes do not affect the substance of the EPA's final action on Kentucky on March 30, 2012 (77 FR 19098). For Tennessee, in this action we are making conforming changes to the regulatory text in 40 CFR 52.2234(a) regarding the limited approval and limited disapproval of Tennessee's SIP. These conforming changes do not affect the substance of EPA's final action on April 24, 2012 (77 FR 24392). For West Virginia, in this action we are making conforming changes to the regulatory text in 40 CFR 52.2533(d) regarding the limited approval and limited disapproval of West Virginia's SIP. These conforming changes do not affect the substance of the EPA's final action on West Virginia on March 23, 2012 (77 FR 16937).

VIII. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is a "significant regulatory action" because some may view it as raising novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order. Accordingly, the EPA submitted this action to the Office of Management and Budget (OMB) for review under Executive Orders 12866 and 13563 (76 FR 3821, January 21, 2011) and any changes made in response to OMB recommendations have been

[21] The regulatory text at issue addressing limited approvals and limited disapprovals can be found at 40 CFR 52.791(a), 40 CFR 52.1886(a) and 40 CFR 52.2452(d).

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documented in the docket for this action.

B. Paperwork Reduction Act

This action does not impose an information collection burden under the provisions of the *Paperwork Reduction Act,* 44 U.S.C. 3501 *et seq.* Burden is defined at 5 CFR 1320.3(b). This action does not include or require any information collection.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of this rule on small entities, small entity is defined as: (1) A small business that is a small industrial entity as defined by the U.S. Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) A governmental jurisdiction that is a government of a city, county, town, school district, or special district with a population of less than 50,000; and (3) A small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This final rule will not impose any requirements on small entities. Rather, this rule would allow states to avoid regulating EGUs in new ways based on the current requirements of the Transport Rule and as such does not impose any new requirements on small entities.

D. Unfunded Mandates Reform Act

This action contains no federal mandates under the provisions of Title II of the Unfunded Mandates Reform Act of 1995 (UMRA, 2 U.S.C. 1531–1538) for state, local, or tribal governments or the private sector. The action imposes no enforceable duty on any state, local, or tribal governments or the private sector. Therefore, this action is not subject to the requirements of sections 202 or 205 of the UMRA.

This action is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. This action merely interprets the statutory requirements that apply to states in preparing their SIPs.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This action does not impose any new mandates on state or local governments. Thus, Executive Order 13132 does not apply to this rule. In the spirit of Executive Order 13132 and consistent with EPA policy to promote communications between the EPA and state and local governments, the EPA specifically solicited comments on the proposed rule from state and local officials. We received comments from seven states. These comments are addressed in the final action and in the Response to Comment document.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This rule does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). The rule does not have a substantial direct effect on one or more Indian tribes, since there are no BART-eligible EGU sources on tribal lands in the Transport Rule region. In addition, the CAA does not provide for the inclusion of any tribal areas as mandatory Class I federal areas; thus, tribal areas are not subject to the requirements of the Regional Haze Rule. Furthermore, this rule does not affect the relationship or distribution of power and responsibilities between the federal government and Indian tribes. Thus, Executive Order 13175 does not apply to this action. The EPA specifically solicited additional comment on the proposed action from tribal officials and we received none.

G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

The EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997) as applying to those regulatory actions that concern health or safety risks, such that the analysis required under section 5–501 of the Order has the potential to influence the regulation. This action is not subject to Executive Order 13045 because it does not establish an environmental standard intended to mitigate health or safety risks.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a "significant energy action" as defined in Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. This action does not establish requirements that directly affect the general public and private sectors. Rather, this rule will allow states to avoid regulating EGUs in new ways based on the current requirements of the Transport Rule, and thus may avoid adverse effects that conceivably might result from such additional regulation of EGUs by states.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law 104–113, section 12(d), (15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.,* materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs the EPA to provide Congress, through OMB, explanations when the agency decides not to use available and applicable voluntary consensus standards.

This action does not involve technical standards. Therefore, the EPA did not consider the use of any voluntary consensus standards.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (EO) (59 FR 7629, February 16, 1994) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority

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populations and low-income populations in the United States.

The EPA has concluded that it is not practicable to determine whether there would be disproportionately high and adverse human health or environmental effects on minority and/or low income populations from this final rule. The $PM_{2.5}$ air quality improvements that might be expected under implementation of source-specific BART may differ from the Transport Rule in terms of the emission reductions required at any given source. However, our analysis of the Transport Rule suggests that the regional Transport Rule approach provides widespread health benefits especially among populations most vulnerable to $PM_{2.5}$ impacts. This analysis is presented in detail in the Regulatory Impact Analysis for the Transport Rule which is available in the Transport Rule docket EPA–HQ–OAR–2009–0491 and from the main EPA Web page for the Transport Rule available at *www.epa.gov/airtransport.*

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A Major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2). This rule will be effective August 6, 2012.

IX. Statutory Authority

Statutory authority for this rule comes from sections 169A and 169B of the CAA (42 U.S.C. 7491 and 7492). These sections require the EPA to issue regulations that will require states to revise their SIPs to ensure that reasonable progress is made toward the national visibility goals specified in section 169A.

List of Subjects

40 CFR Part 51

Administrative practice and procedure, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen oxides, Ozone, Particulate matter, Regional haze, Reporting and recordkeeping requirements, Sulfur dioxide.

40 CFR Part 52

Administrative practice and procedure, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen oxides, Ozone, Particulate matter, Regional haze, Reporting and recordkeeping requirements, Sulfur dioxide.

Dated: May 30, 2012.

Lisa P. Jackson,

Administrator.

For the reasons set forth in the preamble, chapter I of title 40 of the Code of Federal Regulations is amended as follows:

PART 51—[AMENDED]

* 1. The authority citation for part 51 continues to read as follows:

Authority: 23 U.S.C. 101; 42 U.S.C. 7401–7671q.

* 2. Section 51.308 is amended by revising paragraph (e)(4) to read as follows:

§51.308 Regional haze program requirements.

* * * * *

(e) * * *

(4) A State subject to a trading program established in accordance with §52.38 or §52.39 under a Transport Rule Federal Implementation Plan need not require BART-eligible fossil fuel-fired steam electric plants in the State to install, operate, and maintain BART for the pollutant covered by such trading program in the State. A State that chooses to meet the emission reduction requirements of the Transport Rule by submitting a SIP revision that establishes a trading program and is approved as meeting the requirements of §52.38 or §52.39 also need not require BART-eligible fossil fuel-fired steam electric plants in the State to install, operate, and maintain BART for the pollutant covered by such trading program in the State. A State may adopt provisions, consistent with the requirements applicable to the State for a trading program established in accordance with §52.38 or §52.39 under the Transport Rule Federal Implementation Plan or established under a SIP revision that is approved as meeting the requirements of §52.38 or §52.39, for a geographic enhancement to the program to address the requirement under §51.302(c) related to BART for reasonably attributable impairment from the pollutant covered by such trading program in that State.

* * * * *

PART 52—[AMENDED]

* 3. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401, *et seq.*

Subpart B—Alabama

* 4. Section 52.61 is amended by revising paragraph (a) and adding a new paragraph (c) to read as follows:

§52.61 Visibility protection.

(a) *Reasonably Attributable Visibility Impairment.* The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.306 for protection of visibility in mandatory Class I Federal areas.

* * * * *

(c) *Regional Haze.* The requirements of section 169A of the Clean Air Act are not met because the regional haze plan submitted by Alabama on July 15, 2008, does not include fully approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) with respect to emissions of NO_X and SO_2 from electric generating units. EPA has given limited disapproval to the plan provisions addressing these requirements.

Subpart L—Georgia

* 5. Section 52.580 is added to read as follows:

§52.580 Visibility protection.

(a) *Regional Haze.* The requirements of section 169A of the Clean Air Act are not met because the regional haze plan submitted by Georgia on February 11, 2010, and supplemented on November 19, 2010, does not include fully approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) with respect to emissions of NO_X and SO_2 from electric generating units. EPA has given limited disapproval to the plan provisions addressing these requirements.

(b) *Measures Addressing Limited Disapproval Associated with NO_X.* The deficiencies associated with NO_X identified in EPA's limited disapproval of the regional haze plan submitted by Georgia on February 11, 2010, and supplemented on November 19, 2010, are satisfied by §52.584.

(c) *Measures Addressing Limited Disapproval Associated with SO_2.* The deficiencies associated with SO_2

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identified in EPA's limited disapproval of the regional haze plan submitted by Georgia on February 11, 2010, and supplemented on November 19, 2010, are satisfied by §52.585.

Subpart P—Indiana

* 6. Section 52.791 is added to read as follows:

§52.791 Visibility protection.

(a) *Regional Haze.* The requirements of section 169A of the Clean Air Act are not met because the regional haze plan submitted by Indiana on January 14, 2011, and supplemented on March 10, 2011, does not include fully approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) with respect to emissions of NO_X and SO_2 from electric generating units. EPA has given limited approval and limited disapproval to the plan provisions addressing these requirements.

(b) *Measures Addressing Limited Disapproval Associated with NO_X.* The deficiencies associated with NO_X identified in EPA's limited disapproval of the regional haze plan submitted by Indiana on January 14, 2011, and supplemented on March 10, 2011, are satisfied by §52.789.

(c) *Measures Addressing Limited Disapproval Associated with SO_2.* The deficiencies associated with SO_2 dentified in EPA's limited disapproval of the regional haze plan submitted by Indiana on January 14, 2011 and supplemented on March 10, 2011 are satisfied by §52.790.

Subpart Q—Iowa

* 7. Section 52.842 is added to read as follows:

§52.842 Visibility protection.

(a) *Regional Haze.* The requirements of section 169A of the Clean Air Act are not met because the regional haze plan submitted by Iowa on March 25, 2008, does not include fully approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) with respect to emissions of NO_X and SO_2 from electric generating units. EPA has given limited disapproval to the plan provisions addressing these requirements.

(b) *Measures Addressing Limited Disapproval Associated with NO_X.* The deficiencies associated with NO_X identified in EPA's limited disapproval of the regional haze plan submitted by Iowa on March 25, 2008, are satisfied by §52.840.

(c) *Measures Addressing Limited Disapproval Associated with SO_2.* The deficiencies associated with SO_2 identified in EPA's limited disapproval of the regional haze plan submitted by Iowa on March 25, 2008, are satisfied by §52.841.

Subpart S—Kentucky

* 8. Section 52.936 is revised to read as follows:

§52.936 Visibility protection.

(a) *Regional Haze.* The requirements of section 169A of the Clean Air Act are not met because the regional haze plan submitted by Kentucky on June 25, 2008, and amended on May 28, 2010, does not include fully approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) with respect to emissions of NO_X and SO_2 from electric generating units. EPA has given limited approval and limited disapproval to the plan provisions addressing these requirements.

(b) *Measures Addressing Limited Disapproval Associated with NO_X.* The deficiencies associated with NO_X identified in EPA's limited disapproval of the regional haze plan submitted by Kentucky on June 25, 2008, and amended on May 28, 2010, are satisfied by §52.940.

(c) *Measures Addressing Limited Disapproval Associated with SO_2.* The deficiencies associated with SO_2 identified in EPA's limited disapproval of the regional haze plan submitted by Kentucky on June 25, 2008, and amended on May 28, 2010, are satisfied by §52.941.

Subpart T—Louisiana

* 9. Section 52.985 is added to read as follows:

§52.985 Visibility protection.

(a) *Regional Haze.* The requirements of section 169A of the Clean Air Act are not met because the regional haze plan submitted by Louisiana on June 13, 2008, does not include fully approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) with respect to emissions of NO_X and SO_2 from electric generating units. EPA has given limited disapproval to the plan provisions addressing these requirements.

(b) [Reserved]

Subpart X—Michigan

* 10. Section 52.1183 is amended by revising paragraph (a) and adding new paragraphs (d), (e), and (f) to read as follows:

§52.1183 Visibility protection.

(a) *Reasonably Attributable Visibility Impairment.* The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.302, 51.305, and 51.307 for protection of visibility in mandatory Class I Federal areas.

* * * * *

(d) *Regional Haze.* The requirements of section 169A of the Clean Air Act are not met because the regional haze plan submitted by Michigan on November 5, 2010, does not include fully approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) with respect to emissions of NO_X and SO_2 from electric generating units. EPA has given limited approval and limited disapproval to the plan provisions addressing these requirements.

(e) *Measures Addressing Limited Disapproval Associated With NO_X.* The deficiencies associated with NO_X identified in EPA's limited disapproval of the regional haze plan submitted by Michigan on November 5, 2010, are satisfied by §52.1186.

(f) *Measures Addressing Limited Disapproval Associated With SO_2.* The deficiencies associated with SO_2 identified in EPA's limited disapproval of the regional haze plan submitted by Michigan on November 5, 2010, are satisfied by §52.1187.

Subpart Z—Mississippi

* 11. Section 52.1279 is added to read as follows:

§52.1279 Visibility protection.

(a) *Regional Haze.* The requirements of section 169A of the Clean Air Act are not met because the regional haze plan submitted by Mississippi on September 22, 2008, and supplemented on May 9, 2011, does not include fully approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) with respect to emissions of NO_X and SO_2 from electric generating units. EPA has given limited disapproval to the plan provisions addressing these requirements.

(b) [Reserved]

Subpart AA—Missouri

* 12. Section 52.1339 is amended by revising paragraph (a) and adding new paragraphs (c), (d), and (e) to read as follows:

§52.1339 Visibility protection.

(a) *Reasonably Attributable Visibility Impairment.* The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR

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51.306 for protection of visibility in mandatory Class I Federal areas.

* * * * *

(c) *Regional Haze.* The requirements of section 169A of the Clean Air Act are not met because the regional haze plan submitted by Missouri on August 5, 2009, and supplemented on January 30, 2012, does not include fully approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) with respect to emissions of NO_X and SO_2 from electric generating units. EPA has given limited disapproval to the plan provisions addressing these requirements.

(d) *Measures Addressing Limited Disapproval Associated With NO_X.* The deficiencies associated with NO_X identified in EPA's limited disapproval of the regional haze plan submitted by Missouri on August 5, 2009, and supplemented on January 30, 2012, are satisfied by §52.1326.

(e) *Measures Addressing Limited Disapproval Associated With SO_2.* The deficiencies associated with SO_2 identified in EPA's limited disapproval of the regional haze plan submitted by Missouri on August 5, 2009, and supplemented on January 30, 2012, are satisfied by §52.1327.

Subpart II—North Carolina

* 13. Section 52.1776 is added to read as follows:

§52.1177 Visibility protection.

(a) *Regional Haze.* The requirements of section 169A of the Clean Air Act are not met because the regional haze plan submitted by North Carolina on December 17, 2007, does not include fully approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) with respect to emissions of NO_X and SO_2 from electric generating units. EPA has given limited disapproval to the plan provisions addressing these requirements.

(b) [Reserved]

Subpart KK—Ohio

* 14. Section 52.1886 is added to read as follows:

§52.1886 Visibility protection.

(a) *Regional Haze.* The requirements of section 169A of the Clean Air Act are not met because the regional haze plan submitted by Ohio on March 11, 2011, does not include fully approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) with respect to emissions of NO_X and SO_2 from electric generating units. EPA has given limited approval and limited disapproval to the plan provisions addressing these requirements.

(b) *Measures Addressing Limited Disapproval Associated With NO_X.* The deficiencies associated with NO_X identified in EPA's limited disapproval of the regional haze plan submitted by Ohio on March 11, 2011, are satisfied §52.1882.

(c) *Measures Addressing Limited Disapproval Associated With SO_2.* The deficiencies associated with SO_2 identified in EPA's limited disapproval of the regional haze plan submitted by Ohio on March 11, 2011, are satisfied by §52.1883.

Subpart NN—Pennsylvania

* 15. Section 52.2042 is added to read as follows:

§52.2042 Visibility protection.

(a) *Regional Haze.* The requirements of section 169A of the Clean Air Act are not met because the regional haze plan submitted by Pennsylvania on December 20, 2010, does not include fully approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) with respect to emissions of NO_X and SO_2 from electric generating units. EPA has given limited approval and limited disapproval to the plan provisions addressing these requirements.

(b) *Measures Addressing Limited Disapproval Associated With NO_X.* The deficiencies associated with NO_X identified in EPA's limited disapproval of the regional haze plan submitted by Pennsylvania on December 20, 2010, are satisfied §52.2040.

(c) *Measures Addressing Limited Disapproval Associated With SO_2.* The deficiencies associated with SO_2 identified in EPA's limited disapproval of the regional haze plan submitted by Pennsylvania on December 20, 2010, are satisfied by §52.2041.

Subpart PP—South Carolina

* 16. Section 52.2132 is amended by revising paragraph (a) and adding new paragraphs (d), (e), and (f) to read as follows:

§52.2132 Visibility protection.

(a) *Reasonably Attributable Visibility Impairment.* The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.305 and 51.306 for protection of visibility in mandatory Class I Federal areas.

* * * * *

(d) *Regional Haze.* The requirements of section 169A of the Clean Air Act are not met because the regional haze plan submitted by South Carolina on December 17, 2007, does not include fully approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) with respect to emissions of NO_X and SO_2 from electric generating units. EPA has given limited disapproval to the plan provisions addressing these requirements.

(e) *Measures Addressing Limited Disapproval Associated with NO_X.* The deficiencies associated with NO_X identified in EPA's limited disapproval of the regional haze plan submitted by South Carolina on December 17, 2007, are satisfied by §52.2140.

(f) *Measures Addressing Limited Disapproval Associated with SO_2.* The deficiencies associated with SO_2 identified in EPA's limited disapproval of the regional haze plan submitted by South Carolina on December 17, 2007, are satisfied by §52.2141.

Subpart RR—Tennessee

* 17. Section 52.2234 is amended by revising paragraph (a) and adding new paragraphs (c) and (d) to read as follows:

§52.2234 Visibility protection.

(a) *Regional Haze.* The requirements of section 169A of the Clean Air Act are not met because the regional haze plan submitted by Tennessee on April 4, 2008, does not include fully approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) with respect to emissions of NO_X and SO_2 from electric generating units. EPA has given limited approval and limited disapproval to the plan provisions addressing these requirements.

* * * * *

(c) *Measures Addressing Limited Disapproval Associated with NO_X.* The deficiencies associated with NO_X identified in EPA's limited disapproval of the regional haze plan submitted by Tennessee on April 4, 2008, are satisfied by §52.2240.

(d) *Measures Addressing Limited Disapproval Associated with SO_2.* The deficiencies associated with SO_2 identified in EPA's limited disapproval of the regional haze plan submitted by Tennessee on April 4, 2008, are satisfied by §52.2241.

Subpart SS—Texas

* 18. Section 52.2304 is amended by revising paragraph (a) and adding new paragraph (c) to read as follows:

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§52.2304 Visibility protection.

(a) *Reasonably Attributable Visibility Impairment.* The requirements of section 169A of the Clean Air Act are not met because the plan does not include fully approvable measures for meeting the requirements of 40 CFR 51.305 for protection of visibility in mandatory Class I Federal areas.

* * * * *

(c) *Regional Haze.* The requirements of section 169A of the Clean Air Act are not met because the regional haze plan submitted by Texas on March 31, 2009, does not include fully approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) with respect to emissions of NO_X and SO_2 from electric generating units. EPA has given limited disapproval to the plan provisions addressing these requirements.

Subpart VV—Virginia

* 19. Section 52.2452 is amended by revising paragraph (a) and adding new paragraphs (d), (e), and (f) to read as follows:

§52.2452 Visibility protection.

(a) *Reasonably Attributable Visibility Impairment.* The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.305 and 51.306 for protection of visibility in mandatory Class I Federal areas.

* * * * *

(d) *Regional Haze.* The requirements of section 169A of the Clean Air Act are not met because the regional haze plan submitted by Virginia on July 17, 2008, March 6, 2009, January 14, 2010, October 4, 2010, November 19, 2010, and May 6, 2011, does not include fully approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) with respect to emissions of NO_X and SO_2 from electric generating units. EPA has given limited approval and limited disapproval to the plan provisions addressing these requirements.

(e) *Measures Addressing Limited Disapproval Associated with NO_X.* The deficiencies associated with NO_X identified in EPA's limited disapproval of the regional haze plan submitted by Virginia on July 17, 2008, March 6, 2009, January 14, 2010, October 4, 2010, November 19, 2010, and May 6, 2011, are satisfied by §52.2440.

(f) *Measures Addressing Limited Disapproval Associated with SO_2.* The deficiencies associated with SO_2 identified in EPA's limited disapproval of the regional haze plan submitted by Virginia on July 17, 2008, March 6, 2009, January 14, 2010, October 4, 2010, November 19, 2010, and May 6, 2011, are satisfied by §52.2441.

Subpart XX—West Virginia

* 20. Section 52.2533 is amended by revising paragraphs (a) and (d) and adding new paragraphs (e) and (f) to read as follows:

§52.2533 Visibility protection.

(a) *Reasonably Attributable Visibility Impairment.* The requirements of section 169A of the Clean Air Act are not met because the plan does not include approvable measures for meeting the requirements of 40 CFR 51.305, 51.306, and 51.307 for protection of visibility in mandatory Class I Federal areas.

* * * * *

(d) *Regional Haze.* The requirements of section 169A of the Clean Air Act are not met because the regional haze plan submitted by West Virginia on June 18, 2008, does not include fully approvable measures for meeting the requirements of 40 CFR 51.308(d)(3) and 51.308(e) with respect to emissions of NO_X and SO_2 from electric generating units. EPA has given limited approval and limited disapproval to the plan provisions addressing these requirements.

(e) *Measures Addressing Limited Disapproval Associated with NO_X.* The deficiencies associated with NO_X identified in EPA's limited disapproval of the regional haze plan submitted by West Virginia on June 18, 2008, are satisfied by §52.2540.

(f) *Measures Addressing Limited Disapproval Associated with SO_2.* The deficiencies associated with SO_2 identified in EPA's limited disapproval of the regional haze plan submitted by West Virginia on June 18, 2008, are satisfied by §52.2541.

[FR Doc. 2012–13693 Filed 6–6–12; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R05–OAR–2010–0394; FRL–9663–1]

Approval and Promulgation of Air Quality Implementation Plans; Illinois; Consumer Products and AIM Rules

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is approving the addition of a new rule to the Illinois State Implementation Plan (SIP) submitted by the Illinois Environmental Protection Agency (IEPA) on April 7, 2010. The rule being approved into the SIP is Title 35 Illinois Administrative Code (IAC) Part 223, "Standards and Limitations for Organic Material Emissions for Area Sources." The rule is approvable because it is at least as stringent, and in some cases more stringent than, EPA's national consumer products and architectural and industrial maintenance (AIM) coatings rules. However, EPA is conditionally approving four specific paragraphs in the rule, based on a September 2, 2011, letter from IEPA committing to correct the noted deficiencies in these paragraphs within one year of July 9, 2012.

DATES: This final rule is effective on July 9, 2012.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA–R05–OAR–2010–0394. All documents in the docket are listed on the *www.regulations.gov* Web site. Although listed in the index, some information is not publicly available, i.e., Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *www.regulations.gov* or in hard copy at the Environmental Protection Agency, Region 5, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. This facility is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding Federal holidays. We recommend that you telephone Anthony Maietta, Environmental Protection Specialist, at (312) 353–8777 before visiting the Region 5 office.

FOR FURTHER INFORMATION CONTACT: Anthony Maietta, Environmental Protection Specialist, Control Strategies Section, Air Programs Branch (AR–18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 353–8777, *maietta.anthony@epa.gov*.

SUPPLEMENTARY INFORMATION: Throughout this document whenever "we," "us," or "our" is used, we mean EPA. This supplementary information section is arranged as follows:

I. Background
II. Did EPA receive any comments on our proposed rulemaking?
III. What action is EPA taking?
IV. Statutory and Executive Order Reviews

To: CN=Phil Lorang/OU=RTP/O=USEPA/C=US@EPA;CN=Rhea Jones/OU=RTP/O=USEPA/C=US@EPA;CN=Todd Hawes/OU=RTP/O=USEPA/C=US@EPA;CN=Lea Anderson/OU=DC/O=USEPA/C=US@EPA;CN=Geoffrey Wilcox/OU=DC/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Laurel Dygowski/OU=R8/O=USEPA/C=US@EPA;CN=Steve Body/OU=R10/O=USEPA/C=US@EPA;CN=Keith Rose/OU=R10/O=USEPA/C=US@EPA[]; N=Rhea Jones/OU=RTP/O=USEPA/C=US@EPA;CN=Todd Hawes/OU=RTP/O=USEPA/C=US@EPA;CN=Lea Anderson/OU=DC/O=USEPA/C=US@EPA;CN=Geoffrey Wilcox/OU=DC/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Laurel Dygowski/OU=R8/O=USEPA/C=US@EPA;CN=Steve Body/OU=R10/O=USEPA/C=US@EPA;CN=Keith Rose/OU=R10/O=USEPA/C=US@EPA[]; N=Todd Hawes/OU=RTP/O=USEPA/C=US@EPA;CN=Lea Anderson/OU=DC/O=USEPA/C=US@EPA;CN=Geoffrey Wilcox/OU=DC/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Laurel Dygowski/OU=R8/O=USEPA/C=US@EPA;CN=Steve Body/OU=R10/O=USEPA/C=US@EPA;CN=Keith Rose/OU=R10/O=USEPA/C=US@EPA[]; N=Lea Anderson/OU=DC/O=USEPA/C=US@EPA;CN=Geoffrey Wilcox/OU=DC/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Laurel Dygowski/OU=R8/O=USEPA/C=US@EPA;CN=Steve Body/OU=R10/O=USEPA/C=US@EPA;CN=Keith Rose/OU=R10/O=USEPA/C=US@EPA[]; N=Geoffrey Wilcox/OU=DC/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Laurel Dygowski/OU=R8/O=USEPA/C=US@EPA;CN=Steve Body/OU=R10/O=USEPA/C=US@EPA;CN=Keith Rose/OU=R10/O=USEPA/C=US@EPA[]; N=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Laurel Dygowski/OU=R8/O=USEPA/C=US@EPA;CN=Steve Body/OU=R10/O=USEPA/C=US@EPA;CN=Keith Rose/OU=R10/O=USEPA/C=US@EPA[]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Laurel Dygowski/OU=R8/O=USEPA/C=US@EPA;CN=Steve Body/OU=R10/O=USEPA/C=US@EPA;CN=Keith Rose/OU=R10/O=USEPA/C=US@EPA[]; N=Laurel Dygowski/OU=R8/O=USEPA/C=US@EPA;CN=Steve Body/OU=R10/O=USEPA/C=US@EPA;CN=Keith Rose/OU=R10/O=USEPA/C=US@EPA[]; N=Steve Body/OU=R10/O=USEPA/C=US@EPA;CN=Keith Rose/OU=R10/O=USEPA/C=US@EPA[]; N=Keith Rose/OU=R10/O=USEPA/C=US@EPA[]
Cc: CN=Lisa Hanf/OU=R9/O=USEPA/C=US@EPA;CN=Thomas Webb/OU=R9/O=USEPA/C=US@EPA[]; N=Thomas Webb/OU=R9/O=USEPA/C=US@EPA[]
From: CN=Colleen McKaughan/OU=R9/O=USEPA/C=US
Sent: Tue 8/14/2012 12:14:01 AM
Subject: Final Partial Approval and Partial Disapproval of Nevada's NOx BART Determination for Reid Gardner Generating Station, and Final FIP
NV RH NFRM Reid Gardner 081312 prepublication.pdf

Hi,

Here is a pre-publication version of the final NOx BART determination for Reid Gardner in Nevada.

Colleen W. McKaughan
Associate Director, Air Division
USEPA, Region 9
(520) 498-0118

The EPA Administrator, Lisa P. Jackson, signed the following final rule on 08/13/2012, and EPA is submitting it for publication in the *Federal Register* (FR). While we have taken steps to ensure the accuracy of this Internet version of the rule, it is not the official version of the rule for purposes of compliance. Please refer to the official version in a forthcoming FR publication, which will appear on the Government Printing Office's FDsys website (http://fdsys.gpo.gov/fdsys/search/home.action) and on Regulations.gov (http://www.regulations.gov) in Docket No. EPA-R09-OAR-2011-0130. Once the official version of this document is published in the FR, this version will be removed from the Internet and replaced with a link to the official version.

6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R09-OAR-2011-0130, FRL 9700-4]

Approval and Promulgation of Air Quality Implementation Plans; Nevada; Regional Haze State and Federal Implementation Plans; BART Determination for Reid Gardner Generating Station

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is approving in part and disapproving in part the remaining portion of the Nevada Regional Haze State Implementation Plan (SIP) that implements the Clean Air Act (CAA) Regional Haze Rule requiring states to prevent any future and remedy any existing man-made impairment of visibility in mandatory Class I areas through a regional haze program. EPA is approving Nevada's selection of a nitrogen oxide (NO_x) emissions limit of 0.20 lb/MMBtu as Best Available Retrofit Technology (BART) for the Reid Gardner Generating Station (RGGS) at Units 1 and 2. EPA is disapproving two provisions of Nevada's BART determination for NO_x at RGGS: the emissions limit for Unit 3 and the compliance method for all three units. EPA is promulgating a Federal Implementation Plan (FIP) which replaces the disapproved provisions by establishing a BART emissions limit for NO_x of 0.20 lb/MMBtu at Unit 3, and a 30-day averaging period for compliance on a heat input-weighted basis across all three units. We encourage the State to submit a revised SIP to replace all portions of our FIP. Moreover, we stand ready to work with the State to develop a revised plan.

This document is a prepublication version, signed by the EPA Administrator, Lisa P. Jackson, on 8/13/2012. We have taken steps to ensure the accuracy of this version, but it is not the official version.

DATES: This rule is effective on [insert date 30 days from the date of publication in the Federal Register]

ADDRESSES: EPA has established docket number EPA-R09-OAR-2011-0130 for this action. Generally, documents in the docket are available electronically at http://www.regulations.gov or in hard copy at EPA Region 9, 75 Hawthorne Street, San Francisco, California. Please note that while many of the documents in the docket are listed at http://www.regulations.gov, some information may not be specifically listed in the index to the docket and may be publicly available only at the hard copy location (e.g., copyrighted material, large maps, multi-volume reports or otherwise voluminous materials), and some may not be available at either locations (e.g., confidential business information). To inspect the hard copy materials, please schedule an appointment during normal business hours with the contact listed directly below.

FOR FURTHER INFORMATION CONTACT: Thomas Webb, U.S. EPA, Region 9, Planning Office, Air Division, AIR-2, 75 Hawthorne Street, San Francisco, CA 94105. Thomas Webb can be reached at telephone number (415) 947-4139 and via electronic mail at webb.thomas@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document, wherever—we,‖—us,‖ or —our,‖ is used, we mean the United States Environmental Protection Agency (EPA).

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I. Background and Purpose

II. EPA Responses to Public Comments

III. Summary of EPA Actions

IV. Statutory and Executive Order Reviews

This document is a prepublication version, signed by the EPA Administrator, Lisa P. Jackson, on 8/13/2012. We have taken steps to ensure the accuracy of this version, but it is not the official version.

I. Background and Purpose

A detailed explanation of the requirements for regional haze SIPs and EPA's analysis of the Nevada Division of Environmental Protection's (NDEP) BART determination for NO_x at RGGS is provided in our Notice of Proposed Rule Making and is not restated here. *See* 77 FR 21896 (April 12, 2012).

RGGS consists of four coal-fired boilers, three of which are BART-eligible units with generating capacity of 100 megawatts (MW) each. A fourth unit (250 MW) is not BART-eligible. Nevada Energy, the owner of RGGS, performed a NO_x BART analysis for the three BART-eligible units at RGGS and submitted the results of its analysis to NDEP.[1] In its BART analysis, Nevada Energy considered several NO_x control technologies and evaluated the cost of compliance and visibility improvement associated with each technology. In preparing the SIP, NDEP relied on certain aspects of Nevada Energy's analysis while performing updated analyses for other aspects.

EPA proposed to fully approve Nevada's SIP on June 22, 2011 (*see* 76 FR 36450), but received numerous comments on our proposed approval of the BART determination for NO_x at RGGS. A detailed description of those comments is in our final rule, which approved all of the Nevada regional haze SIP, except for the BART determination for NO_x at RGGS. *See* 77 FR 17334 (March 26, 2012). After reviewing the public comments, EPA performed additional analyses of the cost-effectiveness and visibility improvement associated with the various NO_x control technologies considered by NDEP in determining BART for NO_x at RGGS. Based upon these additional analyses, EPA did not take final action on the chapters of the SIP containing the NO_x BART determination for RGGS, including the corresponding emission limits and schedules

[1] Nevada Energy BART Analysis Reports, Reid_Gardner_1_10-03-08.pdf, Reid_Gardner_2_10-03-08.pdf, Reid_Gardner_3_10-03-08.pdf. Available in Docket Item No. EPA-R09-OAR-2011-0130-0007.

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of compliance for NO_x at RGGS. Specifically, EPA did not take final action on sections 5.5.3, 5.6.3 and 7.2 of NDEP's SIP, addressing the NO_x BART control analyses, visibility improvement, and implementation at RGGS.

EPA published a new proposal to partially approve and partially disapprove NDEP's BART determination for NO_x at RGGS on April 12, 2012. *See* 77 FR 21896. Based on its additional analyses described above, EPA proposed revised control cost calculations for installation and operation of low NO_x burners (LNB) and overfire air (OFA) combined with either selective non-catalytic reduction (SNCR) or selective catalytic reduction (SCR) technology.[2] EPA also performed new CALPUFF visibility modeling to evaluate the visibility improvement from installing and operating LNB with OFA and either SNCR or SCR.

As discussed in detail in our responses to comments, EPA's independent modeling results showed a very small visibility improvement at the Grand Canyon National Park (GCNP) as a result of installing and operating SCR with an 85 percent reduction in NO_x on all three units. The modeled visibility improvement for this scenario was 0.38 dv at the GCNP. The incremental visibility improvement for installing LNB with OFA and SCR rather than LNB with OFA and SNCR was only 0.10 dv at GCNP.

EPA has considered the comments we received on our proposed approval and proposed disapproval. In this final action, EPA is approving NDEP's determination that NO_x BART for RGGS for Units 1 and 2 is an emissions limit of 0.20 lb/MMBtu that can be achieved by installing and operating LNB with OFA and SNCR. EPA is disapproving NDEP's NO_x BART

[2] As explained in our proposal, NDEP originally selected rotating opposed fire air (ROFA) with Rotamix™ as BART for RGGS Units 1-3, but more recently informed us that it will submit a SIP that evaluates the substitution of SNCR with LNB and OFA for ROFA with Rotamix™. 77 FR at 21898. Therefore, we are not approving NDEP's prior selection of ROFA with Rotamix™ as the control type for BART. Rather, we are approving NDEP's BART emissions limits for Units 1 and 2 of 0.20 lb/MMBtu. According to the most recent information received from NDEP, these limits can be achieved either with ROFA with Rotamix™ or with SNCR with LNB and OFA. ROFA with Rotamix™ combines a conventional SNCR system with a proprietary air and reagent injection system.

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emissions limit of 0.28 lb/MMBtu for Unit 3. EPA is also disapproving the 12-month rolling average that NDEP adopted for all three units. Concurrently, EPA is finalizing a FIP for RGGS setting a NO_x emissions limit of 0.20 lb/MMBtu for Unit 3 and a 30 successive boiler operating day (BOD) rolling NO_x emissions limit on a heat input-weighted average across all three units.[3] This represents a change to the averaging period included in our proposed action on April 12, 2012, which was based on a straight 30 calendar day average. EPA concludes that the change is a logical outgrowth of the proposal and the comments received.

EPA takes very seriously a decision to disapprove these provisions in Nevada's plan, as we believe that it is preferable that all emission control requirements needed to protect visibility be implemented through the Nevada SIP. A revised state plan need not contain exactly the same provisions that EPA has included in the FIP, but EPA must be able to find that the state plan is consistent with the requirements of the CAA. Further, EPA's oversight role requires that we assure fair implementation of CAA requirements by states across the country, even while acknowledging that individual decisions from source to source or state to state may not have identical outcomes. In this instance, we believe that NDEP's NO_x BART determination for RGGS generally meets those requirements except for the specific emissions limit for Unit 3 and the compliance averaging time. As a result, EPA believes this combined approval, disapproval, and FIP is consistent with the CAA at this time, while full approval of the SIP would be inconsistent with the CAA. We look forward to working with NDEP to replace the FIP provisions with a revised SIP.

[3] Throughout the preamble we use the term—heat input-weighted average‖ in describing the 30 successive day rolling emission limit. The regulation does not actually average the data for the 3 units, but sums the total NOx lb/hr over 30 boiler operating days and divides that total NOx lb by the sum of the heat input over the same days. The use of the term—heat input-weighted average‖ is meant to be descriptive of the time period and of the fact that it combines all three units to determine compliance.

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II. EPA Responses to Public Comments

EPA received written and oral comments before the close of the public comment period on June 4, 2012. We received major comments in writing from a consortium of environmental and conservation organizations[4] (Consortium), the National Park Service, the Nevada Division of Environmental Protection, Nevada Energy, the Moapa Band of Paiutes, Clark County Rural Democratic Caucus, and about ten individuals. We received comments from the two public hearings held near RGGS on May 3, 2012, that were attended by about 150 people, many of whom testified. We also received over 13,000 comments from mass mailings initiated by Sierra Club, National Parks Conservation Association, and CREDO Action (Rural Nevada Democratic Caucus). The comment letters, transcripts of the public testimony, and samples of the mass mailers are available for review online in Docket EPA-R09-OAR-2011-0130 at http://www.regulations.gov. While the written comments focus largely on the cost of compliance and degree of visibility improvement associated with SCR and SNCR, other topics are included. The oral comments provided as testimony at the public hearings focus largely on SCR and SNCR, but with an emphasis on sustaining jobs in the local community and the health issues experienced by the Moapa Band of Paiutes who live adjacent to Reid Gardner. We respond below to the full range of comments received from all sources.

A. National Consistency

Comment 1: EPA's proposed BART determination for NO_x at RGGS is inconsistent with EPA's decision to require SCR on other similar facilities including the San Juan Generating Station in New Mexico.

[4] The Consortium's comment letter was signed by representatives of Sierra Club, National Parks Conservation Association, Moapa Band of Paiutes, Citizens for Dixie's Future, Defend Our Desert, Friends of Gold Butte, Grand Canyon Trust, and Western Resource Advocates.

This document is a prepublication version, signed by the EPA Administrator, Lisa P. Jackson, on 8/13/2012. We have taken steps to ensure the accuracy of this version, but it is not the official version.

Response 1: It is important to note that EPA is approving Nevada's determination that the NO_x BART for RGGS is the emissions rate achievable using modern LNB with OFA and SNCR. We are approving NDEP's decision to reject requiring SCR as NO_x BART because we believe that NDEP's conclusion, that the small improvement in visibility at GCNP did not justify the cost of LNB with OFA and SCR technology, is adequately supported by the facts in this situation.[5] Congress crafted the CAA to provide for states to take the lead in developing implementation plans, but balanced that decision by requiring EPA to ensure the plans meet the requirements of the CAA. EPA's review of a SIP is not limited to a ministerial approval of a state's decisions. EPA must evaluate whether a state considered the appropriate factors and acted reasonably in doing so. In undertaking such a review, EPA does not usurp a state's authority but ensures that such authority is reasonably exercised.

The CAA and EPA's regional haze regulations set forth five factors that a state should evaluate to reach a BART determination. However, the CAA and our regulations provide flexibility to the state in deciding how the factors in the analysis are weighed. Moreover, for power plants that are smaller than 750 MW, our regulations allow the state to conduct a five-factor analysis that does not conform in all respects to our BART Guidelines for larger sources. *See* 70 FR 39131 (July 6, 2005).

For San Juan Generating Station and other examples cited in the comments, EPA disapproved BART determinations submitted by the states because they did not meet the CAA requirements. Under CAA section 110(c), EPA is required to promulgate a Federal Implementation Plan following disapproval of a state implementation plan submission in whole or in part. EPA's role of making the initial BART determination in a FIP is not directly

[5] In future discussions comparing SNCR and SCR, both technologies include use of modern LNB and OFA to meet the emission rates discussed in this rule. We will not continue to list the combustion controls separately.

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comparable to EPA's role in deciding whether the state's SIP is approvable. EPA and the states generally consider the same factors in the initial BART determination but may weigh those factors differently provided the determination in each case is reasonable. BART determinations are case by case analyses. For example, in the case of San Juan Generating Station, EPA modeled very significant visibility improvement in numerous surrounding Class I areas resulting from emissions reductions associated with SCR, and thus concluded based on its five factor analysis that SCR was BART.[6] However, at RGGS, the visibility improvement from SCR compared to SNCR is very small. The units at San Juan Generating Station are also significantly larger than the units at RGGS, and the application of the BART Guidelines is mandatory when performing the five-factor analysis. This is not the case for RGGS.

NDEP on the other hand indicated that it had determined SNCR rather than SCR was NO_x BART for RGGS based on weighing the small incremental visibility improvement of SCR against its incremental cost effectiveness. When EPA reviewed NDEP's NO_x BART determination, we found problems in the method NDEP used to calculate cost-effectiveness and in the assumptions on which the modeling was based. Accordingly, EPA independently calculated cost-effectiveness and performed new modeling. In our review, EPA considered both average and incremental cost-effectiveness and visibility improvement. The results of our own analysis of the incremental visibility improvement and cost for SCR differ from NDEP's analysis in certain respects , but support NDEP's decision to establish an emissions limit that can be achieved by installing SNCR technology.

NDEP reasonably determined that NO_x emissions reductions achievable with SNCR would provide some visibility improvement at GCNP at a reasonable cost. Our decision to

[6] Per 76 FR 503, Table 8, EPA Region 6 modeled visibility benefits of 3.11 deciviews (single Class I area with greatest impact), and 21.69 deciviews (cumulative, all Class I areas within 300 km)

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approve NDEP's determination that the emissions rate achievable with LNB with OFA and SNCR is NO_x BART for RGGS is consistent with other national BART SIP approvals as well as proposed FIPs and final FIPs. *See, e.g.,* 77 FR 24385 (April 24, 2012) (Final Maine SIP approval); 77 FR 24027 and 24034 (April 20, 2012) (Proposed Montana FIP); and 77 FR 20894 (April 6, 2012) (Final North Dakota FIP). Other SIPs have rejected more effective controls such as SCR if those controls were found to provide little visibility improvement relative to significant cost. *See, e.g.,* 76 FR 80754, 80758 (Dec. 27, 2011) (Final Kansas SIP approval[7]); 76 FR 16168 (March 22, 2011)(Proposed Oklahoma SIP approval[8]). Therefore, our approval of NDEP's BART determination is consistent with EPA's action on other regional haze SIPs as well as proposed and final EPA FIPs.

In summary, EPA thoroughly and independently reviewed NDEP's basis for selecting a NO_x emissions rate achievable with SNCR as BART for RGGS rather than selecting SCR. In reaching this determination, NDEP weighed the small visibility improvement against the costs of the more effective control option. EPA calculated a lower average and incremental cost-effectiveness value than NDEP. EPA's modeling relied on the regulatory version of the CALPUFF modeling system and improved meteorological inputs, and predicted much less visibility improvement at GCNP from selecting SCR as NO_x BART (average: 0.38 dv, incremental: 0.10 dv). We also evaluated the visibility improvement that would result at four other Class I areas within 300 km of RGGS. Our modeling indicated that SCR would result in only minimal improvement at these four areas. Although we found shortcomings in NDEP's cost-effectiveness and visibility improvement values, we are taking final action to approve NDEP's conclusion that the small visibility improvement does not justify the cost of requiring

[7] Jeffrey Energy Center 1 and 2, La Cygne Unit 2
[8] EPA Region 6 proposed approval of the NOx portions of the Oklahoma RH SIP. See Muskogee Station Unit 4 and 5, Sooner Station Units 1 and 2

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SCR as NO_x BART. The comment before us does not change our decision that NDEP reasonably applied the statutory and regulatory factors to determine that the NO_x BART emission rate achievable from SNCR (0.20 lb/MMBtu) is BART for RGGS.

EPA acknowledges that NDEP has greater discretion in applying the BART factors because RGGS is an electric generating unit smaller than 750 MW. In evaluating SIPs, EPA exercises judgment about SIP adequacy, not just to meet and maintain the National Ambient Air Quality Standards (NAAQS), but also to meet other requirements that do not have a specific ambient standard, such as visibility at Class I areas. In this case, Congress established a requirement for BART, and EPA is charged to assure that states meet the requirement. Here, contrary to the commenter's assertion, we are exercising judgment within the parameters laid out in the CAA and consistent with other actions nationally applying our regional haze regulations. Our interpretation of our regulations and the CAA, and our technical judgments, are entitled to deference. *See, e.g.,* Michigan Dep't. of Envtl. Quality v. Browner, 230 F.3d 181 (6th Cir. 2000); Connecticut Fund for the Env't., Inc. v. EPA, 696 F.2d 169 (2nd Cir. 1982); Voyageurs Nat'l Park Ass'n v. Norton, 381 F.3d 759 (8th Cir. 2004); Mont. Sulphur & Chem. Co. v. United States EPA, 2012 U.S. App. LEXIS 1056 (9th Cir. January 19, 2012).

Therefore, we are finalizing our approval of NDEP's NO_x BART emissions rate of 0.20 lb/MMBtu, achievable using modern LNB with OFA and SNCR, for RGGS with two exceptions. For Unit 3, EPA is taking final action disapproving the SIP and promulgating a FIP setting the NO_x emissions limit at 0.20 lb/MMBtu. In addition, EPA is finalizing a 30 successive boiler operating day rolling NO_x emissions FIP limit on a heat input-weighted average across all three units rather than the 12-month rolling average NDEP included in its SIP, which EPA is disapproving.

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B. BART Evaluation Process

Comment 2: EPA did not correctly follow the BART process for evaluating the five factors, which should have resulted in selecting SCR and an emission limit corresponding to 90 percent control of NO_x.

Response 2: EPA was not conducting a BART analysis, but was reviewing the adequacy and reasonableness of NDEP's BART analysis. NDEP noted that RGGS is not the size of a facility for which application of the BART guidelines is mandatory when performing its five-factor analysis. In evaluating the five factors, NDEP evaluated visibility impacts by relying on visibility modeling included in the BART analysis submitted to NDEP by Nevada Energy. NDEP concluded that the small improvement in visibility that could be achieved with SCR did not justify the cost of SCR. We are generally approving the State's BART determination because we find NDEP's conclusions as to the appropriate level of BART controls to be reasonable..

NDEP did not consider a SCR system that would achieve 90 percent reduction. For SCR, NDEP assumed the technology would achieve control efficiencies of 78 to 82 percent. *See* Table 1 in 77 FR 21900 (April 12, 2012). The significance of the control efficiency assumption is that it affects the cost-effectiveness of the control technology. Cost-effectiveness ($/ton) is calculated by dividing the total annual cost ($) by the total annual tons of the pollutant reduced (tons). Assuming that two different levels of control (*e.g.,* 82 percent versus 90 percent) bear the same cost, higher control efficiency assumptions (*e.g.,* 90 percent) will result in lower cost per ton values because the denominator in the equation is larger.

In reviewing the reasonableness of NDEP's NO_x BART determination, EPA assumed a higher efficiency than NDEP. EPA determined that SCR could reduce 85 percent of the NO_x

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emissions from the stack exhaust. EPA continues to find that the correct assumption for the removal efficiency in this case is 85 percent rather than 90 percent. One of the factors EPA considered is that RGGS is not limited in its coal purchase by a contract. RGGS may purchase coal on the spot market, meaning that the rank[9] and nitrogen content of the coal combusted may vary. Bituminous coals from Utah have a very high btu per pound, which leads to higher NO_x produced during combustion. Coals with high nitrogen content also produce more NO_x when combusted.[10] Since RGGS has access by rail line to a number of different ranks of coal with varying nitrogen, these factors can affect the emission level that can be achieved with the SCR.

Assuming *arguendo* that EPA agreed with the comment that SCR should achieve 90 percent reduction continuously, we would not necessarily change our decision to approve NDEP's BART determination. As noted above, 90 percent control efficiency assumption would lead to a lower average and incremental cost-effectiveness. Even with that, NDEP's BART determination may have been reasonable based on weighing the small incremental visibility improvement of SCR against its incremental cost effectiveness. However, that issue was not before EPA in this action since EPA determined that only 85% reduction could be assumed in this case.

Comment 3: The commenter states that EPA did not follow the two-step process described in 40 CFR 51.301, which involves first identifying the best control technology for reducing NO_x and then applying the five factors to determine the best emissions limit achievable by that technology. A different emission limit should be chosen only if the technology fails to

[9] **Coal rank:** The classification of coals according to their degree of progressive alteration from lignite to anthracite. In the United States, the standard ranks of coal include lignite, subbituminous coal, bituminous coal, and anthracite and are based on fixed carbon, volatile matter, heating value, and agglomerating (or caking) properties. http://205.254.135.7/tools/glossary/index.cfm?id=C

[10] *Journal of the Air & Waste Management Association,* Volume 55, September 2005, Nitrogen Oxides Emission Control Options for Coal-Fired Electric Utility Boilers.

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meet one of the five factors. Instead, EPA provided a list of all feasible methods to remove NO_x, ranked from least effective (worst) to most effective (best) based on their NO_x control efficiency. In sorting through the ranked list of control options to pick the BART control technology, the EPA started at the bottom, with the worst control, and moved up to the best control, thus corrupting the entire process.

Response 3: We reiterate that EPA was not conducting a BART determination for NO_x at RGGS. Rather, we were reviewing the adequacy of NDEP's BART analysis. NDEP noted, correctly, that RGGS is not the size of a facility for which application of the BART Guidelines is mandatory.

The process described in the comment is comparable to the process for determining Best Available Control Technology (BACT) established in the Prevention of Significant Deterioration regulations. The states, however, are not required to use a top-down BACT process for making a BART determination. EPA stated in its final BART rule that,—States should retain the discretion to evaluate control options in whatever order they choose, so long as the State explains its analysis of the CAA factors.‖ *See* 70 FR 39130 (July 6, 2005). NDEP's determination to eliminate SCR from consideration as BART was based on weighing the small incremental visibility improvement from SCR against its incremental cost-effectiveness. This decision is within the discretion that a state can exercise in evaluating BART because it considered the appropriate factors and came to a reasonable determination, especially in this case which was not required to meet all aspects of EPA's BART guidelines.

Comment 4: The proposal does not demonstrate that a NO_x limit of 0.05 lb/MMBtu on a 30-day rolling average basis using SCR has any adverse impacts when subjected to a site-specific, case-by-case, five-factor analysis.

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Response 4: The comment does not set forth the appropriate standard for a BART analysis. The process described by the commenter is analogous to a top-down control technology review conducted when determining the BACT for new major stationary sources or major modifications at existing stationary sources. As stated in Response 3, states are not required to use a top-down BACT process for making a BART determination, and states retain discretion to evaluate control options in whatever order they choose, as long as the state explains its analysis of the CAA factors.

NDEP applied the five-factor BART analysis for NO_x at RGGS. NDEP weighed the five factors and concluded that the small visibility improvement expected from installation of SCR did not justify the incremental cost of SCR. EPA independently and thoroughly evaluated NDEP's determination. EPA also considered both average and incremental cost effectiveness as well as visibility improvement. Although we disagree with NDEP's calculation of the cost effectiveness of SCR compared to SNCR, our modeling analysis has demonstrated that the visibility improvement from SCR is very small at GCNP. The visibility improvement from SCR is only 0.38 dv, and the incremental visibility improvement between SCR and SNCR is only 0.10 dv. The annualized cost of SNCR is approximately $1.02 million per unit, and the annualized cost of SCR is approximately $3.8 million per unit, making it four times as expensive as SNCR.[11] NDEP's determination that NO_x BART is an emissions rate that is achievable with SNCR is reasonable based on its weighing of the small visibility improvement against the cost of SCR.

[11] EPA cost estimates, as listed in Appendix B of the TSD to our April 4 proposed action [Appendix B - Control Cost Estimate Revisions (September 2011 updated estimates)]

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Comment 5: The statute and regulations do not require EPA to compare the best technology to the next best technology, and then reject the best technology based on incremental differences.

Response 5: EPA was not conducting its own BART analysis but was reviewing the adequacy of NDEP's BART analysis. We agree with the commenter that the CAA and regional haze regulations do not require the state to reject the best technology based on incremental differences. However, we note that the state has the discretion to compare the incremental cost-effectiveness and incremental visibility improvement that will result from various technologies. *See* 70 FR 39129 (July 6, 2005). The state must evaluate the differences between control technologies reasonably and provide a justification for rejecting a technology. For the RGGS NO_x BART determination, we are finalizing our approval of NDEP's elimination of SCR as BART based on the small visibility improvement that would result at the GCNP weighed against its cost-effectiveness. In addition, NDEP noted that RGGS is the size of a facility for which application of the BART Guidelines is not mandatory. Thus, EPA concluded that NDEP's NO_x BART determination was reasonable.

Comment 6: EPA's consideration of the incremental visibility improvement between SCR and SNCR is contrary to law because there is no incremental visibility factor.

Response 6: We disagree with the comment that considering incremental visibility improvement is prohibited by the CAA or our regulations. The CAA and our regional haze regulations specify that the states or EPA must consider cost and visibility in the five-factor analysis. With respect to the cost factor, in promulgating the BART Guidelines, EPA responded to a comment stating: —In addition, the guidelines continue to include both average and incremental costs. We continue to believe that both average and incremental costs provide

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information useful for making control determinations.‖ *See* 70 FR 39127 (July 6, 2005). The commenter did not cite any regulatory language that would preclude incremental cost effectiveness in considering the cost of compliance. With respect to using incremental visibility improvement, EPA's response to comments on promulgating the BART guidelines stated:

> For example, a State can use the CALPUFF model to predict visibility impacts from an EGU in examining the option to control NO_x and SO2 with SCR technology and a scrubber, respectively. A comparison of visibility impacts might then be made with a modeling scenario whereby NO_x is controlled by combustion technology. If expected visibility improvements are significantly different under one control scenario than under another, then a State may use that information, along with information on the other BART factors, to inform its BART determination. *See* 70 FR 39129 (July 6, 2005).

EPA's regulations allow states to compare incremental cost-effectiveness and visibility improvements between different technologies. The incremental visibility benefit is one way to compare the visibility improvements from various controls. For this BART determination, NDEP weighed the small incremental visibility improvement against the incremental cost effectiveness. Based on weighing these factors, NDEP provided a reasoned justification for choosing SNCR technology as NO_x BART for RGGS. EPA's independent analysis indicates that NDEP properly exercised its discretion in its process for weighing the small visibility improvement against the cost-effectiveness to reject SCR.

C. BART Selection Criteria

Comment 7: EPA did not provide the public with the criteria for making its BART determination, which appears inconsistent with the BART Guidelines and the intent of the Regional Haze Rule.

Response 7: As noted previously, EPA was not conducting its own BART analysis. We were reviewing the adequacy of NDEP's BART analysis. NDEP correctly noted that RGGS is not the size of a facility for which application of the BART Guidelines is mandatory.

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After receiving significant comments on our initial proposed rule (76 FR 36450), EPA independently and thoroughly reviewed NDEP's NO_x BART determination and concluded that NDEP provided the public with information regarding the criteria it was applying in making its BART determination. See—Revised NDEP BART Determination Review of NV Energy's Reid Gardner Generating Station Units 1, 2 and 3|| revised October 22, 2009. NDEP adequately informed the public about the basis for its NO_x BART determination for RGGS, stating: —NDEP concluded, based on a review of the economic analysis, that the $/ton of NO_x removed increased significantly for the LNB with OFA and SNCR, and ROFA with SCR technologies without correspondingly significant improvements in visibility.|| *Id.* page 6. We are approving NDEP's determination that NO_x BART for RGGS is an emissions rate that is achievable by installing and operating LNB with OFA and SNCR because NDEP reasonably weighed the small incremental visibility improvement that would result from installation of SCR against its higher cost. NDEP adequately disclosed the factors it considered in its BART determination.

Comment 8: EPA fails to explain what level of incremental cost or visibility improvement would justify SCR. EPA should disclose the dollar limit and rationale for what constitutes—cost effectiveness,|| and how its method is consistently applied across other facilities and states.

Response 8: EPA's approval of NDEP's BART determination is based on finding that the State adequately considered the appropriate factors for BART and provided a reasonable explanation for selecting a NO_x emissions rate that can be achieved with SNCR. NDEP explained that requiring SCR technology would result in a small incremental visibility improvement over SNCR when weighed against the incremental cost-effectiveness of SCR. As stated in our proposed approval, our modeling analysis was performed—in a manner that more

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closely adheres with current EPA regulatory guidance on CALPUFF modeling.‖ *See* 77 FR 21903 (April 12, 2012). Our analysis found that the average and incremental visibility improvement would be significantly lower than the visibility improvement relied upon by NDEP. In addition, EPA's revised cost analysis also indicated lower cost per ton of pollutant removed for SCR. In our analysis, we evaluated the cost-effectiveness of both technologies (SCR and SNCR with LNB and OFA) based on using the Control Cost Manual (CCM) for including appropriate costs.

Our modeling shows that there would be a very small improvement in visibility at the GCNP from using SCR at RGGS. Based on this analysis we have determined that we can approve NDEP's determination that RGGS is required to comply with a NO_x emissions rate that can be achieved with SNCR as BART. Although the values that EPA considered for cost-effectiveness and visibility improvement differ from NDEP's analysis, we conclude NDEP's analysis reasonably weighed the small visibility improvement against the cost to eliminate SCR.

One comment faults EPA, stating: ―EPA further fails to explain what level of incremental cost or visibility improvement would justify the incremental cost.‖ *See* Consortium Letter at page 6. EPA's BART guidelines did not establish bright-line thresholds for cost-effectiveness or visibility improvement, choosing to allow the states to exercise discretion to choose such values when appropriate. EPA stated:

> We agree with the suggestion that the use of a comparison threshold, as is done for determining if BART-eligible sources should be subject to a BART determination, is an appropriate way to evaluate visibility improvement. However, we believe the States have flexibility in setting absolute thresholds, target levels of improvement, or de minimis levels since the deciview improvement must be weighed among the five factors, and States are free to determine the weight and significance to be assigned to each factor. For example, a 0.3, 0.5 or even 1.0 deciview improvement may merit stronger weighting in one case versus another, so one _bright line' may not be appropriate. *See* 70 FR 39129 (July 6, 2005).

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The same rationale should apply to cost-effectiveness. A bright line for cost-effectiveness may not be appropriate for every case and is dependent on case specific factors relating to economics and technology. In this case-by-case determination, the small amount of visibility improvement did not justify the cost of SCR.

Comment 9: EPA should explain the amount of incremental visibility improvement from SNCR to SCR that would justify the incremental cost increase of SCR, since no threshold is established in rulemaking or guidance.

Response 9: EPA is not setting generally applicable thresholds for incremental cost-effectiveness or visibility improvement for the reasons discussed above. EPA's BART Guidelines established presumptive emissions limits for SO_2 and NO_x at electric generating units at facilities generating more than 750 MW. But EPA did not extend those presumptive emissions limits to electric generating units at smaller facilities, such as RGGS.

EPA did not establish presumptive cost-effectiveness or visibility improvement values. EPA left weighing the factors to the state providing the state considered the five factors and exercised its discretion reasonably. Here, EPA proposed to find that NDEP reasonably eliminated SCR when it weighed the cost-effectiveness against the small incremental visibility improvement associated with requiring SCR rather than SNCR.

BART is a case-by-case analysis that is initially evaluated by the states. Provided the state exercises its discretion reasonably and meets the requirements of the CAA and regulations, EPA may approve it. EPA's approval is not a ministerial act. In this rulemaking, EPA has carefully reviewed the basis for NDEP's determination. There is no reason, and none is provided in the comment, to support the assertion that EPA should establish thresholds for cost-

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effectiveness or visibility improvement, or challenge EPA's authority to approve a BART determination without them.

Comment 10: EPA's use of incremental visibility improvement to find that the cost of SCR is unjustified contradicts its finding that SCR is cost-effective (77 FR 21901).

Response 10: The commenter mischaracterizes EPA's proposed approval. The commenter is correct that we did not find the average and incremental cost-effectiveness of SCR to be cost prohibitive. Nevertheless, our evaluation supported NDEP's determination that the small amount of visibility improvement at GCNP did not justify the cost of SCR.

The comment states that EPA has invented a—sixth factor|| by—concatenating incremental visibility and incremental cost.|| *See* Consortium Letter, page 7. EPA has not invented an additional factor in the BART analysis but has approved a reasonable conclusion reached by NDEP when it weighed these two factors. NDEP's weighing two factors in the analysis does not create a sixth factor. The comment does not explain how weighing two factors in the five-factor analysis constitutes stringing together and joining those factors into a sixth factor.

National Parks Conservation Association and Sierra Club wrote to EPA on June 29, 2012, concerning several regional haze actions. We are treating this letter as a late comment on our proposed action and including it in our docket as such. This letter indicates that NPCA and Sierra Club understand that our approval is based on finding that NDEP reasonably weighed visibility improvement and cost-effectiveness rather than inventing an additional BART factor. The letter provides:

> In many cases, EPA has summarily concluded that the incremental costs of concededly superior controls are not warranted by the visibility benefits determinations, which are routinely at odds with the Agency's own analysis demonstrating that installing the most effective controls will yield needed visibility improvements. *See* Letter dated June 29, 2012, page 1.

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EPA's analyses are also based on weighing the five BART factors. The relative weight of the cost-effectiveness and visibility improvement varies depending on the facility at issue. For the three 100 megawatt units at RGGS, EPA concludes that notwithstanding differing conclusions about both cost and visibility improvement, NDEP reasonably determined that a small visibility improvement at GCNP does not justify the cost of SCR. Our approval of NDEP's NO_x BART determination on this basis is consistent with our actions on other regional haze SIPs. *See, e.g.,* 77 FR 24385 (Apr. 24, 2012)(Final Approval of Maine SIP).

D. Cost Analysis

Comment 11: The incremental cost difference between SCR and SNCR is less than EPA estimated because the cost of SCR is overestimated and the cost of SNCR is underestimated, making SCR look relatively more expensive than is the case.

Response 11: The comment does not provide any basis for EPA to revise its proposed approval of NDEP's NO_x BART determination. Our proposal stated:

> Based on our revised cost estimates, we do not consider these [EPA's] average and incremental cost effectiveness values for SCR and LNB and OFA as cost prohibitive. Our analysis of this factor indicates that costs of compliance (average and incremental) are not sufficiently large to warrant eliminating SCR from consideration.
> The incremental cost effectiveness values for Units 1 and 2 are around $4,500/ton. Although EPA does not consider this incremental cost prohibitive, we note that the State has certain discretion in weighing this cost. Because RGGS is not a facility over 750 MW and therefore not subject to EPA's presumptive BART limits, the State may exercise its discretion more broadly in this particular determination. *See* 77 FR 21901 (April 12, 2012).

Even if the average and incremental cost-effectiveness between SCR and SNCR were somewhat different, NDEP's BART determination would still be approvable based on its reasonable weighing of the cost and visibility improvement factors.

Comment 12: EPA incorrectly estimated the cost-effectiveness of SCR (i.e., dollars per ton of emissions removed on an annual basis) by assuming that SCR can achieve an annual

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average emission no lower than 0.083 to 0.098 lb/MMBtu, despite substantial evidence that SCR can achieve 0.05 lb/MMBtu or lower on an annual basis.

Response 12: EPA disagrees with this comment. Regarding the accuracy of the cost effectiveness calculations of SCR, the commenter is correct that we estimated cost-effectiveness of SCR based on annual average emission rates ranging from 0.083 to 0.098 lb/MMBtu. However, we indicated in our proposal that we did not find SCR to be cost prohibitive at these emission rates. As a result, although we did consider more stringent SCR emission rates, such as 0.06 lb/MMBtu, when evaluating visibility improvement, we did not also revise our cost estimates to reflect the more stringent SCR emission rates, since we had already indicated that did not find SCR to be cost prohibitive at the less stringent SCR emission rates. It would not have been in any way determinative to our decision to find that SCR was—even more‖ cost-effective or that the incremental cost-effectiveness value between SCR and SNCR was—even more‖ incrementally cost-effective.

Regarding the emission rate achievable by SCR, the BART Guidelines state that:—[i]n assessing the capability of the control alternative, latitude exists to consider special circumstances pertinent to the specific source under review, or regarding the prior application of the control alternative‖ (70 FR 39166, July 6, 2005).[12] In other words, the BART emission limits are not required to represent the maximum level of control ever achieved by a given technology. Limits set as BACT under the PSD program, or emission rates achieved from the operation of individual facilities under an emission trading program (e.g., Clean Air Interstate Rule), may provide important information, but should not be construed to automatically represent the most appropriate BART limit for all facilities.

[12] Although NDEP's BART analysis for RGGS need not conform to the BART guidelines because the capacity of RGGS is smaller than 750 MW, the BART guidelines do provide useful guidance in setting appropriate BART limits.

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The coal composition is also an important component of estimating the NO_x emissions rate that a facility can achieve. RGGS is capable of purchasing coal on the spot market so there is likely to be variability in the NO_x emissions rate that would be achievable with SCR or SNCR. As previously discussed in the response to Comment 2, RGGS receives its coal by rail line and has access to different ranked coals with varying nitrogen content, which influence the NO_x concentration in the exhaust going to either SNCR or SCR controls. EPA's policy is to set an emission limit that would reasonably accommodate the various coal sources under these circumstances.

EPA disagrees with this comment, but even if we accepted the premise that RGGS is capable of continuously meeting an emission limit of 0.05 lb/MMBtu, the comment does not provide any basis for EPA to change our approval of NDEP's SIP or our FIP. Assuming the cost of achieving 0.05 lb/MMBtu was equal to the cost of achieving 0.083 to 0.098 lb/MMBtu, using a NO_x emissions rate of 0.05 lb/MMBtu for SCR would likely result in lower average and incremental cost per ton values. Thus, we would calculate SCR to be more cost-effective (i.e., lower dollars per ton) on an average and incremental basis. As stated above, EPA did not determine the average or incremental cost of SCR to be prohibitive. Rather, EPA's approval of NDEP's determination that NO_x BART for RGGS for Units 1 and 2 is an emissions limit of 0.20 lb/MMBtu that can be achieved by installing and operating LNB with OFA and SNCR is based on our determination that NDEP reasonably weighed the visibility improvement against the other factors in rejecting SCR. EPA does not believe this analysis would be significantly altered by slightly lower incremental cost numbers.

Comment 13: EPA did not correct all the errors in the State's cost calculations for SCR (e.g., lack of multiple unit discounts, high reagent costs, incorrect capital recovery factor), which

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would have further reduced the cost and improved the cost effectiveness of SCR, thereby reducing the incremental cost difference with SNCR.

Response 13: EPA partially agrees with this comment. EPA's revised cost-effectiveness values are consistent with EPA's regulations and the parameters set forth in the CCM. EPA explained in promulgating the BART Guidelines that—[s]tates have flexibility in how they calculate costs.‖ *See* 70 FR at 39127 (July 6, 2005). A state may deviate from the Control Cost Manual provided its analysis is reasonable. EPA independently evaluated NDEP's cost-effectiveness calculation, stating in our proposal:

> We received several public comments that NDEP's cost calculations were overestimated and based on methodology inconsistent with EPA's Control Cost Manual (CCM). [footnote omitted]. We agree that NDEP included inappropriate costs and our analysis excludes those costs that are not allowed by the CCM. *See* 77 FR 21901 (April 12, 2012).

Our proposal noted that we did not revise the cost-effectiveness calculation to adjust for all of the discrepancies with the CCM because based on our initial adjustments we found that SCR was not cost-prohibitive. It would not have been in any way determinative to our decision to find that SCR was—even more‖ cost-effective or that the incremental cost-effectiveness value between SCR and SNCR was—even more‖ incrementally cost-effective.

As discussed above, EPA is approving NDEP's determination that NO_x BART is an emissions limit achievable with SNCR rather than SCR. The basis for our approval is that when NDEP weighed the small visibility improvement of moving from an emissions limit achievable with SNCR to one based on SCR against the incremental cost-effectiveness of SCR, NDEP determined that NO_x BART for RGGS for Units 1 and 2 is an emissions limit of 0.20 lb/MMBtu that can be achieved by installing and operating LNB with OFA and SNCR. NDEP has discretion in determining how to weigh the factors in reaching a BART decision under the CAA

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and regional haze regulations. NDEP's rationale for its decision, although based on different values than EPA calculated and modeled, was reasonable. Therefore, EPA is approving NDEP's determination.

The comment implies that correcting each of the costs listed as incorrect and substituting a SCR emissions limit of 0.05 lb/MMBtu rather than 0.06 lb/MMBtu for SCR would yield a very low incremental cost difference between SCR and SNCR. However, that implication is not supported by the comment. The comment does not calculate an alternative average or incremental cost-effectiveness differential between SCR and SNCR. Therefore, EPA is approving NDEP's conclusion that the incremental cost-effectiveness is not justified when weighed against the small visibility improvement.

Comment 14: EPA did not consider the adverse non-air quality impacts of SNCR due to ammonia injection, which would increase the cost of SNCR and reduce the incremental cost difference with SCR.

Response 14: As noted previously, EPA was reviewing the State's BART determination to evaluate whether NDEP reasonably applied the requirements of the CAA and the regional haze regulations. EPA anticipates that ammonia emissions will be quite low because these units are equipped with baghouses and wet scrubbers that each can be expected to remove most ammonia slip associated with SNCR or SCR. To the extent the commenter is concerned that considering costs due to ammonia injection would lower the incremental cost-effectiveness value between SCR and SNCR, EPA reiterates that our proposed approval of NDEP's RGGS NO_x BART determination is not based on agreeing with NDEP that SCR is not cost-effective. EPA's proposed approval states that SCR is cost-effective. Nonetheless, the BART determination is a multiple-factor analysis. NDEP has discretion to determine how to weigh the factors. Our

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independent analysis of the two critical factors demonstrated that the NDEP reasonably weighed the cost of SCR controls against the small visibility improvement to determine that SNCR is NO_x BART for RGGS.

Comment 15: In determining the average and incremental cost-effectiveness, EPA should have used actual emissions for the baseline value of each unit rather than each unit's annualized maximum permitted heat input multiplied by each unit's maximum permitted NO_x limit, which is closer to the potential to emit (PTE).

Response 15: EPA disagrees with this comment. Again, we note that EPA was not performing its own BART analysis, but was reviewing the adequacy of NDEP's BART analysis. The commenter is correct in noting that, in our review of NDEP's evaluation of the cost of compliance, we did not modify the estimate of baseline annual emissions that NDEP used in its cost calculations. We agree that NDEP's baseline more closely represents the sources' PTE, and results in higher baseline annual emissions than the methodology proposed by the commenter, which would rely almost entirely on past actual annual emissions. Because the regional haze regulations and BART Guidelines are not prescriptive regarding the calculation of baseline emissions, stating that—the baseline emissions rate should represent a realistic depiction of anticipated annual emissions for the source‖ [13], the commenter's proposed methodology is a potentially acceptable way to calculate baseline annual emissions. NDEP used a methodology that resulted in a higher estimate of baseline annual emissions, and we consider the methodology used by NDEP to be within the discretion afforded to states.

E. Cost of Compliance

Comment 16: Use of EPA's *Air Pollution Control Cost Manual* (—CCM‖) is not required since RGGS is less than a 750 megawatt facility.

[13] 70 FR 39167, July 6, 2005

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Response 16: EPA agrees that the states are not required to use the CCM for electric generating units smaller than 750 MW but that it is generally a good guide concerning costs to include and exclude. EPA performed an independent average and incremental cost-effectiveness calculation using the CCM to evaluate whether NDEP had reasonably weighed small visibility improvements against the incremental cost-effectiveness of requiring SCR rather than SNCR. EPA's analysis resulted in different cost-effectiveness and visibility improvement values. Although the values for these factors differed from NDEP's values, our analysis supported approving NDEP's NO_x BART determination to establish an emissions limit of 0.20 lb/MMBtu achievable from installing and operating SNCR.

Comment 17: EPA's *Air Pollution Control Cost Manual* is out of date, and thus substantially underestimates current market costs of control technologies including SCR, which misrepresents the cost-effectiveness of chosen technologies.

Response 17: EPA disagrees with the comment. The CCM is a valuable resource to guide the states in evaluating costs that should be included or excluded. The states have discretion to rely on specific capital and annual cost information that is updated or specific to the facility under consideration.

F. Visibility Analysis

Comment 18: EPA underestimated the visibility improvement that would result from SCR by assuming an emissions limit of 0.06 lb/MMBtu (about 84 percent efficiency) instead of 0.05 lbs/MMBtu (about 90 percent efficiency) or lower, which was achieved at 21 coal-fired EGUs in 2011, 11 of which are dry-bottom, wall-fired units like RGGS.

Response 18: EPA disagrees with this comment. As noted previously, the purpose of EPA's independent analyses assessing anticipated visibility improvements and cost-effectiveness

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of SCR were to evaluate the reasonableness of NDEP's determination based on weighing small incremental visibility improvement against the incremental cost-effectiveness of SCR. The modeling that NDEP relied on assumed that SCR would reduce NO_x between 78 percent and 82 percent. Although NDEP's assumptions for SCR performance were within the range of emission rates achieved nationwide, EPA determined that for the purposes of visibility modeling and calculating cost-effectiveness of SCR, assuming an 85 percent reduction efficiency to meet an emissions limit of 0.06 lb/MMBtu was reasonable for RGGS. As noted by the commenter, other coal-fired facilities do achieve emission rates of 0.05 lb/MMBtu or lower, and some BART determinations have established a NO_x emission limit of 0.05 lb/MMBtu for SCR. However, as noted in Response 12, emissions information reported to EPA's Clean Air Markets program show that among coal-fired boilers operating with SCR nationwide, there is significant variability in actual NO_x emission rates achieved, ranging from below 0.05 to greater than 0.10 lb/MMBtu.

EPA's assumption that RGGS could meet an emission limit of 0.06 lb/MMBtu is reasonable and within the expected performance range of SCR. The commenter does not provide a basis, *e.g.,* modeling that compares visibility benefits expected from a NO_x limit of 0.05 versus 0.06 lb/MMBtu, to change our approval of NDEP's determination that NO_x BART for RGGS is an emissions limit of 0.20 lb/MMBtu that can be achieved by installing and operating LNB with OFA and SNCR for the three units at RGGS. EPA anticipates that even if we modeled SCR to achieve 0.05 lb/MMBtu instead of 0.06 lb/MMBtu, the visibility benefits of SCR would still be smaller than the benefits modeled by NDEP. For example, if the post-SCR impact at GCNP is scaled by 0.05/0.06, it decreases from 0.20 dv to 0.17 dv. Relative to the 0.59 dv base case impact, the benefit of SCR would correspondingly increase from 0.38 dv to 0.42 dv,

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roughly 10 percent higher. However, as discussed in the Technical Support Document (TSD) for our proposed rule, EPA's estimates of visibility impacts are more than 50 percent lower than those relied on by NDEP due to differences in modeling procedures. The net effect of using 0.05 lb/MMBtu as the NO_x emissions factor would not change the fact that EPA's estimate of SCR's benefit would remain substantially smaller than that estimated by NDEP. As noted in previous responses, NDEP determined that the visibility benefits of SCR based on its modeling do not justify the cost. Thus, additional modeling of SCR at a lower emission rate is not likely to change NDEP's consideration of the visibility factor, or our determination that NDEP's process for weighing the factors is reasonable.

Comment 19: The small visibility improvement from SCR is the result of underestimating the base case emissions and the amount of NO_x that could be removed by SCR. The commenter provided an alternative, larger estimate of SCR benefits by scaling the EPA modeling results.

Response 19: EPA disagrees with this comment. EPA performed an independent modeling analysis to ensure NDEP's NO_x BART determination was reasonable. Although estimates of the visibility improvement would be larger if EPA had used higher base case emissions, the scaling method used by the commenter does not accurately reflect the effect of a different base case, which would require new modeling. Even if the commenter's scaling method results were accurate, the estimated visibility improvement remains small. The scaled benefits of SCR provided by the commenter are 0.7 dv at GCNP, and 1.9 dv cumulatively over the five Class I areas; the comparable scaled figures for SNCR would be 0.4 dv and 1.1 dv cumulatively. Thus, using the commenter's method, the incremental visibility improvement of SCR over SNCR would be 0.3 and 0.8 cumulatively. This is only slightly larger than the EPA-

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estimated benefit increase of 0.2 dv at GCNP, and is the same as the EPA-estimated benefit increase of 0.8 dv cumulatively. EPA's decision to approve NDEP's BART determination would be unchanged. See also the response to comment 20.

Comment 20: A commenter states that EPA used NDEP's NO_x baseline emission rates and control scenario emission rates to determine modeled visibility impacts. Because NDEP's emission rates are based on an annual average instead of a maximum 24-hr average, the commenter alleges that EPA underestimated visibility impacts, and provides its own estimate of 24-hr average baseline and control scenario emission rates.

Response 20: We acknowledge that we used NDEP's baseline and control scenario emission rates, based on annual average emission factors, in the visibility modeling supporting our proposed approval. As noted in our proposal, NDEP modified the baseline emission rates and control scenario emission rates that Nevada Energy included in the BART analysis.[14] NDEP did not, however, perform updated modeling to determine the visibility improvement associated with the revised baseline emission rates and revised control scenario emission rates. The absence of modeling results complicated our ability to evaluate the adequacy of NDEP's analysis. To evaluate the adequacy of NDEP's analysis, we performed our visibility modeling using NDEP's revised baseline and revised control scenario emission rates. Again, the purpose of our modeling was to evaluate the adequacy of NDEP's analysis which is not directly comparable to any modeling decisions we might make in our own BART determination as part of a FIP, such as at San Juan Generating Station.

Regarding the use of control scenario emission rates based upon annual average emission factors (in lb/MMBtu) instead of 24-hour average emission factors (lb/MMBtu), we disagree with the commenter that these emission rates do not provide acceptable estimates of visibility

[14] 77 FR 21903

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benefits. The methodology for calculating control scenario model emission rates described by the commenter involves applying the estimated control efficiencies of a particular technology to the baseline (pre-control) model emission rate. While this methodology has been used by EPA, it does not preclude the use of other methodologies for calculating control scenario emissions. In the case of control technology performance, engineering estimates of a particular technology's post-control level of performance will often be expressed in terms of lb/MMBtu, either on a 30-day or annual average basis. To the extent that the engineering estimate represents a more accurate depiction of future anticipated emissions at a particular facility, it may be appropriate to rely on the specified post-control level of performance rather than on a control efficiency applied to a pre-control emission rate. In fact, using model emission rates based on an annual average, instead of a 24-hour average, results in more stringent emission rates. As an example, the RGGS Unit 1 model emission rate calculated by the commenter for SCR and LNB with OFA is 99 lb/hr.[15] By comparison, the RGGS Unit 1 model emission rate used by EPA for this same technology is 73 lb/hr.[16]

Regarding the use of baseline emission rates based upon the annual average maximum instead of the 24-hour average maximum, we agree with the commenter that the BART guidelines state:—Use the 24-hour average actual emission rate from the highest emitting day of the meteorological period modeled (for the pre-control scenario).‖ *See* 70 FR 39170 (July 6, 2005). We note, however, that because the capacity of RGGS is less than 750 MW, NDEP is not required to adhere to the BART guidelines, and is therefore afforded some flexibility when evaluating the five statutory factors in its analysis of RGGS. We disagree that the maximum 24-

[15] See Table 13, National Park Service comment letter dated June 4, 2012, from Susan Johnson (NPS) to Thomas Webb (EPA)

[16] As used in Model Scenario c16 that is based on the more stringent level of SCR+LNB+OFA performance of 0.06 lb/MMBtu. See Technical Support Document, Appendix C, Docket Item No. EPA-R09-2010-0130-0077-11 and -15

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hour average baseline emissions the commenter provided are representative of RGGS' historical performance.[17] The baseline emissions provided by the commenter include a period of malfunction extending from January 8, 2003 to March 27, 2003. The result is maximum 24-hour average values that overstate RGGS' emission rate, and would therefore also overstate its visibility impact. If examining baseline emissions on a 24-hour average basis, we consider the WRAP NO_x emission rates indicated by the commenter to be more representative of maximum 24-hr average emissions[18], and note that these emission rates were included in our modeling analysis as Scenario c02.

The commenter also provides scaled estimates of visibility benefit based upon its estimates of 24-hour average baseline and control scenario emission rates. Notwithstanding our disagreements with the commenter noted above, if we use the WRAP's maximum 24-hour average emission rate as the baseline instead of the NDEP baseline, and scale our control scenario visibility benefits accordingly, we estimate the following visibility improvement at Grand Canyon National Park:[19]

	Original			Scaled		
Scenario	Visibility Impact	Visibility Improvement		Visibility Impact	Visibility Improvement	
		Total (from baseline)	Incremental (from prev)		Total (from baseline)	Incremental (from prev)
	dv	dv		dv	dv	
Baseline NO_x LNB+OFA	0.59	--	--	0.74	--	--
Enh. LNB+OFA	0.51	-0.08	*-0.08*	0.64	-0.10	-0.10
SNCR+LNB+OFA	0.37	-0.21	*-0.13*	0.47	-0.27	-0.17
ROFA+Rotamix	0.31	-0.28	*-0.06*	0.39	-0.35	-0.08

[17] Column 2 in Tables 11, 13, 15, National Park Service comment letter dated June 4, 2012, from Susan Johnson (NPS) to Thomas Webb (EPA)
[18] Column 6, Table 11, *ibid*
[19] Based on Visibility Method 8, best 20 percent days background, as summarized in Appendix E of the TSD from our April 4, 2012 proposed action. [Appendix E - RGGS_TSD_CALPUFF_tables.xls]

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SCR+LNB+OFA	0.22	-0.36	*-0.09*	0.28	-0.46	-0.11
SCR+LNB+OFA (0.06 lb/MMBtu)	0.20	-0.38	*-0.10*	0.26	-0.48	-0.13

As seen above, the scaled incremental visibility benefit of SCR (at 0.06 lb/MMBtu) compared to the next most stringent technology, ROFA w/ Rotamix, is 0.13 deciviews, whereas the original EPA-estimated incremental visibility benefit is 0.10. This magnitude of incremental visibility benefit is still sufficiently small to justify approval of NDEP's analysis.

G. Cumulative Visibility Benefit Analysis

We are providing a consolidated response to the following comments.

Comment 21: EPA based its BART determination on the visibility benefits of SCR at a single Class I area that has the maximum visibility impact, but should have considered cumulative impacts.

Comment 22: EPA did not consider the cumulative visibility benefits of SCR at all five Class I areas within 300 kilometers that are impacted by NO_x emissions from RGGS, in contrast to performing a cumulative visibility benefit analysis for Four Corners Power Plant and Navajo Generating Station.

Comment 23: EPA modeled the cumulative benefits of various BART controls across all five Class I areas as indicated in Appendix E, but did not include its cumulative modeling results in its proposed rule or TSD.

Comment 24: EPA's modeling results for SCR at all five parks in Appendix E showed a cumulative visibility benefit of 1.07 dv to 1.15 dv, which is significantly greater than the 0.38 dv benefits at GCNP alone.

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Comment 25: NPS calculates that the cumulative visibility benefits at five class I areas is about 2.0 dv for SCR on all three units.

Response 21-25: Although EPA did not provide the cumulative sum of visibility impacts over the five nearby Class I areas in the Notice of Proposed Rulemaking, EPA did in fact take into account the impacts at all those areas, considering both the number of areas affected and the impacts and benefits occurring there. EPA provided the modeled visibility impacts and benefits at all five Class I areas in Appendix E of the Technical Support Document. We did not rely on the specific metric advocated by the commenters, i.e. the sum of benefits over the areas, but we did consider the estimated visibility impacts across all five Class I areas in evaluating the reasonableness of Nevada's BART determination. Given the magnitude of the impacts at these areas, however, we focused largely on the benefits at GCNP in our proposed action and placed little weight on the benefits at the remaining four Class I areas. The commenters note that the sum of the visibility benefits across all five impacted Class I areas from requiring SCR is just over 1 dv of improvement. However, as that improvement is spread out over five Class I areas, we do not consider this sufficient reason to reject the State's BART determination, especially in light of the incremental benefits of SCR. On a Class I by Class I basis, there would be little improvement in visibility from requiring SCR.

The comment is correct that EPA provided information about the cumulative visibility improvement modeled for different BART scenarios in our Advanced Notice of Proposed Rulemaking for the Four Corners Power Plant and the Navajo Generating Station. EPA also provided information about the cumulative visibility improvement in our proposed and supplemental BART actions for Four Corners Power Plant. As we stated in those notices, EPA primarily relied on the benefits at the area with the greatest visibility improvement from controls,

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but we also considered impacts and benefits at nearby areas, including cumulative visibility benefits. EPA agrees that cumulative visibility benefits summed over multiple Class I areas may be a useful metric that can further inform a BART determination. Such an approach can be useful, for example, in simplifying a complex array of visibility impacts, especially where a source has significant impacts on multiple Class I areas. This approach, however, is not the only means of assessing visibility benefits over multiple Class I areas.

In this action we are evaluating whether NDEP's BART determination for RGGS resulted in the appropriate level of control for that facility. EPA's independent analysis of the modeled visibility improvements at GCNP and all other impacted areas corroborated the results of the NDEP analysis.

Comment 26: Using the WRAP baseline (scenario 00) and EPA's emissions limit of 0.06 lb/MMBtu (scenario 16) for SCR produces a cumulative visibility benefit of 1.82 dv.

Response 26: We disagree with the commenter's use of the WRAP scenario 00 as the baseline against which to measure visibility improvement. Although Scenario 00 models the WRAP NO_x emission rate, it also models the WRAP PM_{10} and SO_2 emission rates, which correspond to emission rates prior to installation of fabric filters (NDEP's PM_{10} BART determination) and wet flue gas desulfurization upgrades (NDEP's SO_2 BART determination). Scenario 16 models PM_{10} and SO_2 emission rates that account for the emission reductions associated with these control technologies. As a result, a comparison of Scenario 00 and 16 overestimates the benefit from SCR, because it also includes the visibility improvement associated with PM_{10} and SO_2 emission reductions.

H. CALPUFF Model

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Comment 27: EPA's accepted version of the CALPUFF model, introduced in 2007, is out of date given that new versions were updated in 2008, 2010, and 2011.

Response 27: EPA disagrees with the commenters that any new CALPUFF version should be used for the BART determination. EPA relied on version 5.8 of CALPUFF because it is the EPA-approved version in accordance with the Guideline on Air Quality Models (—GAQM||, 40 CFR 51, Appendix W, section 6.2.1.e); EPA updated the specific version to be used for regulatory purposes on June 29, 2007, including minor revisions as of that date; the approved CALPUFF modeling system includes CALPUFF version 5.8, level 070623, and CALMET version 5.8 level 070623. CALPUFF version 5.8 has been thoroughly tested and evaluated, and has been shown to perform consistently with the initial 2003 version in the analytical situations for which CALPUFF has been approved. Any other version would be considered an—alternative model||, subject to the provisions of GAQM section 3.2.2(b), requiring full model documentation, peer-review, and performance evaluation. No such information for the later CALPUFF versions that meet the requirements of section 3.2.2(b) has been submitted to or approved by EPA. Experience has shown that when the full evaluation procedure is not followed, errors that are not immediately apparent can be introduced along with new model features. For example, changes introduced to CALMET to improve simulation of over-water convective mixing heights caused their periodic collapse to zero, even over land, so that CALPUFF concentration estimates were no longer reliable.[20]

In addition, the latest version of CALPUFF, 6.4, incorporates a detailed treatment of chemistry. EPA's promulgation of CALPUFF (68 FR 18440, April 15, 2003) as a—preferred|| model approved it for use in analyses of Prevention of Significant Deterioration increment

[20]—CALPUFF Regulatory Update|| Roger W. Brode, Presentation at Regional/State/LocalModelers Workshop, June 10–12, 2008, available at http://www.cleanairinfo.com/regionalstatelocalmodelingworkshop/archive/2008/agenda.htm

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consumption and for complex wind situations, neither of which involve chemical transformations. For visibility impact analyses, which do involve chemical transformations, CALPUFF is considered a—screening|| model, rather than a—preferred|| model; this—screening|| status is also described in the preamble to the BART Guidelines (70 FR 39123, July 6, 2005). The change to CALPUFF 6.4 is not a simple model update to address bug fixes, but a significant change in the model science that requires its own rulemaking with public notice and comment.

Furthermore, it should be noted that the US Forest Service and EPA review[21] of CALPUFF version 6.4 results for a limited set of BART applications showed that differences in its results from those of version 5.8 are driven by two input assumptions and not associated with the chemistry changes in 6.4. Use of the so-called—full|| ammonia limiting method and finer horizontal grid resolution are the primary drivers in the predicted differences in modeled visibility impacts between the model versions. These input assumptions have been previously reviewed by EPA and the FLMs and have been rejected based on lack of documentation, inadequate peer review, and lack of technical justification and validation.

EPA intends to conduct a comprehensive evaluation of the latest CALPUFF version along with other—chemistry|| air quality models in consultation with the Federal Land Managers, including a full statistical performance evaluation, verification of its scientific basis, determination of whether the underlying science has been incorporated into the modeling system correctly, and evaluation of the effect on the regulatory framework for its use, including in New Source Review permitting. CALPUFF version 5.8 has already gone through this comprehensive evaluation process and remains the EPA-approved version, and is thus the appropriate version for EPA's corroboration of NDEP's BART determination.

[21]—CALPUFF Status and Update|| Tyler J. Fox, Presentation at Regional/State/LocalModelers Workshop, April 30 – May 4, 2012, available at http://www.cleanairinfo.com/regionalstatelocalmodelingworkshop/archive/2012/agenda.htm

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I. Nitrate Contribution to GCNP

We are providing a consolidated response to the following comments.

Comment 28: The WRAP's modeling supports the fact that NO_x is only a small contributor to visibility impairment at GCNP.

Comment 29: NO_x is mostly from cars and is not a major contributor to haze compared to other pollutants.

Comment 30: The contribution of nitrates from RGGS to haze at GCNP is so insignificant (0.01 percent) that any additional visibility benefit associated with SCR controls would yield an imperceptible improvement at GCNP for a significantly greater cost.

Comment 31: EPA's modeling did not take into account the fact that nearly 25,000 tons per year of NO_x has been eliminated from the emissions inventory due to closure or cancellation of three generating stations (Mohave, White Pine, and Toquop).

Response 28-31: Section 169A of the Clean Air Act requires BART determinations on BART-eligible EGUs regardless of trends or ambient visibility conditions. Application of BART is one means by which we can ensure that downward emission and visibility impairment trends continue. EPA modeling of NO_x from RGGS showed visibility impacts of up to 0.6 deciviews. This is not a negligible contribution to visibility impairment. EPA concluded in this case only that the incremental cost of SCR was not justified in relation to the visibility impact, not that the visibility impact was deminimis. Even if an individual pollutant or source category appears small to some commenters, the many segments of the emissions inventory together do cause visibility impairment, and each must be addressed in order to make progress towards the national goal of remedying visibility impairment from manmade pollution. EPA identifies stationary sources as

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an important category to evaluate in any BART analysis. In this case EPA approved the state's conclusion that SNCR was the appropriate BART control.

J. Emissions Limits

Comment 32: The proposed BART NO_x emissions limit (0.20 lb/MMBtu) appears to result in a very small reduction in actual emissions when compared to the performance of the three units over the past two years.

Response 32: EPA evaluated the potential NO_x emissions reduction based on RGGS's permitted emission limits. Actual emissions in tons per year can vary substantially for external reasons such as a downturn in economic conditions generally or unusual weather conditions. Until the permitted emissions limits for RGGS are lowered, RGGS may emit pollutants in those amounts at any time. Therefore, for RGGS the permitted emissions limit is the only enforceable and certain amount to use in calculating potential emission reductions. RGGS is no longer subject to a long-term coal contract and may purchase coal on the spot market. Different coals may also lead to a change in NOx emissions. RGGS historically burned a very high BTU Utah bituminous coal that when combusted is expected to result in substantially higher NOx emissions than sub-bituminous coals or lower BTU bituminous coals from Colorado. RGGS has recently added these two coals to the fuel mix at RGGS and the NOx levels have decreased. EPA determined that the BART emission limit should be achieved when burning any of these coals. Setting a more stringent limit for BART achievable with LNB with OFA and SNCR could prevent RGGS from using only their historical Utah bituminous coal.

Comment 33: Given the sensitivity of boiler operation, size, and configuration, SNCR may not be able to achieve the prescribed level of performance (0.20 lb/MMBtu) on a consistent basis.

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Response 33: NDEP will revise the enforceable permit limits to incorporate the NO_x BART emissions limit of 0.20 lb/MMBtu when SNCR is installed and operating at RGGS. EPA expects that Nevada Energy, as the operator of RGGS, will ensure the LNB with OFA and SNCR system is designed to achieve a lower emissions rate than 0.20 lb/MMBtu to insure the BART limit is achieved in practice. RGGS will also be required to continue to operate its continuous emissions monitoring system for NOx and report any excess emissions. If RGGS exceeds its emissions limit for NO_x, NDEP, EPA or a citizen may bring an enforcement action that can result in penalties and injunctive relief. EPA has determined based on the record provided by the state that NDEP should be able to consistently operate at an emissions limit below 0.20 lb/MMBtu and the comment does not provide a basis for us to revise the final SIP approval or FIP.

K. Compliance Period

Comment 34: Allowing five years from promulgation to install SNCR is excessive since SNCR can be installed in less than one year.

Response 34: We have reconsidered the compliance date in our proposal in response to this comment. The Nevada BART regulation requires that BART control measures at RGGS must be installed and operating—[o]n or before January 1, 2015; or (2) [n]ot later than 5 years after approval of Nevada's state implementation plan for regional haze by the United States Environmental Protection Agency Region 9 , *whichever occurs first."* NAC 445B.22096(2)(a)(emphasis added). We approved this requirement into the SIP on March 26, 2012 (effective April 25, 2012). 77 FR 17340. Therefore, the SIP-approved BART implementation deadline at RGGS for all pollutants, including NOx, is January 1, 2015.

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Consistent with this requirement, we are revising the compliance date in our FIP to January 1, 2015.

L. Compliance Method

Comment 35: Commenters state that the proposed method of demonstrating compliance with the NO_x emissions rate is more stringent than the rule requires; does not allow the facility to take credit for the times a unit is not in operation; does not provide a way for a unit that is out of compliance for a period of time to get back into compliance without a continued period of non-compliance; and is in contrast to the BART modeling protocol that directs the use of a pounds per hour limit as opposed to an emissions rate limit for all BART eligible units over a 24-hour basis. Commenters propose an alternate compliance demonstration methodology that consists of a unit-wide 30-calendar day rolling cap (in total lbs of NO_x). The cap is calculated based upon each unit operating continuously (24 hours/day for 30 days) at its permitted maximum hourly heat rate (MMBtu/hr), and at its BART NO_x emission limit (0.20 lb/MMBtu, which was determined based upon the operation of an ammonia injection system in conjunction with LNB). Compliance would then be demonstrated by calculating the unit-wide NO_x emission rate (in total lbs of NO_x) for the current calendar day, and adding it to the previous 29 calendar days' unit-wide NO_x emission rate (in total lbs of NO_x), and comparing this 30-calendar day total to the value of the unit-wide 30-calendar day rolling cap.

Response 35: We disagree with the commenters, and further do not consider the commenters' proposed compliance demonstration methodology to meet BART requirements. The Regional Haze Rule defines BART as—the best system of *continuous* emission reduction for each pollutant||, and requires that—each source subject to BART maintain the control equipment required by the subpart and establish procedures to ensure such equipment is properly operated

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[…].||[22] EPA's BART determinations for coal fired EGUs have set concentration limits, expressed as lb/MMBtu for the various visibility impairing pollutants averaged over a 30-day period. The proposed and finalized limit is more flexible than typical EPA BART determinations in that it allows the 3 units subject to BART to be averaged together to determine compliance (as requested by NDEP). BART limits are designed to be met at all times, not to provide for a facility to easily come back into compliance from a violation. We disagree that the facility requires additional flexibility to come back into compliance following an exceedance event, and consider a 30-day rolling average to provide a sufficient length of time to allow a facility to address and correct for perturbations that are reasonably expected to occur over the course of normal operations, and that cause short-term extra emissions.

Allowing a facility to take credit for times it is not operating, or for when it is not operating at maximum capacity, would allow RGGS to operate without the BART-required SNCR. SNCR can be expected to remove approximately 30 percent of the potential NO_x emissions. If the overall capacity (as evaluated against the maximum potential MW output) fell below 70 percent in any 30-day period, under the commenter's proposal RGGS would not have to operate the SNCR ammonia injection at all to meet its limit. Therefore, this would not meet the BART definition application of the best system of continuous emission reduction.

EPA recognizes that there are differences between BART emission limits and the emissions modeled to determine visibility improvements. This is the result of the models requiring short-term emission projections and the need for BART limits to have practical averaging times. Short averaging periods such as 1-hour averages would better correlate to the modeled emissions, but EPA has determined that such a short averaging period is not practical

[22] 40 CFR 51.301 and 40 CFR 51.308(e)(1)(v)

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for facilities subject to BART. EPA has, therefore, directed that averaging times should be no longer than 30-day rolling averages and should include all periods of startup, shutdown, and malfunction. As discussed above, an emission limit that allows a facility to take credit for non-operation could lead to substantially higher 24-hour emissions of visibility impairing pollutants because the facility could turn off its SNCR.

Specifically, the proposed emission cap, in the form as described by the commenters, does not by itself ensure that the control equipment determined as BART is continuously operated. We acknowledge that the regional haze regulations provide flexibility in establishing requirements and procedures to ensure that control equipment is properly and continuously maintained, and that a mass emission cap could be an acceptable BART emission limitation. In its current form, however, the emission cap proposed by the commenters allows a potential scenario in which, for a given unit-wide 30-calendar day period, one unit could operate at a NO_x emission level of 0.40 lb/MMBtu in exchange for non-operation of another unit (essentially, operating that unit at 0.00 lb/MMBtu). An emission level of 0.40 lb/MMBtu corresponds to operation of LNB only, and does not reflect the operation of SNCR.

In order to allow for better management of the elevated levels of emissions associated with startup events, we have revised our proposed determination method to be based on a boiler operating day average, rather than on a calendar day average. If based on a calendar day basis, the unit-wide 30-day rolling average could include as little as one hour of operation if the units were all offline for an outage that lasted longer than thirty days, because the first hour of operation would be the only data recorded in the last thirty calendar days. If based on a boiler operating day basis, the startup emissions—spike|| would be averaged with emission data from

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before outage, which would reflect nonzero emissions values, rather than with data from during the outage, which would reflect zero emissions.

M. Environmental Compliance at RGGS

Comment 36: Environmental controls, monitoring and practices have improved over recent years at the plant, which meets or exceeds all emissions limits, has reduced emissions, and has some of the lowest emissions of any plant in the country.

Response 36: EPA agrees in part with the comment. Nevada Energy has installed controls that substantially reduced the PM emissions from RGGS and installed ROFA on unit 4 to reduce NO_x emissions. Since monitoring began under the Acid Rain rules, RGGS has been among the coal fired electric generating units that emits the least SO_2. The same is not true for NO_x emissions from units 1, 2, and 3. By finalizing this action, EPA will ensure that there are also significant reductions in NO_x emissions from RGGS, as required by the Regional Haze rule and Section 169A of the CAA. Each of the 3 units at RGGS will reduce NO_x emissions from 0.46 lb/MMBtu to 0.20 lb/MMBtu.

N. Health Effects

Comment 37: Pollution from RGGS is causing a variety of health problems (e.g., allergies, respiratory illnesses, heart ailments, skin lesions, thyroid disorders, sinus infections) for the Moapa Band of Paiutes who reside directly adjacent to RGGS.

Response 37: In addition to regional haze, EPA assesses air quality regularly under the CAA with respect to setting and ensuring that areas in the country attain the NAAQS. The NAAQS are the health based standards that are set by EPA for the entire country. RGGS is located in an area that is designated as attainment for most of the NAAQS.[23] This means that the

[23] Please see http://www.epa.gov/region09/air/maps/maps_top.html for EPA Region IX air quality designations.

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air quality in the area surrounding RGGS is meeting most of the national health-based standards set by EPA.

Breathing air containing ozone can reduce lung function and increase respiratory symptoms, thereby aggravating asthma or other respiratory conditions. The area surrounding RGGS was designated nonattainment for the 1997 8-hour ozone NAAQS. The Clark County APCD and NDEP together are responsible for adopting and implementing programs for both stationary and mobile sources to bring the area into attainment for the 8-hour ozone NAAQS. On March 29, 2011, EPA published a direct final rule determining that the Clark County nonattainment area has attained the 1997 8-hour ozone NAAQS (76 FR 17343). Although the area has not been redesignated to attainment, the Clark County area continues to meet the 1997 8-hour ozone NAAQS. On April 30, 2012, EPA issued final designations for the 2008 8-hour ozone NAAQS. Clark County was designated attainment for this more stringent ozone standard.[24]

The Moapa Band of Paiutes resides on land adjacent to RGGS. The stacks at RGGS release the exhaust at a high elevation for the purpose of preventing excessive concentration of pollutants in the immediate vicinity of the plant.[25] Because the area surrounding RGGS is meeting the health-based 1997 and 2008 ozone NAAQS, EPA expects that air quality in the area is protective of human health. Because today's actions require additional reductions in NO_x emissions, air quality will continue to improve. However, regardless of the attainment status of the surrounding area, EPA has been and will remain involved in efforts to ensure that the operation of RGGS meets all environmental requirements. Consequently, EPA believes it has

[24] http://www.epa.gov/ozonedesignations/2008standards/final/region9f.htm
[25] EPA Good Engineering Practice (GEP) http://www.epa.gov/scram001/guidance/guide/gep.pdf

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implemented the executive order with respect to the Moapa Tribe in these actions implementing BART at RGGS.

O. Environmental Justice

Comment 38: EPA should implement Executive Order 13175 since pollution from RGGS is having a substantial direct effect on the tribe.

Response 38: Ground-level ozone has the ability to impact human health, and is a secondary pollutant formed from precursor gases, primarily volatile organic compounds (VOCs) and NO_x. However, monitored ozone concentrations throughout Clark County, including monitors nearest RGGS, meet the 2008 ozone standard. EPA considers the air quality in the vicinity of the plant to be protective of public health. However, regardless of the attainment status of the surrounding area, EPA has been and will remain involved in efforts to ensure that the operation of RGGS meets all environmental requirements.

P. Economic Impacts

Comment 39: The high cost of SCR could cause RGGS to close, which would harm the local economy through the loss of jobs, the loss of contracts, and the loss of customers for local businesses.

Response 39: EPA has determined that it is cost effective for RGGS to install and operate SNCR at Units 1, 2 and 3. Because EPA is not disapproving NDEP's determination to require SNCR rather than SCR, EPA does not expect the facility to close and thus the comment does not require additional response.

III. Summary of EPA Actions

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EPA is approving in part and disapproving in part the remaining portion of the Nevada Regional Haze SIP that implements the Regional Haze Rule that requires states to prevent any future and remedy any existing man-made impairment of visibility in mandatory Class I areas. EPA is approving Nevada's selection of a NO_x emissions limit of 0.20 lb/MMBtu as BART for Units 1 and 2 at RGGS. EPA is disapproving two provisions of Nevada's BART determination for NO_x at RGGS: the emissions limit for Unit 3 and the compliance method for all three units. EPA is promulgating a FIP to replace the disapproved provisions by establishing a BART emissions limit for NO_x of 0.20 lb/MMBtu at Unit 3, and a 30-day averaging period for compliance based on a heat input-weighted basis across all three units.

EPA estimates the total, facility-wide capital costs of complying with this final BART determination for NO_x to be $26.5 million, and total annual costs (annualized capital costs plus additional operating costs) to be $4.3 million per year. The FIP requirements on Unit 3, which will require that unit to operate at 0.20 lb/MMBtu instead of 0.28 lb/MMBtu, will result in an additional operating cost of approximately $75,000 per year and will achieve a NOx reduction of 393 tons per year. This final BART determination is expected to reduce emissions of NO_x by 58 percent, from 6,980 tons per year to 2,968 tons per year, resulting in a facility-wide average cost-effectiveness of about $1,078 per ton of NO_x removed. EPA anticipates that this investment will reduce visibility impairment caused by RGGS by an average of 48 percent at 5 Class I areas within 300 km of the facility. A detailed summary of the cost and visibility benefits were provided in the Technical Support Document for the proposed rulemaking.

IV. Statutory and Executive Order Reviews

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A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action finalizes a SIP approval and a source-specific FIP for a single stationary source, the Reid Gardner Generating Station in Nevada. This type of action is exempt from review under Executive Order (EO) 12866 (58 FR 51735, October 4, 1993) and is therefore not subject to review under Executive Order 13563 (76 FR 3821, January 21, 2011).

B. Paperwork Reduction Act

This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq*. Under the Paperwork Reduction Act, a ―collection of information‖ is defined as a requirement for―answers to . . . identical reporting or recordkeeping requirements imposed on ten or more persons . . . .‖ 44 U.S.C. 3502(3)(A). Because the FIP portion of this rulemaking applies to a single facility, Reid Gardner Generating Station, the Paperwork Reduction Act does not apply. *See* 5 CFR 1320(c).

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

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An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR Part 9.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) a small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this action on small entities, I certify that this final action will not have a significant economic impact on a substantial number of small entities. As the Reid Gardner Generating Station is not a small entity, the FIP for Reid Gardner Generating Station being finalized today does not impose any new requirements on small entities. *See Mid-Tex Electric Cooperative, Inc. v. FERC*, 773 F.2d 327 (D.C. Cir. 1985)

D. Unfunded Mandates Reform Act (UMRA)

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This rule will impose an enforceable duty on the private sector owners of Reid Gardner Generating Station. However, this rule does not contain a Federal mandate that may result in expenditures of $100 million (in 1996 dollars) or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. EPA's estimate for the total annual cost for Reid Gardner Generating Station to lower its NO_x emissions limit at Unit 3 to 0.20 lb/MMBtu and for Units 1 – 3 to meet that NO_x emissions limit on a 30 successive boiler operating day rolling average does not exceed $100 million (in 1996 dollars) in any one year. Thus, this rule is not subject to the requirements of sections 202 or 205 of UMRA. This action is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. This rule will not impose direct compliance costs on Nevada, and will not preempt Nevada law. This final action will reduce the emissions of one pollutant from a single source, Reid Gardner Generating Station.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or in the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This final action requires emission reductions of NO_x at a specific private stationary source located in Nevada. Thus, Executive Order 13132 does not apply to this action.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

Subject to the Executive Order 13175 (65 FR 67249, November 9, 2000) EPA may not issue a regulation that has tribal implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to

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pay the direct compliance costs incurred by tribal governments, or EPA consults with tribal officials early in the process of developing the proposed regulation and develops a tribal summary impact statement.

EPA has concluded that this action may have tribal implications because the Reid Gardner Generating Station is located adjacent to the Moapa Band of Paiutes reservation and the Tribe has expressed its concerns directly to EPA on several occasions. However, this final action will neither impose substantial direct compliance costs on tribal governments, nor preempt Tribal law. This final rule requires Reid Gardner Generating Station, a major stationary source located in Nevada, to reduce emissions of NO_x under the BART requirement of the Regional Haze Rule. This will benefit air quality and the Moapa Band of Paiutes.

EPA consulted with tribal officials early in the process of developing this regulation to permit them to have meaningful and timely input into its development. EPA met with President Anderson on August 11, 2011, and again on April 17, 2012, to hear the Tribe's concerns directly. In addition, EPA held one public hearing on the Moapa Reservation on May 3, 2011, to ensure that tribal members had the opportunity to provide oral testimony.

The Moapa Band of Paiutes joined a consortium of environmental groups to submit comments on our proposed rule. The main concern expressed by the consortium was that EPA was not requiring Reid Gardner Generating Station to install and operate the top NO_x control option, selective catalytic reduction, as BART. The comments also raised potential health impacts and environmental justice concerns relative to the Moapa Band of Paiutes from not requiring the most stringent NO_x control option.

EPA summarized and responded to comments from the environmental consortium and Moapa Band of Paiutes. Our responsibilities under the Executive Order must be exercised in the

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context of our role under the CAA, which is to review NDEP's plan and determine if it meets the CAA requirements. We have done a thorough review and have determined that NDEP has adopted an emission limit that meets BART for RGGS. That emission limit can be met with SNCR instead of SCR, but RGGS will still have to install additional pollution control equipment that will reduce NO_x emissions. These emission reductions will not only improve visibility but will provide additional health benefits for the Moapa Band of Paiutes and other residents of Clark County. EPA has been and will remain involved in efforts to ensure that the operation of RGGS meets all environmental requirements.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

Executive Order 13045: *Protection of Children from Environmental Health Risks and Safety Risks* (62 FR 19885, April 23, 1997), applies to any rule that: (1) is determined to be economically significant as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This rule is not subject to Executive Order 13045 because it requires emissions reductions of NO_x from a single stationary source. Because this action only applies to a single source and is not a rule of general applicability, it is not economically significant as defined under Executive Order 12866, and the rule also does not have a disproportionate effect on children. However, to the extent that the rule will reduce emissions of NO_x, which contributes to

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ozone formation, the rule will have a beneficial effect on children's health by reducing air pollution that causes or exacerbates childhood asthma and other respiratory issues.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Pub L. No. 104-113, 12 (10) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. VCS are technical standards (e.g., materials specifications, test methods, sampling procedures and business practices) that are developed or adopted by the VCS bodies. The NTTAA directs EPA to provide Congress, through annual reports to OMB, with explanations when the Agency decides not to use available and applicable VCS.

Consistent with the NTTAA, the Agency conducted a search to identify potentially applicable VCS. For the measurements listed below, there are a number of VCS that appear to have possible use in lieu of the EPA test methods and performance specifications (40 CFR Part 60, Appendices A and B) noted next to the measurement requirements. It would not be practical to specify these standards in the current rulemaking due to a lack of sufficient data on equivalency and validation and because some are still under development. However, EPA's Office of Air Quality Planning and Standards is in the process of reviewing all available VCS for incorporation by reference into the test methods and performance specifications of 40 CFR Part

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60, Appendices A and B. Any VCS so incorporated in a specified test method or performance specification would then be available for use in determining the emissions from this facility. This will be an ongoing process designed to incorporate suitable VCS as they become available.

Particulate Matter Emissions - EPA Methods 1 though 5

Opacity - EPA Method 9 and Performance Specification Test 1 for Opacity Monitoring

NO_x Emissions - Continuous Emissions Monitors

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629, February 16, 1994), establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population. This rule requires emissions reductions of one pollutant from a single stationary source, Reid Gardner Generating Station.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the

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agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. Section 804 exempts from section 801 the following types of rules (1) rules of particular applicability; (2) rules relating to agency management or personnel; and (3) rules of agency organization, procedure, or practice that do not substantially affect the rights or obligations of non-agency parties. 5 U.S 804 (3). EPA is not required to submit a rule report regarding today's action under section 801 because this is a rule of particular applicability and only applies to one facility, the Reid Gardner Generating Station..

L. Petitions for Judicial Review

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by [*insert date 60 days from publication in Federal Register*]. Filing a petition for reconsideration by the administrator of this final rule does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (*See* CAA section 307(b) (2)).

[Approval and Promulgation of Air Quality Implementation Plans; Nevada; Regional Haze State and Federal Implementation Plans; BART Determination for Reid Gardner Generating Station

EPA-R09-OAR-2011-0130]

List of Subjects in 40 CFR Part 52

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Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen oxides, Particulate matter, Reporting and recordkeeping requirements, Sulfur dioxide, Visibility, Volatile organic compounds.

_____ _____

Dated: Lisa P. Jackson,

Administrator

Part 52, chapter I, title 40 of the Code of Federal Regulations is amended as follows:

PART 52--[AMENDED]

1. The authority citation for part 52 continues to read as follows:

AUTHORITY: 42 U.S.C. 7401 *et seq.*

Subpart DD - Nevada

2. Section 52.1470 is amended by:

a. In paragraph (c), Table 1 revising the entry for—445B.22096.||

b. In the table in paragraph (e), removing the existing entry for—Nevada Regional Haze State Implementation Plan (October 2009)|| and adding a new, revised entry for __Nevada Regional Haze State Implementation Plan (October 2009)|| after the entry for—Small Business Stationary Source Technical and Environmental Compliance Assistance Program," State-effective on 7/5/95.

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§ 52.1470 Identification of plan.

* * * * *

(c) * * *

Table 1—EPA-Approved Nevada Regulations and Statutes

State citation	Title/subject	State effective date	EPA approval date	Additional explanation
* * * * * * *				
445B.22096, excluding the NO_X averaging time and control type for units 1, 2 and 3 and the NO_X emission limit for unit 3 in sub-paragraph (1)(c), all of which EPA has disapproved.	Control measures constituting BART; limitations on emissions	1/28/10	[Insert page number where the document begins and publication date]	Included in supplemental SIP revision submitted on September 20, 2011, and approved as part of approval of Nevada Regional Haze SIP. Excluding the NO_X averaging time and control type for units 1, 2 and 3 and the NO_X emission limit for unit 3 of NV Energy's Reid Gardner Generating Station, all of which EPA has disapproved.
* * * * * * *				

* * * * *

(e) * * *

Name of SIP provision	Applicable geographic or nonattainment area	State submittal date	EPA approval date	Explanation
* * * * * * *				

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Nevada Regional Haze State Implementation Plan (October 2009), excluding the BART determination for NO_x at Reid Gardner Generating Station in sections 5.5.3, 5.6.3 and 7.2, which EPA has disapproved.	State-wide	11/18/09	[Insert page number where the document begins and publication date]	Excluding Appendix A (—Nevada BART Regulation‖). The Nevada BART regulation, including NAC 445B.029, 445B.22095, and 445B.22096, is listed above in 40 CFR 52.1470(c).
* * * * * * *				

3. Section 52.1488 is amended by:

a. Revising paragraph (e).

b. Adding paragraph (f).

The revision and addition read as follows:

§ 52.1488 Visibility protection.

* * * * *

(e) *Approval.* On November 18, 2009, the Nevada Division of Environmental Protection submitted the—Nevada Regional Haze State Implementation Plan.‖ With the exception of the BART determination for NO_x at Reid Gardner Generating Station in sections 5.5.3, 5.6.3 and 7.2; the NO_X averaging time and control type for units 1, 2 and 3 in sub-paragraph (1)(c) of Nevada Administrative Code section 445B.22096; and the NO_X emission limit for unit 3 in sub-paragraph (1)(c) of Nevada Administrative Code section 445B.22096; the Nevada Regional Haze State Implementation Plan, as supplemented and amended on February 18, 2010 and September

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20, 2011, meets the applicable requirements of Clean Air Act sections 169A and 169B and the Regional Haze Rule in 40 CFR 51.308.

(f) *Source-specific federal implementation plan for regional haze at Reid Gardner Generating Station Units 1, 2 and 3.* This paragraph (f) applies to each owner and operator of the coal-fired electricity generating units (EGUs) designated as Units 1, 2, and 3 at the Reid Gardner Generating Station in Clark County, Nevada.

(1) *Definitions*. Terms not defined below shall have the meaning given to them in the Clean Air Act or EPA's regulations implementing the Clean Air Act. For purposes of this paragraph (f):

Ammonia injection shall include any of the following: anhydrous ammonia, aqueous ammonia or urea injection.

Boiler operating day means any 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any of the units identified in paragraph (f) of this section.

Combustion controls shall mean new low NO_x burners, new overfire air, and/or rotating overfire air.

Continuous emission monitoring system or *CEMS* means the equipment required by 40 CFR Part 75 to determine compliance with this paragraph (f).

NO_x means nitrogen oxides expressed as nitrogen dioxide (NO_2).

Owner/operator means any person who owns or who operates, controls, or supervises an EGU identified in paragraph (f) of this section.

Unit means any of the EGUs identified in paragraph (f) of this section.

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Unit-wide means all of the EGUs identified in paragraph (f) of this section.

Valid data means data recorded when the CEMS is not out-of-control as defined by part 75 and which meets the relative accuracy requirements of this paragraph.

(2) *Emission limitations* – the total discharge of NOx from Units 1, 2, and 3, expressed as NO_2, shall not exceed 0.20 lb/MMBtu determined over a 30 successive boiler operating day period. For each boiler operating day, hourly emissions of NO_2, in pounds of NO_2, for units 1, 2 and 3 for that day shall be summed together. For each boiler operating day, heat input, in millions of BTU, for units 1, 2 and 3 for that day shall be summed together. Each day the 30 successive boiler operating day NO_2 emission rate, in lb/MMBtu, shall be determined by adding together that day and the preceding 29 boiler operating days' pounds of NO_2 and dividing that total pounds of NO_2 by the sum of the heat input during the same 30-day period.

(3) *Compliance date*. The owners and operators subject to this section shall comply with the emissions limitations and other requirements of this section by January 1, 2015 and thereafter.

(4) *Testing and Monitoring*. (i) At all times after the compliance date specified in paragraph (f)(3) of this section, the owner/operator of each unit shall maintain, calibrate, and operate a CEMS, in full compliance with the requirements found at 40 CFR part 75, to accurately measure NO_x, diluent, and stack gas volumetric flow rate from each unit. In addition to these requirements, relative accuracy test audits shall be performed for both the NO_2 pounds per hour measurement and the hourly heat input measurement. Each such relative accuracy test audit shall have a relative accuracy, as defined in 40 CFR part 60, appendix F § 2.6, of less than 20

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percent. This testing shall be evaluated each time the 40 CFR part 75 monitors undergo relative accuracy testing. Compliance with the emission limit for NO_2 shall be determined by using valid data that is quality assured in accordance with the requirements of this paragraph.

(ii) If a valid NO_x pounds per hour or heat input is not available for any hour for a unit, that heat input and NO_x pounds per hour shall not be used in the calculation of the unit-wide rolling 30 successive boiler operating day average. Each unit shall obtain at least 90 percent hours of data over each calendar quarter. 40 CFR part 60 Appendix A Reference Methods may be used to supplement the part 75 monitoring.

(iii) Upon the effective date of the unit-wide NO_x limit, the owner or operator shall have installed CEMS software that meets with the requirements of this section for measuring NO_2 pounds per hour and calculating the unit-wide 30 successive boiler operating day average as required in paragraph (f)(2) of this section.

(iv) Upon the completion of installation of ammonia injection on any of the three units, the owner or operator shall install, and thereafter maintain and operate, instrumentation to continuously monitor and record levels of ammonia consumption for that unit.

(5) *Notifications.* (i) The owner or operator shall notify EPA within two weeks after completion of installation of combustion controls or ammonia injection on any of the units subject to this section.

(ii) The owner or operator shall also notify EPA of initial start-up of any equipment for which notification was given in paragraph (f)(5)(i).

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(6) *Equipment Operations*. After completion of installation of ammonia injection on any of the three units, the owner or operator shall inject sufficient ammonia to minimize the NO_x emissions from that unit while preventing excessive ammonia emissions.

(7) *Recordkeeping.* The owner or operator shall maintain the following records for at least five years:

(i) for each unit, CEMS data measuring NO_x in lb/hr, heat input rate per hour, the daily calculation of the unit-wide 30 successive boiler operating day rolling lb NO_2/MMbtu emission rate as required in paragraph (f)(2) of this section.

(ii) Records of the relative accuracy test for NO_x lb/hr measurement and hourly heat input

(iii) Records of ammonia consumption for each unit, as recorded by the instrumentation required in paragraph (f)(4)(iv) of this section.

(8) *Reporting.* Reports and notifications shall be submitted to the Director of Enforcement Division, U.S. EPA Region IX, at 75 Hawthorne Street, San Francisco, CA 94105. Within 30 days of the end of each calendar quarter after the effective date of this section, the owner or operator shall submit a report that lists the unit-wide 30 successive boiler operating day rolling lb NO_2/MMBtu emission rate for each day. Included in this report shall be the results of any relative accuracy test audit performed during the calendar quarter.

(9) *Enforcement.* Notwithstanding any other provision in this implementation plan, any credible evidence or information relevant as to whether the unit would have been in compliance with applicable requirements if the appropriate performance or compliance test had been performed,

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can be used to establish whether or not the owner or operator has violated or is in violation of any standard or applicable emission limit in the plan.

To: CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Guy Donaldson/OU=R6/O=USEPA/C=US
Sent: Tue 8/14/2012 12:19:41 PM
Subject: Fw: Final Partial Approval and Partial Disapproval of Nevada's NOx BART Determination for Reid Gardner Generating Station, and Final FIP
NV RH NFRM Reid Gardner 081312 prepublication.pdf

Ex. 5 - Deliberative

----- Forwarded by Guy Donaldson/R6/USEPA/US on 08/14/2012 07:18 AM -----

From: Colleen McKaughan/R9/USEPA/US
To: Phil Lorang/RTP/USEPA/US@EPA, Rhea Jones/RTP/USEPA/US@EPA, Todd Hawes/RTP/USEPA/US@EPA, Lea Anderson/DC/USEPA/US@EPA, Geoffrey Wilcox/DC/USEPA/US@EPA, Guy Donaldson/R6/USEPA/US@EPA, Joe Kordzi/R6/USEPA/US@EPA, Laurel Dygowski/R8/USEPA/US@EPA, Steve Body/R10/USEPA/US@EPA, Keith Rose/R10/USEPA/US@EPA
Cc: Lisa Hanf/R9/USEPA/US@EPA, Thomas Webb/R9/USEPA/US@EPA
Date: 08/13/2012 07:14 PM
Subject: Final Partial Approval and Partial Disapproval of Nevada's NOx BART Determination for Reid Gardner Generating Station, and Final FIP

Hi,

Here is a pre-publication version of the final NOx BART determination for Reid Gardner in Nevada.

Colleen W. McKaughan
Associate Director, Air Division
USEPA, Region 9
(520) 498-0118

The EPA Administrator, Lisa P. Jackson, signed the following final rule on 08/13/2012, and EPA is submitting it for publication in the *Federal Register* (FR). While we have taken steps to ensure the accuracy of this Internet version of the rule, it is not the official version of the rule for purposes of compliance. Please refer to the official version in a forthcoming FR publication, which will appear on the Government Printing Office's FDsys website (http://fdsys.gpo.gov/fdsys/search/home.action) and on Regulations.gov (http://www.regulations.gov) in Docket No. EPA-R09-OAR-2011-0130. Once the official version of this document is published in the FR, this version will be removed from the Internet and replaced with a link to the official version.

6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R09-OAR-2011-0130, FRL 9700-4]

Approval and Promulgation of Air Quality Implementation Plans; Nevada; Regional Haze State and Federal Implementation Plans; BART Determination for Reid Gardner Generating Station

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is approving in part and disapproving in part the remaining portion of the Nevada Regional Haze State Implementation Plan (SIP) that implements the Clean Air Act (CAA) Regional Haze Rule requiring states to prevent any future and remedy any existing man-made impairment of visibility in mandatory Class I areas through a regional haze program. EPA is approving Nevada's selection of a nitrogen oxide (NO_x) emissions limit of 0.20 lb/MMBtu as Best Available Retrofit Technology (BART) for the Reid Gardner Generating Station (RGGS) at Units 1 and 2. EPA is disapproving two provisions of Nevada's BART determination for NO_x at RGGS: the emissions limit for Unit 3 and the compliance method for all three units. EPA is promulgating a Federal Implementation Plan (FIP) which replaces the disapproved provisions by establishing a BART emissions limit for NO_x of 0.20 lb/MMBtu at Unit 3, and a 30-day averaging period for compliance on a heat input-weighted basis across all three units. We encourage the State to submit a revised SIP to replace all portions of our FIP. Moreover, we stand ready to work with the State to develop a revised plan.

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DATES: This rule is effective on [insert date 30 days from the date of publication in the Federal Register]

ADDRESSES: EPA has established docket number EPA-R09-OAR-2011-0130 for this action. Generally, documents in the docket are available electronically at http://www.regulations.gov or in hard copy at EPA Region 9, 75 Hawthorne Street, San Francisco, California. Please note that while many of the documents in the docket are listed at http://www.regulations.gov, some information may not be specifically listed in the index to the docket and may be publicly available only at the hard copy location (e.g., copyrighted material, large maps, multi-volume reports or otherwise voluminous materials), and some may not be available at either locations (e.g., confidential business information). To inspect the hard copy materials, please schedule an appointment during normal business hours with the contact listed directly below.

FOR FURTHER INFORMATION CONTACT: Thomas Webb, U.S. EPA, Region 9, Planning Office, Air Division, AIR-2, 75 Hawthorne Street, San Francisco, CA 94105. Thomas Webb can be reached at telephone number (415) 947-4139 and via electronic mail at webb.thomas@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document, wherever—we,‖—us,‖ or —our,‖ is used, we mean the United States Environmental Protection Agency (EPA).

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I. Background and Purpose

A detailed explanation of the requirements for regional haze SIPs and EPA's analysis of the Nevada Division of Environmental Protection's (NDEP) BART determination for NO_x at RGGS is provided in our Notice of Proposed Rule Making and is not restated here. *See* 77 FR 21896 (April 12, 2012).

RGGS consists of four coal-fired boilers, three of which are BART-eligible units with generating capacity of 100 megawatts (MW) each. A fourth unit (250 MW) is not BART-eligible. Nevada Energy, the owner of RGGS, performed a NO_x BART analysis for the three BART-eligible units at RGGS and submitted the results of its analysis to NDEP.[1] In its BART analysis, Nevada Energy considered several NO_x control technologies and evaluated the cost of compliance and visibility improvement associated with each technology. In preparing the SIP, NDEP relied on certain aspects of Nevada Energy's analysis while performing updated analyses for other aspects.

EPA proposed to fully approve Nevada's SIP on June 22, 2011 (*see* 76 FR 36450), but received numerous comments on our proposed approval of the BART determination for NO_x at RGGS. A detailed description of those comments is in our final rule, which approved all of the Nevada regional haze SIP, except for the BART determination for NO_x at RGGS. *See* 77 FR 17334 (March 26, 2012). After reviewing the public comments, EPA performed additional analyses of the cost-effectiveness and visibility improvement associated with the various NO_x control technologies considered by NDEP in determining BART for NO_x at RGGS. Based upon these additional analyses, EPA did not take final action on the chapters of the SIP containing the NO_x BART determination for RGGS, including the corresponding emission limits and schedules

[1] Nevada Energy BART Analysis Reports, Reid_Gardner_1_10-03-08.pdf, Reid_Gardner_2_10-03-08.pdf, Reid_Gardner_3_10-03-08.pdf. Available in Docket Item No. EPA-R09-OAR-2011-0130-0007.

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of compliance for NO_x at RGGS. Specifically, EPA did not take final action on sections 5.5.3, 5.6.3 and 7.2 of NDEP's SIP, addressing the NO_x BART control analyses, visibility improvement, and implementation at RGGS.

EPA published a new proposal to partially approve and partially disapprove NDEP's BART determination for NO_x at RGGS on April 12, 2012. *See* 77 FR 21896. Based on its additional analyses described above, EPA proposed revised control cost calculations for installation and operation of low NO_x burners (LNB) and overfire air (OFA) combined with either selective non-catalytic reduction (SNCR) or selective catalytic reduction (SCR) technology.[2] EPA also performed new CALPUFF visibility modeling to evaluate the visibility improvement from installing and operating LNB with OFA and either SNCR or SCR.

As discussed in detail in our responses to comments, EPA's independent modeling results showed a very small visibility improvement at the Grand Canyon National Park (GCNP) as a result of installing and operating SCR with an 85 percent reduction in NO_x on all three units. The modeled visibility improvement for this scenario was 0.38 dv at the GCNP. The incremental visibility improvement for installing LNB with OFA and SCR rather than LNB with OFA and SNCR was only 0.10 dv at GCNP.

EPA has considered the comments we received on our proposed approval and proposed disapproval. In this final action, EPA is approving NDEP's determination that NO_x BART for RGGS for Units 1 and 2 is an emissions limit of 0.20 lb/MMBtu that can be achieved by installing and operating LNB with OFA and SNCR. EPA is disapproving NDEP's NO_x BART

[2] As explained in our proposal, NDEP originally selected rotating opposed fire air (ROFA) with Rotamix™ as BART for RGGS Units 1-3, but more recently informed us that it will submit a SIP that evaluates the substitution of SNCR with LNB and OFA for ROFA with Rotamix™. 77 FR at 21898. Therefore, we are not approving NDEP's prior selection of ROFA with Rotamix™ as the control type for BART. Rather, we are approving NDEP's BART emissions limits for Units 1 and 2 of 0.20 lb/MMBtu. According to the most recent information received from NDEP, these limits can be achieved either with ROFA with Rotamix™ or with SNCR with LNB and OFA. ROFA with Rotamix™ combines a conventional SNCR system with a proprietary air and reagent injection system.

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emissions limit of 0.28 lb/MMBtu for Unit 3. EPA is also disapproving the 12-month rolling average that NDEP adopted for all three units. Concurrently, EPA is finalizing a FIP for RGGS setting a NO_x emissions limit of 0.20 lb/MMBtu for Unit 3 and a 30 successive boiler operating day (BOD) rolling NO_x emissions limit on a heat input-weighted average across all three units.[3] This represents a change to the averaging period included in our proposed action on April 12, 2012, which was based on a straight 30 calendar day average. EPA concludes that the change is a logical outgrowth of the proposal and the comments received.

EPA takes very seriously a decision to disapprove these provisions in Nevada's plan, as we believe that it is preferable that all emission control requirements needed to protect visibility be implemented through the Nevada SIP. A revised state plan need not contain exactly the same provisions that EPA has included in the FIP, but EPA must be able to find that the state plan is consistent with the requirements of the CAA. Further, EPA's oversight role requires that we assure fair implementation of CAA requirements by states across the country, even while acknowledging that individual decisions from source to source or state to state may not have identical outcomes. In this instance, we believe that NDEP's NO_x BART determination for RGGS generally meets those requirements except for the specific emissions limit for Unit 3 and the compliance averaging time. As a result, EPA believes this combined approval, disapproval, and FIP is consistent with the CAA at this time, while full approval of the SIP would be inconsistent with the CAA. We look forward to working with NDEP to replace the FIP provisions with a revised SIP.

[3] Throughout the preamble we use the term—heat input-weighted average‖ in describing the 30 successive day rolling emission limit. The regulation does not actually average the data for the 3 units, but sums the total NOx lb/hr over 30 boiler operating days and divides that total NOx lb by the sum of the heat input over the same days. The use of the term—heat input-weighted average‖ is meant to be descriptive of the time period and of the fact that it combines all three units to determine compliance.

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II. EPA Responses to Public Comments

EPA received written and oral comments before the close of the public comment period on June 4, 2012. We received major comments in writing from a consortium of environmental and conservation organizations[4] (Consortium), the National Park Service, the Nevada Division of Environmental Protection, Nevada Energy, the Moapa Band of Paiutes, Clark County Rural Democratic Caucus, and about ten individuals. We received comments from the two public hearings held near RGGS on May 3, 2012, that were attended by about 150 people, many of whom testified. We also received over 13,000 comments from mass mailings initiated by Sierra Club, National Parks Conservation Association, and CREDO Action (Rural Nevada Democratic Caucus). The comment letters, transcripts of the public testimony, and samples of the mass mailers are available for review online in Docket EPA-R09-OAR-2011-0130 at http://www.regulations.gov. While the written comments focus largely on the cost of compliance and degree of visibility improvement associated with SCR and SNCR, other topics are included. The oral comments provided as testimony at the public hearings focus largely on SCR and SNCR, but with an emphasis on sustaining jobs in the local community and the health issues experienced by the Moapa Band of Paiutes who live adjacent to Reid Gardner. We respond below to the full range of comments received from all sources.

A. National Consistency

Comment 1: EPA's proposed BART determination for NO_x at RGGS is inconsistent with EPA's decision to require SCR on other similar facilities including the San Juan Generating Station in New Mexico.

[4] The Consortium's comment letter was signed by representatives of Sierra Club, National Parks Conservation Association, Moapa Band of Paiutes, Citizens for Dixie's Future, Defend Our Desert, Friends of Gold Butte, Grand Canyon Trust, and Western Resource Advocates.

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Response 1: It is important to note that EPA is approving Nevada's determination that the NO_x BART for RGGS is the emissions rate achievable using modern LNB with OFA and SNCR. We are approving NDEP's decision to reject requiring SCR as NO_x BART because we believe that NDEP's conclusion, that the small improvement in visibility at GCNP did not justify the cost of LNB with OFA and SCR technology, is adequately supported by the facts in this situation.[5] Congress crafted the CAA to provide for states to take the lead in developing implementation plans, but balanced that decision by requiring EPA to ensure the plans meet the requirements of the CAA. EPA's review of a SIP is not limited to a ministerial approval of a state's decisions. EPA must evaluate whether a state considered the appropriate factors and acted reasonably in doing so. In undertaking such a review, EPA does not usurp a state's authority but ensures that such authority is reasonably exercised.

The CAA and EPA's regional haze regulations set forth five factors that a state should evaluate to reach a BART determination. However, the CAA and our regulations provide flexibility to the state in deciding how the factors in the analysis are weighed. Moreover, for power plants that are smaller than 750 MW, our regulations allow the state to conduct a five-factor analysis that does not conform in all respects to our BART Guidelines for larger sources. *See* 70 FR 39131 (July 6, 2005).

For San Juan Generating Station and other examples cited in the comments, EPA disapproved BART determinations submitted by the states because they did not meet the CAA requirements. Under CAA section 110(c), EPA is required to promulgate a Federal Implementation Plan following disapproval of a state implementation plan submission in whole or in part. EPA's role of making the initial BART determination in a FIP is not directly

[5] In future discussions comparing SNCR and SCR, both technologies include use of modern LNB and OFA to meet the emission rates discussed in this rule. We will not continue to list the combustion controls separately.

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comparable to EPA's role in deciding whether the state's SIP is approvable. EPA and the states generally consider the same factors in the initial BART determination but may weigh those factors differently provided the determination in each case is reasonable. BART determinations are case by case analyses. For example, in the case of San Juan Generating Station, EPA modeled very significant visibility improvement in numerous surrounding Class I areas resulting from emissions reductions associated with SCR, and thus concluded based on its five factor analysis that SCR was BART.[6] However, at RGGS, the visibility improvement from SCR compared to SNCR is very small. The units at San Juan Generating Station are also significantly larger than the units at RGGS, and the application of the BART Guidelines is mandatory when performing the five-factor analysis. This is not the case for RGGS.

NDEP on the other hand indicated that it had determined SNCR rather than SCR was NO_x BART for RGGS based on weighing the small incremental visibility improvement of SCR against its incremental cost effectiveness. When EPA reviewed NDEP's NO_x BART determination, we found problems in the method NDEP used to calculate cost-effectiveness and in the assumptions on which the modeling was based. Accordingly, EPA independently calculated cost-effectiveness and performed new modeling. In our review, EPA considered both average and incremental cost-effectiveness and visibility improvement. The results of our own analysis of the incremental visibility improvement and cost for SCR differ from NDEP's analysis in certain respects , but support NDEP's decision to establish an emissions limit that can be achieved by installing SNCR technology.

NDEP reasonably determined that NO_x emissions reductions achievable with SNCR would provide some visibility improvement at GCNP at a reasonable cost. Our decision to

[6] Per 76 FR 503, Table 8, EPA Region 6 modeled visibility benefits of 3.11 deciviews (single Class I area with greatest impact), and 21.69 deciviews (cumulative, all Class I areas within 300 km)

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approve NDEP's determination that the emissions rate achievable with LNB with OFA and SNCR is NO_x BART for RGGS is consistent with other national BART SIP approvals as well as proposed FIPs and final FIPs. *See, e.g.,* 77 FR 24385 (April 24, 2012) (Final Maine SIP approval); 77 FR 24027 and 24034 (April 20, 2012) (Proposed Montana FIP); and 77 FR 20894 (April 6, 2012) (Final North Dakota FIP). Other SIPs have rejected more effective controls such as SCR if those controls were found to provide little visibility improvement relative to significant cost. *See, e.g.,* 76 FR 80754, 80758 (Dec. 27, 2011) (Final Kansas SIP approval[7]); 76 FR 16168 (March 22, 2011)(Proposed Oklahoma SIP approval[8]). Therefore, our approval of NDEP's BART determination is consistent with EPA's action on other regional haze SIPs as well as proposed and final EPA FIPs.

In summary, EPA thoroughly and independently reviewed NDEP's basis for selecting a NO_x emissions rate achievable with SNCR as BART for RGGS rather than selecting SCR. In reaching this determination, NDEP weighed the small visibility improvement against the costs of the more effective control option. EPA calculated a lower average and incremental cost-effectiveness value than NDEP. EPA's modeling relied on the regulatory version of the CALPUFF modeling system and improved meteorological inputs, and predicted much less visibility improvement at GCNP from selecting SCR as NO_x BART (average: 0.38 dv, incremental: 0.10 dv). We also evaluated the visibility improvement that would result at four other Class I areas within 300 km of RGGS. Our modeling indicated that SCR would result in only minimal improvement at these four areas. Although we found shortcomings in NDEP's cost-effectiveness and visibility improvement values, we are taking final action to approve NDEP's conclusion that the small visibility improvement does not justify the cost of requiring

[7] Jeffrey Energy Center 1 and 2, La Cygne Unit 2
[8] EPA Region 6 proposed approval of the NOx portions of the Oklahoma RH SIP. See Muskogee Station Unit 4 and 5, Sooner Station Units 1 and 2

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SCR as NO_x BART. The comment before us does not change our decision that NDEP reasonably applied the statutory and regulatory factors to determine that the NO_x BART emission rate achievable from SNCR (0.20 lb/MMBtu) is BART for RGGS.

EPA acknowledges that NDEP has greater discretion in applying the BART factors because RGGS is an electric generating unit smaller than 750 MW. In evaluating SIPs, EPA exercises judgment about SIP adequacy, not just to meet and maintain the National Ambient Air Quality Standards (NAAQS), but also to meet other requirements that do not have a specific ambient standard, such as visibility at Class I areas. In this case, Congress established a requirement for BART, and EPA is charged to assure that states meet the requirement. Here, contrary to the commenter's assertion, we are exercising judgment within the parameters laid out in the CAA and consistent with other actions nationally applying our regional haze regulations. Our interpretation of our regulations and the CAA, and our technical judgments, are entitled to deference. *See, e.g.,* Michigan Dep't. of Envtl. Quality v. Browner, 230 F.3d 181 (6th Cir. 2000); Connecticut Fund for the Env't., Inc. v. EPA, 696 F.2d 169 (2nd Cir. 1982); Voyageurs Nat'l Park Ass'n v. Norton, 381 F.3d 759 (8th Cir. 2004); Mont. Sulphur & Chem. Co. v. United States EPA, 2012 U.S. App. LEXIS 1056 (9th Cir. January 19, 2012).

Therefore, we are finalizing our approval of NDEP's NO_x BART emissions rate of 0.20 lb/MMBtu, achievable using modern LNB with OFA and SNCR, for RGGS with two exceptions. For Unit 3, EPA is taking final action disapproving the SIP and promulgating a FIP setting the NO_x emissions limit at 0.20 lb/MMBtu. In addition, EPA is finalizing a 30 successive boiler operating day rolling NO_x emissions FIP limit on a heat input-weighted average across all three units rather than the 12-month rolling average NDEP included in its SIP, which EPA is disapproving.

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B. BART Evaluation Process

Comment 2: EPA did not correctly follow the BART process for evaluating the five factors, which should have resulted in selecting SCR and an emission limit corresponding to 90 percent control of NO_x.

Response 2: EPA was not conducting a BART analysis, but was reviewing the adequacy and reasonableness of NDEP's BART analysis. NDEP noted that RGGS is not the size of a facility for which application of the BART guidelines is mandatory when performing its five-factor analysis. In evaluating the five factors, NDEP evaluated visibility impacts by relying on visibility modeling included in the BART analysis submitted to NDEP by Nevada Energy. NDEP concluded that the small improvement in visibility that could be achieved with SCR did not justify the cost of SCR. We are generally approving the State's BART determination because we find NDEP's conclusions as to the appropriate level of BART controls to be reasonable..

NDEP did not consider a SCR system that would achieve 90 percent reduction. For SCR, NDEP assumed the technology would achieve control efficiencies of 78 to 82 percent. *See* Table 1 in 77 FR 21900 (April 12, 2012). The significance of the control efficiency assumption is that it affects the cost-effectiveness of the control technology. Cost-effectiveness ($/ton) is calculated by dividing the total annual cost ($) by the total annual tons of the pollutant reduced (tons). Assuming that two different levels of control (*e.g.,* 82 percent versus 90 percent) bear the same cost, higher control efficiency assumptions (*e.g.,* 90 percent) will result in lower cost per ton values because the denominator in the equation is larger.

In reviewing the reasonableness of NDEP's NO_x BART determination, EPA assumed a higher efficiency than NDEP. EPA determined that SCR could reduce 85 percent of the NO_x

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emissions from the stack exhaust. EPA continues to find that the correct assumption for the removal efficiency in this case is 85 percent rather than 90 percent. One of the factors EPA considered is that RGGS is not limited in its coal purchase by a contract. RGGS may purchase coal on the spot market, meaning that the rank[9] and nitrogen content of the coal combusted may vary. Bituminous coals from Utah have a very high btu per pound, which leads to higher NO_x produced during combustion. Coals with high nitrogen content also produce more NO_x when combusted.[10] Since RGGS has access by rail line to a number of different ranks of coal with varying nitrogen, these factors can affect the emission level that can be achieved with the SCR.

Assuming *arguendo* that EPA agreed with the comment that SCR should achieve 90 percent reduction continuously, we would not necessarily change our decision to approve NDEP's BART determination. As noted above, 90 percent control efficiency assumption would lead to a lower average and incremental cost-effectiveness. Even with that, NDEP's BART determination may have been reasonable based on weighing the small incremental visibility improvement of SCR against its incremental cost effectiveness. However, that issue was not before EPA in this action since EPA determined that only 85% reduction could be assumed in this case.

Comment 3: The commenter states that EPA did not follow the two-step process described in 40 CFR 51.301, which involves first identifying the best control technology for reducing NO_x and then applying the five factors to determine the best emissions limit achievable by that technology. A different emission limit should be chosen only if the technology fails to

[9] **Coal rank:** The classification of coals according to their degree of progressive alteration from lignite to anthracite. In the United States, the standard ranks of coal include lignite, subbituminous coal, bituminous coal, and anthracite and are based on fixed carbon, volatile matter, heating value, and agglomerating (or caking) properties. http://205.254.135.7/tools/glossary/index.cfm?id=C

[10] *Journal of the Air & Waste Management Association,* Volume 55, September 2005, Nitrogen Oxides Emission Control Options for Coal-Fired Electric Utility Boilers.

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meet one of the five factors. Instead, EPA provided a list of all feasible methods to remove NO_x, ranked from least effective (worst) to most effective (best) based on their NO_x control efficiency. In sorting through the ranked list of control options to pick the BART control technology, the EPA started at the bottom, with the worst control, and moved up to the best control, thus corrupting the entire process.

Response 3: We reiterate that EPA was not conducting a BART determination for NO_x at RGGS. Rather, we were reviewing the adequacy of NDEP's BART analysis. NDEP noted, correctly, that RGGS is not the size of a facility for which application of the BART Guidelines is mandatory.

The process described in the comment is comparable to the process for determining Best Available Control Technology (BACT) established in the Prevention of Significant Deterioration regulations. The states, however, are not required to use a top-down BACT process for making a BART determination. EPA stated in its final BART rule that,—States should retain the discretion to evaluate control options in whatever order they choose, so long as the State explains its analysis of the CAA factors.‖ *See* 70 FR 39130 (July 6, 2005). NDEP's determination to eliminate SCR from consideration as BART was based on weighing the small incremental visibility improvement from SCR against its incremental cost-effectiveness. This decision is within the discretion that a state can exercise in evaluating BART because it considered the appropriate factors and came to a reasonable determination, especially in this case which was not required to meet all aspects of EPA's BART guidelines.

Comment 4: The proposal does not demonstrate that a NO_x limit of 0.05 lb/MMBtu on a 30-day rolling average basis using SCR has any adverse impacts when subjected to a site-specific, case-by-case, five-factor analysis.

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Response 4: The comment does not set forth the appropriate standard for a BART analysis. The process described by the commenter is analogous to a top-down control technology review conducted when determining the BACT for new major stationary sources or major modifications at existing stationary sources. As stated in Response 3, states are not required to use a top-down BACT process for making a BART determination, and states retain discretion to evaluate control options in whatever order they choose, as long as the state explains its analysis of the CAA factors.

NDEP applied the five-factor BART analysis for NO_x at RGGS. NDEP weighed the five factors and concluded that the small visibility improvement expected from installation of SCR did not justify the incremental cost of SCR. EPA independently and thoroughly evaluated NDEP's determination. EPA also considered both average and incremental cost effectiveness as well as visibility improvement. Although we disagree with NDEP's calculation of the cost effectiveness of SCR compared to SNCR, our modeling analysis has demonstrated that the visibility improvement from SCR is very small at GCNP. The visibility improvement from SCR is only 0.38 dv, and the incremental visibility improvement between SCR and SNCR is only 0.10 dv. The annualized cost of SNCR is approximately $1.02 million per unit, and the annualized cost of SCR is approximately $3.8 million per unit, making it four times as expensive as SNCR.[11] NDEP's determination that NO_x BART is an emissions rate that is achievable with SNCR is reasonable based on its weighing of the small visibility improvement against the cost of SCR.

[11] EPA cost estimates, as listed in Appendix B of the TSD to our April 4 proposed action [Appendix B - Control Cost Estimate Revisions (September 2011 updated estimates)]

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Comment 5: The statute and regulations do not require EPA to compare the best technology to the next best technology, and then reject the best technology based on incremental differences.

Response 5: EPA was not conducting its own BART analysis but was reviewing the adequacy of NDEP's BART analysis. We agree with the commenter that the CAA and regional haze regulations do not require the state to reject the best technology based on incremental differences. However, we note that the state has the discretion to compare the incremental cost-effectiveness and incremental visibility improvement that will result from various technologies. *See* 70 FR 39129 (July 6, 2005). The state must evaluate the differences between control technologies reasonably and provide a justification for rejecting a technology. For the RGGS NO_x BART determination, we are finalizing our approval of NDEP's elimination of SCR as BART based on the small visibility improvement that would result at the GCNP weighed against its cost-effectiveness. In addition, NDEP noted that RGGS is the size of a facility for which application of the BART Guidelines is not mandatory. Thus, EPA concluded that NDEP's NO_x BART determination was reasonable.

Comment 6: EPA's consideration of the incremental visibility improvement between SCR and SNCR is contrary to law because there is no incremental visibility factor.

Response 6: We disagree with the comment that considering incremental visibility improvement is prohibited by the CAA or our regulations. The CAA and our regional haze regulations specify that the states or EPA must consider cost and visibility in the five-factor analysis. With respect to the cost factor, in promulgating the BART Guidelines, EPA responded to a comment stating: —In addition, the guidelines continue to include both average and incremental costs. We continue to believe that both average and incremental costs provide

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information useful for making control determinations.‖ *See* 70 FR 39127 (July 6, 2005). The commenter did not cite any regulatory language that would preclude incremental cost effectiveness in considering the cost of compliance. With respect to using incremental visibility improvement, EPA's response to comments on promulgating the BART guidelines stated:

> For example, a State can use the CALPUFF model to predict visibility impacts from an EGU in examining the option to control NO_x and SO2 with SCR technology and a scrubber, respectively. A comparison of visibility impacts might then be made with a modeling scenario whereby NO_x is controlled by combustion technology. If expected visibility improvements are significantly different under one control scenario than under another, then a State may use that information, along with information on the other BART factors, to inform its BART determination. *See* 70 FR 39129 (July 6, 2005).

EPA's regulations allow states to compare incremental cost-effectiveness and visibility improvements between different technologies. The incremental visibility benefit is one way to compare the visibility improvements from various controls. For this BART determination, NDEP weighed the small incremental visibility improvement against the incremental cost effectiveness. Based on weighing these factors, NDEP provided a reasoned justification for choosing SNCR technology as NO_x BART for RGGS. EPA's independent analysis indicates that NDEP properly exercised its discretion in its process for weighing the small visibility improvement against the cost-effectiveness to reject SCR.

C. BART Selection Criteria

Comment 7: EPA did not provide the public with the criteria for making its BART determination, which appears inconsistent with the BART Guidelines and the intent of the Regional Haze Rule.

Response 7: As noted previously, EPA was not conducting its own BART analysis. We were reviewing the adequacy of NDEP's BART analysis. NDEP correctly noted that RGGS is not the size of a facility for which application of the BART Guidelines is mandatory.

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After receiving significant comments on our initial proposed rule (76 FR 36450), EPA independently and thoroughly reviewed NDEP's NO_x BART determination and concluded that NDEP provided the public with information regarding the criteria it was applying in making its BART determination. See—Revised NDEP BART Determination Review of NV Energy's Reid Gardner Generating Station Units 1, 2 and 3|| revised October 22, 2009. NDEP adequately informed the public about the basis for its NO_x BART determination for RGGS, stating: —NDEP concluded, based on a review of the economic analysis, that the $/ton of NO_x removed increased significantly for the LNB with OFA and SNCR, and ROFA with SCR technologies without correspondingly significant improvements in visibility.|| *Id.* page 6. We are approving NDEP's determination that NO_x BART for RGGS is an emissions rate that is achievable by installing and operating LNB with OFA and SNCR because NDEP reasonably weighed the small incremental visibility improvement that would result from installation of SCR against its higher cost. NDEP adequately disclosed the factors it considered in its BART determination.

Comment 8: EPA fails to explain what level of incremental cost or visibility improvement would justify SCR. EPA should disclose the dollar limit and rationale for what constitutes—cost effectiveness,|| and how its method is consistently applied across other facilities and states.

Response 8: EPA's approval of NDEP's BART determination is based on finding that the State adequately considered the appropriate factors for BART and provided a reasonable explanation for selecting a NO_x emissions rate that can be achieved with SNCR. NDEP explained that requiring SCR technology would result in a small incremental visibility improvement over SNCR when weighed against the incremental cost-effectiveness of SCR. As stated in our proposed approval, our modeling analysis was performed—in a manner that more

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closely adheres with current EPA regulatory guidance on CALPUFF modeling.‖ *See* 77 FR 21903 (April 12, 2012). Our analysis found that the average and incremental visibility improvement would be significantly lower than the visibility improvement relied upon by NDEP. In addition, EPA's revised cost analysis also indicated lower cost per ton of pollutant removed for SCR. In our analysis, we evaluated the cost-effectiveness of both technologies (SCR and SNCR with LNB and OFA) based on using the Control Cost Manual (CCM) for including appropriate costs.

Our modeling shows that there would be a very small improvement in visibility at the GCNP from using SCR at RGGS. Based on this analysis we have determined that we can approve NDEP's determination that RGGS is required to comply with a NO_x emissions rate that can be achieved with SNCR as BART. Although the values that EPA considered for cost-effectiveness and visibility improvement differ from NDEP's analysis, we conclude NDEP's analysis reasonably weighed the small visibility improvement against the cost to eliminate SCR.

One comment faults EPA, stating: ―EPA further fails to explain what level of incremental cost or visibility improvement would justify the incremental cost.‖ *See* Consortium Letter at page 6. EPA's BART guidelines did not establish bright-line thresholds for cost-effectiveness or visibility improvement, choosing to allow the states to exercise discretion to choose such values when appropriate. EPA stated:

> We agree with the suggestion that the use of a comparison threshold, as is done for determining if BART-eligible sources should be subject to a BART determination, is an appropriate way to evaluate visibility improvement. However, we believe the States have flexibility in setting absolute thresholds, target levels of improvement, or de minimis levels since the deciview improvement must be weighed among the five factors, and States are free to determine the weight and significance to be assigned to each factor. For example, a 0.3, 0.5 or even 1.0 deciview improvement may merit stronger weighting in one case versus another, so one _bright line' may not be appropriate. *See* 70 FR 39129 (July 6, 2005).

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The same rationale should apply to cost-effectiveness. A bright line for cost-effectiveness may not be appropriate for every case and is dependent on case specific factors relating to economics and technology. In this case-by-case determination, the small amount of visibility improvement did not justify the cost of SCR.

Comment 9: EPA should explain the amount of incremental visibility improvement from SNCR to SCR that would justify the incremental cost increase of SCR, since no threshold is established in rulemaking or guidance.

Response 9: EPA is not setting generally applicable thresholds for incremental cost-effectiveness or visibility improvement for the reasons discussed above. EPA's BART Guidelines established presumptive emissions limits for SO_2 and NO_x at electric generating units at facilities generating more than 750 MW. But EPA did not extend those presumptive emissions limits to electric generating units at smaller facilities, such as RGGS.

EPA did not establish presumptive cost-effectiveness or visibility improvement values. EPA left weighing the factors to the state providing the state considered the five factors and exercised its discretion reasonably. Here, EPA proposed to find that NDEP reasonably eliminated SCR when it weighed the cost-effectiveness against the small incremental visibility improvement associated with requiring SCR rather than SNCR.

BART is a case-by-case analysis that is initially evaluated by the states. Provided the state exercises its discretion reasonably and meets the requirements of the CAA and regulations, EPA may approve it. EPA's approval is not a ministerial act. In this rulemaking, EPA has carefully reviewed the basis for NDEP's determination. There is no reason, and none is provided in the comment, to support the assertion that EPA should establish thresholds for cost-

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effectiveness or visibility improvement, or challenge EPA's authority to approve a BART determination without them.

Comment 10: EPA's use of incremental visibility improvement to find that the cost of SCR is unjustified contradicts its finding that SCR is cost-effective (77 FR 21901).

Response 10: The commenter mischaracterizes EPA's proposed approval. The commenter is correct that we did not find the average and incremental cost-effectiveness of SCR to be cost prohibitive. Nevertheless, our evaluation supported NDEP's determination that the small amount of visibility improvement at GCNP did not justify the cost of SCR.

The comment states that EPA has invented a—sixth factor|| by—concatenating incremental visibility and incremental cost.|| *See* Consortium Letter, page 7. EPA has not invented an additional factor in the BART analysis but has approved a reasonable conclusion reached by NDEP when it weighed these two factors. NDEP's weighing two factors in the analysis does not create a sixth factor. The comment does not explain how weighing two factors in the five-factor analysis constitutes stringing together and joining those factors into a sixth factor.

National Parks Conservation Association and Sierra Club wrote to EPA on June 29, 2012, concerning several regional haze actions. We are treating this letter as a late comment on our proposed action and including it in our docket as such. This letter indicates that NPCA and Sierra Club understand that our approval is based on finding that NDEP reasonably weighed visibility improvement and cost-effectiveness rather than inventing an additional BART factor. The letter provides:

> In many cases, EPA has summarily concluded that the incremental costs of concededly superior controls are not warranted by the visibility benefits determinations, which are routinely at odds with the Agency's own analysis demonstrating that installing the most effective controls will yield needed visibility improvements. *See* Letter dated June 29, 2012, page 1.

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EPA's analyses are also based on weighing the five BART factors. The relative weight of the cost-effectiveness and visibility improvement varies depending on the facility at issue. For the three 100 megawatt units at RGGS, EPA concludes that notwithstanding differing conclusions about both cost and visibility improvement, NDEP reasonably determined that a small visibility improvement at GCNP does not justify the cost of SCR. Our approval of NDEP's NO_x BART determination on this basis is consistent with our actions on other regional haze SIPs. *See, e.g.,* 77 FR 24385 (Apr. 24, 2012)(Final Approval of Maine SIP).

D. Cost Analysis

Comment 11: The incremental cost difference between SCR and SNCR is less than EPA estimated because the cost of SCR is overestimated and the cost of SNCR is underestimated, making SCR look relatively more expensive than is the case.

Response 11: The comment does not provide any basis for EPA to revise its proposed approval of NDEP's NO_x BART determination. Our proposal stated:

> Based on our revised cost estimates, we do not consider these [EPA's] average and incremental cost effectiveness values for SCR and LNB and OFA as cost prohibitive. Our analysis of this factor indicates that costs of compliance (average and incremental) are not sufficiently large to warrant eliminating SCR from consideration.
> The incremental cost effectiveness values for Units 1 and 2 are around $4,500/ton. Although EPA does not consider this incremental cost prohibitive, we note that the State has certain discretion in weighing this cost. Because RGGS is not a facility over 750 MW and therefore not subject to EPA's presumptive BART limits, the State may exercise its discretion more broadly in this particular determination. *See* 77 FR 21901 (April 12, 2012).

Even if the average and incremental cost-effectiveness between SCR and SNCR were somewhat different, NDEP's BART determination would still be approvable based on its reasonable weighing of the cost and visibility improvement factors.

Comment 12: EPA incorrectly estimated the cost-effectiveness of SCR (i.e., dollars per ton of emissions removed on an annual basis) by assuming that SCR can achieve an annual

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average emission no lower than 0.083 to 0.098 lb/MMBtu, despite substantial evidence that SCR can achieve 0.05 lb/MMBtu or lower on an annual basis.

Response 12: EPA disagrees with this comment. Regarding the accuracy of the cost effectiveness calculations of SCR, the commenter is correct that we estimated cost-effectiveness of SCR based on annual average emission rates ranging from 0.083 to 0.098 lb/MMBtu. However, we indicated in our proposal that we did not find SCR to be cost prohibitive at these emission rates. As a result, although we did consider more stringent SCR emission rates, such as 0.06 lb/MMBtu, when evaluating visibility improvement, we did not also revise our cost estimates to reflect the more stringent SCR emission rates, since we had already indicated that did not find SCR to be cost prohibitive at the less stringent SCR emission rates. It would not have been in any way determinative to our decision to find that SCR was—even more‖ cost-effective or that the incremental cost-effectiveness value between SCR and SNCR was—even more‖ incrementally cost-effective.

Regarding the emission rate achievable by SCR, the BART Guidelines state that:—[i]n assessing the capability of the control alternative, latitude exists to consider special circumstances pertinent to the specific source under review, or regarding the prior application of the control alternative‖ (70 FR 39166, July 6, 2005).[12] In other words, the BART emission limits are not required to represent the maximum level of control ever achieved by a given technology. Limits set as BACT under the PSD program, or emission rates achieved from the operation of individual facilities under an emission trading program (e.g., Clean Air Interstate Rule), may provide important information, but should not be construed to automatically represent the most appropriate BART limit for all facilities.

[12] Although NDEP's BART analysis for RGGS need not conform to the BART guidelines because the capacity of RGGS is smaller than 750 MW, the BART guidelines do provide useful guidance in setting appropriate BART limits.

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The coal composition is also an important component of estimating the NO_x emissions rate that a facility can achieve. RGGS is capable of purchasing coal on the spot market so there is likely to be variability in the NO_x emissions rate that would be achievable with SCR or SNCR. As previously discussed in the response to Comment 2, RGGS receives its coal by rail line and has access to different ranked coals with varying nitrogen content, which influence the NO_x concentration in the exhaust going to either SNCR or SCR controls. EPA's policy is to set an emission limit that would reasonably accommodate the various coal sources under these circumstances.

EPA disagrees with this comment, but even if we accepted the premise that RGGS is capable of continuously meeting an emission limit of 0.05 lb/MMBtu, the comment does not provide any basis for EPA to change our approval of NDEP's SIP or our FIP. Assuming the cost of achieving 0.05 lb/MMBtu was equal to the cost of achieving 0.083 to 0.098 lb/MMBtu, using a NO_x emissions rate of 0.05 lb/MMBtu for SCR would likely result in lower average and incremental cost per ton values. Thus, we would calculate SCR to be more cost-effective (i.e., lower dollars per ton) on an average and incremental basis. As stated above, EPA did not determine the average or incremental cost of SCR to be prohibitive. Rather, EPA's approval of NDEP's determination that NO_x BART for RGGS for Units 1 and 2 is an emissions limit of 0.20 lb/MMBtu that can be achieved by installing and operating LNB with OFA and SNCR is based on our determination that NDEP reasonably weighed the visibility improvement against the other factors in rejecting SCR. EPA does not believe this analysis would be significantly altered by slightly lower incremental cost numbers.

Comment 13: EPA did not correct all the errors in the State's cost calculations for SCR (e.g., lack of multiple unit discounts, high reagent costs, incorrect capital recovery factor), which

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would have further reduced the cost and improved the cost effectiveness of SCR, thereby reducing the incremental cost difference with SNCR.

Response 13: EPA partially agrees with this comment. EPA's revised cost-effectiveness values are consistent with EPA's regulations and the parameters set forth in the CCM. EPA explained in promulgating the BART Guidelines that—[s]tates have flexibility in how they calculate costs.‖ *See* 70 FR at 39127 (July 6, 2005). A state may deviate from the Control Cost Manual provided its analysis is reasonable. EPA independently evaluated NDEP's cost-effectiveness calculation, stating in our proposal:

> We received several public comments that NDEP's cost calculations were overestimated and based on methodology inconsistent with EPA's Control Cost Manual (CCM). [footnote omitted]. We agree that NDEP included inappropriate costs and our analysis excludes those costs that are not allowed by the CCM. *See* 77 FR 21901 (April 12, 2012).

Our proposal noted that we did not revise the cost-effectiveness calculation to adjust for all of the discrepancies with the CCM because based on our initial adjustments we found that SCR was not cost-prohibitive. It would not have been in any way determinative to our decision to find that SCR was—even more‖ cost-effective or that the incremental cost-effectiveness value between SCR and SNCR was—even more‖ incrementally cost-effective.

As discussed above, EPA is approving NDEP's determination that NO_x BART is an emissions limit achievable with SNCR rather than SCR. The basis for our approval is that when NDEP weighed the small visibility improvement of moving from an emissions limit achievable with SNCR to one based on SCR against the incremental cost-effectiveness of SCR, NDEP determined that NO_x BART for RGGS for Units 1 and 2 is an emissions limit of 0.20 lb/MMBtu that can be achieved by installing and operating LNB with OFA and SNCR. NDEP has discretion in determining how to weigh the factors in reaching a BART decision under the CAA

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and regional haze regulations. NDEP's rationale for its decision, although based on different values than EPA calculated and modeled, was reasonable. Therefore, EPA is approving NDEP's determination.

The comment implies that correcting each of the costs listed as incorrect and substituting a SCR emissions limit of 0.05 lb/MMBtu rather than 0.06 lb/MMBtu for SCR would yield a very low incremental cost difference between SCR and SNCR. However, that implication is not supported by the comment. The comment does not calculate an alternative average or incremental cost-effectiveness differential between SCR and SNCR. Therefore, EPA is approving NDEP's conclusion that the incremental cost-effectiveness is not justified when weighed against the small visibility improvement.

Comment 14: EPA did not consider the adverse non-air quality impacts of SNCR due to ammonia injection, which would increase the cost of SNCR and reduce the incremental cost difference with SCR.

Response 14: As noted previously, EPA was reviewing the State's BART determination to evaluate whether NDEP reasonably applied the requirements of the CAA and the regional haze regulations. EPA anticipates that ammonia emissions will be quite low because these units are equipped with baghouses and wet scrubbers that each can be expected to remove most ammonia slip associated with SNCR or SCR. To the extent the commenter is concerned that considering costs due to ammonia injection would lower the incremental cost-effectiveness value between SCR and SNCR, EPA reiterates that our proposed approval of NDEP's RGGS NO_x BART determination is not based on agreeing with NDEP that SCR is not cost-effective. EPA's proposed approval states that SCR is cost-effective. Nonetheless, the BART determination is a multiple-factor analysis. NDEP has discretion to determine how to weigh the factors. Our

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independent analysis of the two critical factors demonstrated that the NDEP reasonably weighed the cost of SCR controls against the small visibility improvement to determine that SNCR is NO_x BART for RGGS.

Comment 15: In determining the average and incremental cost-effectiveness, EPA should have used actual emissions for the baseline value of each unit rather than each unit's annualized maximum permitted heat input multiplied by each unit's maximum permitted NO_x limit, which is closer to the potential to emit (PTE).

Response 15: EPA disagrees with this comment. Again, we note that EPA was not performing its own BART analysis, but was reviewing the adequacy of NDEP's BART analysis. The commenter is correct in noting that, in our review of NDEP's evaluation of the cost of compliance, we did not modify the estimate of baseline annual emissions that NDEP used in its cost calculations. We agree that NDEP's baseline more closely represents the sources' PTE, and results in higher baseline annual emissions than the methodology proposed by the commenter, which would rely almost entirely on past actual annual emissions. Because the regional haze regulations and BART Guidelines are not prescriptive regarding the calculation of baseline emissions, stating that—the baseline emissions rate should represent a realistic depiction of anticipated annual emissions for the source‖ [13], the commenter's proposed methodology is a potentially acceptable way to calculate baseline annual emissions. NDEP used a methodology that resulted in a higher estimate of baseline annual emissions, and we consider the methodology used by NDEP to be within the discretion afforded to states.

E. Cost of Compliance

Comment 16: Use of EPA's *Air Pollution Control Cost Manual* (—CCM‖) is not required since RGGS is less than a 750 megawatt facility.

[13] 70 FR 39167, July 6, 2005

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Response 16: EPA agrees that the states are not required to use the CCM for electric generating units smaller than 750 MW but that it is generally a good guide concerning costs to include and exclude. EPA performed an independent average and incremental cost-effectiveness calculation using the CCM to evaluate whether NDEP had reasonably weighed small visibility improvements against the incremental cost-effectiveness of requiring SCR rather than SNCR. EPA's analysis resulted in different cost-effectiveness and visibility improvement values. Although the values for these factors differed from NDEP's values, our analysis supported approving NDEP's NO_x BART determination to establish an emissions limit of 0.20 lb/MMBtu achievable from installing and operating SNCR.

Comment 17: EPA's *Air Pollution Control Cost Manual* is out of date, and thus substantially underestimates current market costs of control technologies including SCR, which misrepresents the cost-effectiveness of chosen technologies.

Response 17: EPA disagrees with the comment. The CCM is a valuable resource to guide the states in evaluating costs that should be included or excluded. The states have discretion to rely on specific capital and annual cost information that is updated or specific to the facility under consideration.

F. Visibility Analysis

Comment 18: EPA underestimated the visibility improvement that would result from SCR by assuming an emissions limit of 0.06 lb/MMBtu (about 84 percent efficiency) instead of 0.05 lbs/MMBtu (about 90 percent efficiency) or lower, which was achieved at 21 coal-fired EGUs in 2011, 11 of which are dry-bottom, wall-fired units like RGGS.

Response 18: EPA disagrees with this comment. As noted previously, the purpose of EPA's independent analyses assessing anticipated visibility improvements and cost-effectiveness

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of SCR were to evaluate the reasonableness of NDEP's determination based on weighing small incremental visibility improvement against the incremental cost-effectiveness of SCR. The modeling that NDEP relied on assumed that SCR would reduce NO_x between 78 percent and 82 percent. Although NDEP's assumptions for SCR performance were within the range of emission rates achieved nationwide, EPA determined that for the purposes of visibility modeling and calculating cost-effectiveness of SCR, assuming an 85 percent reduction efficiency to meet an emissions limit of 0.06 lb/MMBtu was reasonable for RGGS. As noted by the commenter, other coal-fired facilities do achieve emission rates of 0.05 lb/MMBtu or lower, and some BART determinations have established a NO_x emission limit of 0.05 lb/MMBtu for SCR. However, as noted in Response 12, emissions information reported to EPA's Clean Air Markets program show that among coal-fired boilers operating with SCR nationwide, there is significant variability in actual NO_x emission rates achieved, ranging from below 0.05 to greater than 0.10 lb/MMBtu.

EPA's assumption that RGGS could meet an emission limit of 0.06 lb/MMBtu is reasonable and within the expected performance range of SCR. The commenter does not provide a basis, *e.g.,* modeling that compares visibility benefits expected from a NO_x limit of 0.05 versus 0.06 lb/MMBtu, to change our approval of NDEP's determination that NO_x BART for RGGS is an emissions limit of 0.20 lb/MMBtu that can be achieved by installing and operating LNB with OFA and SNCR for the three units at RGGS. EPA anticipates that even if we modeled SCR to achieve 0.05 lb/MMBtu instead of 0.06 lb/MMBtu, the visibility benefits of SCR would still be smaller than the benefits modeled by NDEP. For example, if the post-SCR impact at GCNP is scaled by 0.05/0.06, it decreases from 0.20 dv to 0.17 dv. Relative to the 0.59 dv base case impact, the benefit of SCR would correspondingly increase from 0.38 dv to 0.42 dv,

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roughly 10 percent higher. However, as discussed in the Technical Support Document (TSD) for our proposed rule, EPA's estimates of visibility impacts are more than 50 percent lower than those relied on by NDEP due to differences in modeling procedures. The net effect of using 0.05 lb/MMBtu as the NO_x emissions factor would not change the fact that EPA's estimate of SCR's benefit would remain substantially smaller than that estimated by NDEP. As noted in previous responses, NDEP determined that the visibility benefits of SCR based on its modeling do not justify the cost. Thus, additional modeling of SCR at a lower emission rate is not likely to change NDEP's consideration of the visibility factor, or our determination that NDEP's process for weighing the factors is reasonable.

Comment 19: The small visibility improvement from SCR is the result of underestimating the base case emissions and the amount of NO_x that could be removed by SCR. The commenter provided an alternative, larger estimate of SCR benefits by scaling the EPA modeling results.

Response 19: EPA disagrees with this comment. EPA performed an independent modeling analysis to ensure NDEP's NO_x BART determination was reasonable. Although estimates of the visibility improvement would be larger if EPA had used higher base case emissions, the scaling method used by the commenter does not accurately reflect the effect of a different base case, which would require new modeling. Even if the commenter's scaling method results were accurate, the estimated visibility improvement remains small. The scaled benefits of SCR provided by the commenter are 0.7 dv at GCNP, and 1.9 dv cumulatively over the five Class I areas; the comparable scaled figures for SNCR would be 0.4 dv and 1.1 dv cumulatively. Thus, using the commenter's method, the incremental visibility improvement of SCR over SNCR would be 0.3 and 0.8 cumulatively. This is only slightly larger than the EPA-

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estimated benefit increase of 0.2 dv at GCNP, and is the same as the EPA-estimated benefit increase of 0.8 dv cumulatively. EPA's decision to approve NDEP's BART determination would be unchanged. See also the response to comment 20.

Comment 20: A commenter states that EPA used NDEP's NO_x baseline emission rates and control scenario emission rates to determine modeled visibility impacts. Because NDEP's emission rates are based on an annual average instead of a maximum 24-hr average, the commenter alleges that EPA underestimated visibility impacts, and provides its own estimate of 24-hr average baseline and control scenario emission rates.

Response 20: We acknowledge that we used NDEP's baseline and control scenario emission rates, based on annual average emission factors, in the visibility modeling supporting our proposed approval. As noted in our proposal, NDEP modified the baseline emission rates and control scenario emission rates that Nevada Energy included in the BART analysis.[14] NDEP did not, however, perform updated modeling to determine the visibility improvement associated with the revised baseline emission rates and revised control scenario emission rates. The absence of modeling results complicated our ability to evaluate the adequacy of NDEP's analysis. To evaluate the adequacy of NDEP's analysis, we performed our visibility modeling using NDEP's revised baseline and revised control scenario emission rates. Again, the purpose of our modeling was to evaluate the adequacy of NDEP's analysis which is not directly comparable to any modeling decisions we might make in our own BART determination as part of a FIP, such as at San Juan Generating Station.

Regarding the use of control scenario emission rates based upon annual average emission factors (in lb/MMBtu) instead of 24-hour average emission factors (lb/MMBtu), we disagree with the commenter that these emission rates do not provide acceptable estimates of visibility

[14] 77 FR 21903

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benefits. The methodology for calculating control scenario model emission rates described by the commenter involves applying the estimated control efficiencies of a particular technology to the baseline (pre-control) model emission rate. While this methodology has been used by EPA, it does not preclude the use of other methodologies for calculating control scenario emissions. In the case of control technology performance, engineering estimates of a particular technology's post-control level of performance will often be expressed in terms of lb/MMBtu, either on a 30-day or annual average basis. To the extent that the engineering estimate represents a more accurate depiction of future anticipated emissions at a particular facility, it may be appropriate to rely on the specified post-control level of performance rather than on a control efficiency applied to a pre-control emission rate. In fact, using model emission rates based on an annual average, instead of a 24-hour average, results in more stringent emission rates. As an example, the RGGS Unit 1 model emission rate calculated by the commenter for SCR and LNB with OFA is 99 lb/hr.[15] By comparison, the RGGS Unit 1 model emission rate used by EPA for this same technology is 73 lb/hr.[16]

Regarding the use of baseline emission rates based upon the annual average maximum instead of the 24-hour average maximum, we agree with the commenter that the BART guidelines state:—Use the 24-hour average actual emission rate from the highest emitting day of the meteorological period modeled (for the pre-control scenario).‖ *See* 70 FR 39170 (July 6, 2005). We note, however, that because the capacity of RGGS is less than 750 MW, NDEP is not required to adhere to the BART guidelines, and is therefore afforded some flexibility when evaluating the five statutory factors in its analysis of RGGS. We disagree that the maximum 24-

[15] See Table 13, National Park Service comment letter dated June 4, 2012, from Susan Johnson (NPS) to Thomas Webb (EPA)

[16] As used in Model Scenario c16 that is based on the more stringent level of SCR+LNB+OFA performance of 0.06 lb/MMBtu. See Technical Support Document, Appendix C, Docket Item No. EPA-R09-2010-0130-0077-11 and -15

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hour average baseline emissions the commenter provided are representative of RGGS' historical performance.[17] The baseline emissions provided by the commenter include a period of malfunction extending from January 8, 2003 to March 27, 2003. The result is maximum 24-hour average values that overstate RGGS' emission rate, and would therefore also overstate its visibility impact. If examining baseline emissions on a 24-hour average basis, we consider the WRAP NO_x emission rates indicated by the commenter to be more representative of maximum 24-hr average emissions[18], and note that these emission rates were included in our modeling analysis as Scenario c02.

The commenter also provides scaled estimates of visibility benefit based upon its estimates of 24-hour average baseline and control scenario emission rates. Notwithstanding our disagreements with the commenter noted above, if we use the WRAP's maximum 24-hour average emission rate as the baseline instead of the NDEP baseline, and scale our control scenario visibility benefits accordingly, we estimate the following visibility improvement at Grand Canyon National Park:[19]

	Original			Scaled		
Scenario	Visibility Impact	Visibility Improvement		Visibility Impact	Visibility Improvement	
		Total (from baseline)	Incremental (from prev)		Total (from baseline)	Incremental (from prev)
	dv	dv		dv	dv	
Baseline NO_x LNB+OFA	0.59	--	--	0.74	--	--
Enh. LNB+OFA	0.51	-0.08	*-0.08*	0.64	-0.10	-0.10
SNCR+LNB+OFA	0.37	-0.21	*-0.13*	0.47	-0.27	-0.17
ROFA+Rotamix	0.31	-0.28	*-0.06*	0.39	-0.35	-0.08

[17] Column 2 in Tables 11, 13, 15, National Park Service comment letter dated June 4, 2012, from Susan Johnson (NPS) to Thomas Webb (EPA)
[18] Column 6, Table 11, *ibid*
[19] Based on Visibility Method 8, best 20 percent days background, as summarized in Appendix E of the TSD from our April 4, 2012 proposed action. [Appendix E - RGGS_TSD_CALPUFF_tables.xls]

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SCR+LNB+OFA	0.22	-0.36	*-0.09*	0.28	-0.46	-0.11
SCR+LNB+OFA (0.06 lb/MMBtu)	0.20	-0.38	*-0.10*	0.26	-0.48	-0.13

As seen above, the scaled incremental visibility benefit of SCR (at 0.06 lb/MMBtu) compared to the next most stringent technology, ROFA w/ Rotamix, is 0.13 deciviews, whereas the original EPA-estimated incremental visibility benefit is 0.10. This magnitude of incremental visibility benefit is still sufficiently small to justify approval of NDEP's analysis.

G. Cumulative Visibility Benefit Analysis

We are providing a consolidated response to the following comments.

Comment 21: EPA based its BART determination on the visibility benefits of SCR at a single Class I area that has the maximum visibility impact, but should have considered cumulative impacts.

Comment 22: EPA did not consider the cumulative visibility benefits of SCR at all five Class I areas within 300 kilometers that are impacted by NO_x emissions from RGGS, in contrast to performing a cumulative visibility benefit analysis for Four Corners Power Plant and Navajo Generating Station.

Comment 23: EPA modeled the cumulative benefits of various BART controls across all five Class I areas as indicated in Appendix E, but did not include its cumulative modeling results in its proposed rule or TSD.

Comment 24: EPA's modeling results for SCR at all five parks in Appendix E showed a cumulative visibility benefit of 1.07 dv to 1.15 dv, which is significantly greater than the 0.38 dv benefits at GCNP alone.

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Comment 25: NPS calculates that the cumulative visibility benefits at five class I areas is about 2.0 dv for SCR on all three units.

Response 21-25: Although EPA did not provide the cumulative sum of visibility impacts over the five nearby Class I areas in the Notice of Proposed Rulemaking, EPA did in fact take into account the impacts at all those areas, considering both the number of areas affected and the impacts and benefits occurring there. EPA provided the modeled visibility impacts and benefits at all five Class I areas in Appendix E of the Technical Support Document. We did not rely on the specific metric advocated by the commenters, i.e. the sum of benefits over the areas, but we did consider the estimated visibility impacts across all five Class I areas in evaluating the reasonableness of Nevada's BART determination. Given the magnitude of the impacts at these areas, however, we focused largely on the benefits at GCNP in our proposed action and placed little weight on the benefits at the remaining four Class I areas. The commenters note that the sum of the visibility benefits across all five impacted Class I areas from requiring SCR is just over 1 dv of improvement. However, as that improvement is spread out over five Class I areas, we do not consider this sufficient reason to reject the State's BART determination, especially in light of the incremental benefits of SCR. On a Class I by Class I basis, there would be little improvement in visibility from requiring SCR.

The comment is correct that EPA provided information about the cumulative visibility improvement modeled for different BART scenarios in our Advanced Notice of Proposed Rulemaking for the Four Corners Power Plant and the Navajo Generating Station. EPA also provided information about the cumulative visibility improvement in our proposed and supplemental BART actions for Four Corners Power Plant. As we stated in those notices, EPA primarily relied on the benefits at the area with the greatest visibility improvement from controls,

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but we also considered impacts and benefits at nearby areas, including cumulative visibility benefits. EPA agrees that cumulative visibility benefits summed over multiple Class I areas may be a useful metric that can further inform a BART determination. Such an approach can be useful, for example, in simplifying a complex array of visibility impacts, especially where a source has significant impacts on multiple Class I areas. This approach, however, is not the only means of assessing visibility benefits over multiple Class I areas.

In this action we are evaluating whether NDEP's BART determination for RGGS resulted in the appropriate level of control for that facility. EPA's independent analysis of the modeled visibility improvements at GCNP and all other impacted areas corroborated the results of the NDEP analysis.

Comment 26: Using the WRAP baseline (scenario 00) and EPA's emissions limit of 0.06 lb/MMBtu (scenario 16) for SCR produces a cumulative visibility benefit of 1.82 dv.

Response 26: We disagree with the commenter's use of the WRAP scenario 00 as the baseline against which to measure visibility improvement. Although Scenario 00 models the WRAP NO_x emission rate, it also models the WRAP PM_{10} and SO_2 emission rates, which correspond to emission rates prior to installation of fabric filters (NDEP's PM_{10} BART determination) and wet flue gas desulfurization upgrades (NDEP's SO_2 BART determination). Scenario 16 models PM_{10} and SO_2 emission rates that account for the emission reductions associated with these control technologies. As a result, a comparison of Scenario 00 and 16 overestimates the benefit from SCR, because it also includes the visibility improvement associated with PM_{10} and SO_2 emission reductions.

H. CALPUFF Model

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Comment 27: EPA's accepted version of the CALPUFF model, introduced in 2007, is out of date given that new versions were updated in 2008, 2010, and 2011.

Response 27: EPA disagrees with the commenters that any new CALPUFF version should be used for the BART determination. EPA relied on version 5.8 of CALPUFF because it is the EPA-approved version in accordance with the Guideline on Air Quality Models (—GAQM||, 40 CFR 51, Appendix W, section 6.2.1.e); EPA updated the specific version to be used for regulatory purposes on June 29, 2007, including minor revisions as of that date; the approved CALPUFF modeling system includes CALPUFF version 5.8, level 070623, and CALMET version 5.8 level 070623. CALPUFF version 5.8 has been thoroughly tested and evaluated, and has been shown to perform consistently with the initial 2003 version in the analytical situations for which CALPUFF has been approved. Any other version would be considered an—alternative model||, subject to the provisions of GAQM section 3.2.2(b), requiring full model documentation, peer-review, and performance evaluation. No such information for the later CALPUFF versions that meet the requirements of section 3.2.2(b) has been submitted to or approved by EPA. Experience has shown that when the full evaluation procedure is not followed, errors that are not immediately apparent can be introduced along with new model features. For example, changes introduced to CALMET to improve simulation of over-water convective mixing heights caused their periodic collapse to zero, even over land, so that CALPUFF concentration estimates were no longer reliable.[20]

In addition, the latest version of CALPUFF, 6.4, incorporates a detailed treatment of chemistry. EPA's promulgation of CALPUFF (68 FR 18440, April 15, 2003) as a—preferred|| model approved it for use in analyses of Prevention of Significant Deterioration increment

[20]—CALPUFF Regulatory Update|| Roger W. Brode, Presentation at Regional/State/LocalModelers Workshop, June 10–12, 2008, available at http://www.cleanairinfo.com/regionalstatelocalmodelingworkshop/archive/2008/agenda.htm

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consumption and for complex wind situations, neither of which involve chemical transformations. For visibility impact analyses, which do involve chemical transformations, CALPUFF is considered a—screening|| model, rather than a—preferred|| model; this—screening|| status is also described in the preamble to the BART Guidelines (70 FR 39123, July 6, 2005). The change to CALPUFF 6.4 is not a simple model update to address bug fixes, but a significant change in the model science that requires its own rulemaking with public notice and comment.

Furthermore, it should be noted that the US Forest Service and EPA review[21] of CALPUFF version 6.4 results for a limited set of BART applications showed that differences in its results from those of version 5.8 are driven by two input assumptions and not associated with the chemistry changes in 6.4. Use of the so-called—full|| ammonia limiting method and finer horizontal grid resolution are the primary drivers in the predicted differences in modeled visibility impacts between the model versions. These input assumptions have been previously reviewed by EPA and the FLMs and have been rejected based on lack of documentation, inadequate peer review, and lack of technical justification and validation.

EPA intends to conduct a comprehensive evaluation of the latest CALPUFF version along with other—chemistry|| air quality models in consultation with the Federal Land Managers, including a full statistical performance evaluation, verification of its scientific basis, determination of whether the underlying science has been incorporated into the modeling system correctly, and evaluation of the effect on the regulatory framework for its use, including in New Source Review permitting. CALPUFF version 5.8 has already gone through this comprehensive evaluation process and remains the EPA-approved version, and is thus the appropriate version for EPA's corroboration of NDEP's BART determination.

[21]—CALPUFF Status and Update|| Tyler J. Fox, Presentation at Regional/State/LocalModelers Workshop, April 30 – May 4, 2012, available at http://www.cleanairinfo.com/regionalstatelocalmodelingworkshop/archive/2012/agenda.htm

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I. Nitrate Contribution to GCNP

We are providing a consolidated response to the following comments.

Comment 28: The WRAP's modeling supports the fact that NO_x is only a small contributor to visibility impairment at GCNP.

Comment 29: NO_x is mostly from cars and is not a major contributor to haze compared to other pollutants.

Comment 30: The contribution of nitrates from RGGS to haze at GCNP is so insignificant (0.01 percent) that any additional visibility benefit associated with SCR controls would yield an imperceptible improvement at GCNP for a significantly greater cost.

Comment 31: EPA's modeling did not take into account the fact that nearly 25,000 tons per year of NO_x has been eliminated from the emissions inventory due to closure or cancellation of three generating stations (Mohave, White Pine, and Toquop).

Response 28-31: Section 169A of the Clean Air Act requires BART determinations on BART-eligible EGUs regardless of trends or ambient visibility conditions. Application of BART is one means by which we can ensure that downward emission and visibility impairment trends continue. EPA modeling of NO_x from RGGS showed visibility impacts of up to 0.6 deciviews. This is not a negligible contribution to visibility impairment. EPA concluded in this case only that the incremental cost of SCR was not justified in relation to the visibility impact, not that the visibility impact was deminimis. Even if an individual pollutant or source category appears small to some commenters, the many segments of the emissions inventory together do cause visibility impairment, and each must be addressed in order to make progress towards the national goal of remedying visibility impairment from manmade pollution. EPA identifies stationary sources as

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an important category to evaluate in any BART analysis. In this case EPA approved the state's conclusion that SNCR was the appropriate BART control.

J. Emissions Limits

Comment 32: The proposed BART NO_x emissions limit (0.20 lb/MMBtu) appears to result in a very small reduction in actual emissions when compared to the performance of the three units over the past two years.

Response 32: EPA evaluated the potential NO_x emissions reduction based on RGGS's permitted emission limits. Actual emissions in tons per year can vary substantially for external reasons such as a downturn in economic conditions generally or unusual weather conditions. Until the permitted emissions limits for RGGS are lowered, RGGS may emit pollutants in those amounts at any time. Therefore, for RGGS the permitted emissions limit is the only enforceable and certain amount to use in calculating potential emission reductions. RGGS is no longer subject to a long-term coal contract and may purchase coal on the spot market. Different coals may also lead to a change in NOx emissions. RGGS historically burned a very high BTU Utah bituminous coal that when combusted is expected to result in substantially higher NOx emissions than sub-bituminous coals or lower BTU bituminous coals from Colorado. RGGS has recently added these two coals to the fuel mix at RGGS and the NOx levels have decreased. EPA determined that the BART emission limit should be achieved when burning any of these coals. Setting a more stringent limit for BART achievable with LNB with OFA and SNCR could prevent RGGS from using only their historical Utah bituminous coal.

Comment 33: Given the sensitivity of boiler operation, size, and configuration, SNCR may not be able to achieve the prescribed level of performance (0.20 lb/MMBtu) on a consistent basis.

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Response 33: NDEP will revise the enforceable permit limits to incorporate the NO_x BART emissions limit of 0.20 lb/MMBtu when SNCR is installed and operating at RGGS. EPA expects that Nevada Energy, as the operator of RGGS, will ensure the LNB with OFA and SNCR system is designed to achieve a lower emissions rate than 0.20 lb/MMBtu to insure the BART limit is achieved in practice. RGGS will also be required to continue to operate its continuous emissions monitoring system for NOx and report any excess emissions. If RGGS exceeds its emissions limit for NO_x, NDEP, EPA or a citizen may bring an enforcement action that can result in penalties and injunctive relief. EPA has determined based on the record provided by the state that NDEP should be able to consistently operate at an emissions limit below 0.20 lb/MMBtu and the comment does not provide a basis for us to revise the final SIP approval or FIP.

K. Compliance Period

Comment 34: Allowing five years from promulgation to install SNCR is excessive since SNCR can be installed in less than one year.

Response 34: We have reconsidered the compliance date in our proposal in response to this comment. The Nevada BART regulation requires that BART control measures at RGGS must be installed and operating—[o]n or before January 1, 2015; or (2) [n]ot later than 5 years after approval of Nevada's state implementation plan for regional haze by the United States Environmental Protection Agency Region 9 , *whichever occurs first."* NAC 445B.22096(2)(a)(emphasis added). We approved this requirement into the SIP on March 26, 2012 (effective April 25, 2012). 77 FR 17340. Therefore, the SIP-approved BART implementation deadline at RGGS for all pollutants, including NOx, is January 1, 2015.

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Consistent with this requirement, we are revising the compliance date in our FIP to January 1, 2015.

L. Compliance Method

Comment 35: Commenters state that the proposed method of demonstrating compliance with the NO_x emissions rate is more stringent than the rule requires; does not allow the facility to take credit for the times a unit is not in operation; does not provide a way for a unit that is out of compliance for a period of time to get back into compliance without a continued period of non-compliance; and is in contrast to the BART modeling protocol that directs the use of a pounds per hour limit as opposed to an emissions rate limit for all BART eligible units over a 24-hour basis. Commenters propose an alternate compliance demonstration methodology that consists of a unit-wide 30-calendar day rolling cap (in total lbs of NO_x). The cap is calculated based upon each unit operating continuously (24 hours/day for 30 days) at its permitted maximum hourly heat rate (MMBtu/hr), and at its BART NO_x emission limit (0.20 lb/MMBtu, which was determined based upon the operation of an ammonia injection system in conjunction with LNB). Compliance would then be demonstrated by calculating the unit-wide NO_x emission rate (in total lbs of NO_x) for the current calendar day, and adding it to the previous 29 calendar days' unit-wide NO_x emission rate (in total lbs of NO_x), and comparing this 30-calendar day total to the value of the unit-wide 30-calendar day rolling cap.

Response 35: We disagree with the commenters, and further do not consider the commenters' proposed compliance demonstration methodology to meet BART requirements. The Regional Haze Rule defines BART as—the best system of *continuous* emission reduction for each pollutant||, and requires that—each source subject to BART maintain the control equipment required by the subpart and establish procedures to ensure such equipment is properly operated

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[…].||[22] EPA's BART determinations for coal fired EGUs have set concentration limits, expressed as lb/MMBtu for the various visibility impairing pollutants averaged over a 30-day period. The proposed and finalized limit is more flexible than typical EPA BART determinations in that it allows the 3 units subject to BART to be averaged together to determine compliance (as requested by NDEP). BART limits are designed to be met at all times, not to provide for a facility to easily come back into compliance from a violation. We disagree that the facility requires additional flexibility to come back into compliance following an exceedance event, and consider a 30-day rolling average to provide a sufficient length of time to allow a facility to address and correct for perturbations that are reasonably expected to occur over the course of normal operations, and that cause short-term extra emissions.

Allowing a facility to take credit for times it is not operating, or for when it is not operating at maximum capacity, would allow RGGS to operate without the BART-required SNCR. SNCR can be expected to remove approximately 30 percent of the potential NO_x emissions. If the overall capacity (as evaluated against the maximum potential MW output) fell below 70 percent in any 30-day period, under the commenter's proposal RGGS would not have to operate the SNCR ammonia injection at all to meet its limit. Therefore, this would not meet the BART definition application of the best system of continuous emission reduction.

EPA recognizes that there are differences between BART emission limits and the emissions modeled to determine visibility improvements. This is the result of the models requiring short-term emission projections and the need for BART limits to have practical averaging times. Short averaging periods such as 1-hour averages would better correlate to the modeled emissions, but EPA has determined that such a short averaging period is not practical

[22] 40 CFR 51.301 and 40 CFR 51.308(e)(1)(v)

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for facilities subject to BART. EPA has, therefore, directed that averaging times should be no longer than 30-day rolling averages and should include all periods of startup, shutdown, and malfunction. As discussed above, an emission limit that allows a facility to take credit for non-operation could lead to substantially higher 24-hour emissions of visibility impairing pollutants because the facility could turn off its SNCR.

Specifically, the proposed emission cap, in the form as described by the commenters, does not by itself ensure that the control equipment determined as BART is continuously operated. We acknowledge that the regional haze regulations provide flexibility in establishing requirements and procedures to ensure that control equipment is properly and continuously maintained, and that a mass emission cap could be an acceptable BART emission limitation. In its current form, however, the emission cap proposed by the commenters allows a potential scenario in which, for a given unit-wide 30-calendar day period, one unit could operate at a NO_x emission level of 0.40 lb/MMBtu in exchange for non-operation of another unit (essentially, operating that unit at 0.00 lb/MMBtu). An emission level of 0.40 lb/MMBtu corresponds to operation of LNB only, and does not reflect the operation of SNCR.

In order to allow for better management of the elevated levels of emissions associated with startup events, we have revised our proposed determination method to be based on a boiler operating day average, rather than on a calendar day average. If based on a calendar day basis, the unit-wide 30-day rolling average could include as little as one hour of operation if the units were all offline for an outage that lasted longer than thirty days, because the first hour of operation would be the only data recorded in the last thirty calendar days. If based on a boiler operating day basis, the startup emissions—spike|| would be averaged with emission data from

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before outage, which would reflect nonzero emissions values, rather than with data from during the outage, which would reflect zero emissions.

M. Environmental Compliance at RGGS

Comment 36: Environmental controls, monitoring and practices have improved over recent years at the plant, which meets or exceeds all emissions limits, has reduced emissions, and has some of the lowest emissions of any plant in the country.

Response 36: EPA agrees in part with the comment. Nevada Energy has installed controls that substantially reduced the PM emissions from RGGS and installed ROFA on unit 4 to reduce NO_x emissions. Since monitoring began under the Acid Rain rules, RGGS has been among the coal fired electric generating units that emits the least SO_2. The same is not true for NO_x emissions from units 1, 2, and 3. By finalizing this action, EPA will ensure that there are also significant reductions in NO_x emissions from RGGS, as required by the Regional Haze rule and Section 169A of the CAA. Each of the 3 units at RGGS will reduce NO_x emissions from 0.46 lb/MMBtu to 0.20 lb/MMBtu.

N. Health Effects

Comment 37: Pollution from RGGS is causing a variety of health problems (e.g., allergies, respiratory illnesses, heart ailments, skin lesions, thyroid disorders, sinus infections) for the Moapa Band of Paiutes who reside directly adjacent to RGGS.

Response 37: In addition to regional haze, EPA assesses air quality regularly under the CAA with respect to setting and ensuring that areas in the country attain the NAAQS. The NAAQS are the health based standards that are set by EPA for the entire country. RGGS is located in an area that is designated as attainment for most of the NAAQS.[23] This means that the

[23] Please see http://www.epa.gov/region09/air/maps/maps_top.html for EPA Region IX air quality designations.

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air quality in the area surrounding RGGS is meeting most of the national health-based standards set by EPA.

Breathing air containing ozone can reduce lung function and increase respiratory symptoms, thereby aggravating asthma or other respiratory conditions. The area surrounding RGGS was designated nonattainment for the 1997 8-hour ozone NAAQS. The Clark County APCD and NDEP together are responsible for adopting and implementing programs for both stationary and mobile sources to bring the area into attainment for the 8-hour ozone NAAQS. On March 29, 2011, EPA published a direct final rule determining that the Clark County nonattainment area has attained the 1997 8-hour ozone NAAQS (76 FR 17343). Although the area has not been redesignated to attainment, the Clark County area continues to meet the 1997 8-hour ozone NAAQS. On April 30, 2012, EPA issued final designations for the 2008 8-hour ozone NAAQS. Clark County was designated attainment for this more stringent ozone standard.[24]

The Moapa Band of Paiutes resides on land adjacent to RGGS. The stacks at RGGS release the exhaust at a high elevation for the purpose of preventing excessive concentration of pollutants in the immediate vicinity of the plant.[25] Because the area surrounding RGGS is meeting the health-based 1997 and 2008 ozone NAAQS, EPA expects that air quality in the area is protective of human health. Because today's actions require additional reductions in NO_x emissions, air quality will continue to improve. However, regardless of the attainment status of the surrounding area, EPA has been and will remain involved in efforts to ensure that the operation of RGGS meets all environmental requirements. Consequently, EPA believes it has

[24] http://www.epa.gov/ozonedesignations/2008standards/final/region9f.htm
[25] EPA Good Engineering Practice (GEP) http://www.epa.gov/scram001/guidance/guide/gep.pdf

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implemented the executive order with respect to the Moapa Tribe in these actions implementing BART at RGGS.

O. Environmental Justice

Comment 38: EPA should implement Executive Order 13175 since pollution from RGGS is having a substantial direct effect on the tribe.

Response 38: Ground-level ozone has the ability to impact human health, and is a secondary pollutant formed from precursor gases, primarily volatile organic compounds (VOCs) and NO_x. However, monitored ozone concentrations throughout Clark County, including monitors nearest RGGS, meet the 2008 ozone standard. EPA considers the air quality in the vicinity of the plant to be protective of public health. However, regardless of the attainment status of the surrounding area, EPA has been and will remain involved in efforts to ensure that the operation of RGGS meets all environmental requirements.

P. Economic Impacts

Comment 39: The high cost of SCR could cause RGGS to close, which would harm the local economy through the loss of jobs, the loss of contracts, and the loss of customers for local businesses.

Response 39: EPA has determined that it is cost effective for RGGS to install and operate SNCR at Units 1, 2 and 3. Because EPA is not disapproving NDEP's determination to require SNCR rather than SCR, EPA does not expect the facility to close and thus the comment does not require additional response.

III. Summary of EPA Actions

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EPA is approving in part and disapproving in part the remaining portion of the Nevada Regional Haze SIP that implements the Regional Haze Rule that requires states to prevent any future and remedy any existing man-made impairment of visibility in mandatory Class I areas. EPA is approving Nevada's selection of a NO_x emissions limit of 0.20 lb/MMBtu as BART for Units 1 and 2 at RGGS. EPA is disapproving two provisions of Nevada's BART determination for NO_x at RGGS: the emissions limit for Unit 3 and the compliance method for all three units. EPA is promulgating a FIP to replace the disapproved provisions by establishing a BART emissions limit for NO_x of 0.20 lb/MMBtu at Unit 3, and a 30-day averaging period for compliance based on a heat input-weighted basis across all three units.

EPA estimates the total, facility-wide capital costs of complying with this final BART determination for NO_x to be $26.5 million, and total annual costs (annualized capital costs plus additional operating costs) to be $4.3 million per year. The FIP requirements on Unit 3, which will require that unit to operate at 0.20 lb/MMBtu instead of 0.28 lb/MMBtu, will result in an additional operating cost of approximately $75,000 per year and will achieve a NOx reduction of 393 tons per year. This final BART determination is expected to reduce emissions of NO_x by 58 percent, from 6,980 tons per year to 2,968 tons per year, resulting in a facility-wide average cost-effectiveness of about $1,078 per ton of NO_x removed. EPA anticipates that this investment will reduce visibility impairment caused by RGGS by an average of 48 percent at 5 Class I areas within 300 km of the facility. A detailed summary of the cost and visibility benefits were provided in the Technical Support Document for the proposed rulemaking.

IV. Statutory and Executive Order Reviews

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A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action finalizes a SIP approval and a source-specific FIP for a single stationary source, the Reid Gardner Generating Station in Nevada. This type of action is exempt from review under Executive Order (EO) 12866 (58 FR 51735, October 4, 1993) and is therefore not subject to review under Executive Order 13563 (76 FR 3821, January 21, 2011).

B. Paperwork Reduction Act

This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq*. Under the Paperwork Reduction Act, a ―collection of information‖ is defined as a requirement for―answers to . . . identical reporting or recordkeeping requirements imposed on ten or more persons . . . .‖ 44 U.S.C. 3502(3)(A). Because the FIP portion of this rulemaking applies to a single facility, Reid Gardner Generating Station, the Paperwork Reduction Act does not apply. *See* 5 CFR 1320(c).

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

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An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR Part 9.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) a small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this action on small entities, I certify that this final action will not have a significant economic impact on a substantial number of small entities. As the Reid Gardner Generating Station is not a small entity, the FIP for Reid Gardner Generating Station being finalized today does not impose any new requirements on small entities. *See Mid-Tex Electric Cooperative, Inc. v. FERC*, 773 F.2d 327 (D.C. Cir. 1985)

D. Unfunded Mandates Reform Act (UMRA)

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This rule will impose an enforceable duty on the private sector owners of Reid Gardner Generating Station. However, this rule does not contain a Federal mandate that may result in expenditures of $100 million (in 1996 dollars) or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. EPA's estimate for the total annual cost for Reid Gardner Generating Station to lower its NO_x emissions limit at Unit 3 to 0.20 lb/MMBtu and for Units 1 – 3 to meet that NO_x emissions limit on a 30 successive boiler operating day rolling average does not exceed $100 million (in 1996 dollars) in any one year. Thus, this rule is not subject to the requirements of sections 202 or 205 of UMRA. This action is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. This rule will not impose direct compliance costs on Nevada, and will not preempt Nevada law. This final action will reduce the emissions of one pollutant from a single source, Reid Gardner Generating Station.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or in the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This final action requires emission reductions of NO_x at a specific private stationary source located in Nevada. Thus, Executive Order 13132 does not apply to this action.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

Subject to the Executive Order 13175 (65 FR 67249, November 9, 2000) EPA may not issue a regulation that has tribal implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to

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pay the direct compliance costs incurred by tribal governments, or EPA consults with tribal officials early in the process of developing the proposed regulation and develops a tribal summary impact statement.

EPA has concluded that this action may have tribal implications because the Reid Gardner Generating Station is located adjacent to the Moapa Band of Paiutes reservation and the Tribe has expressed its concerns directly to EPA on several occasions. However, this final action will neither impose substantial direct compliance costs on tribal governments, nor preempt Tribal law. This final rule requires Reid Gardner Generating Station, a major stationary source located in Nevada, to reduce emissions of NO_x under the BART requirement of the Regional Haze Rule. This will benefit air quality and the Moapa Band of Paiutes.

EPA consulted with tribal officials early in the process of developing this regulation to permit them to have meaningful and timely input into its development. EPA met with President Anderson on August 11, 2011, and again on April 17, 2012, to hear the Tribe's concerns directly. In addition, EPA held one public hearing on the Moapa Reservation on May 3, 2011, to ensure that tribal members had the opportunity to provide oral testimony.

The Moapa Band of Paiutes joined a consortium of environmental groups to submit comments on our proposed rule. The main concern expressed by the consortium was that EPA was not requiring Reid Gardner Generating Station to install and operate the top NO_x control option, selective catalytic reduction, as BART. The comments also raised potential health impacts and environmental justice concerns relative to the Moapa Band of Paiutes from not requiring the most stringent NO_x control option.

EPA summarized and responded to comments from the environmental consortium and Moapa Band of Paiutes. Our responsibilities under the Executive Order must be exercised in the

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context of our role under the CAA, which is to review NDEP's plan and determine if it meets the CAA requirements. We have done a thorough review and have determined that NDEP has adopted an emission limit that meets BART for RGGS. That emission limit can be met with SNCR instead of SCR, but RGGS will still have to install additional pollution control equipment that will reduce NO_x emissions. These emission reductions will not only improve visibility but will provide additional health benefits for the Moapa Band of Paiutes and other residents of Clark County. EPA has been and will remain involved in efforts to ensure that the operation of RGGS meets all environmental requirements.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

Executive Order 13045: *Protection of Children from Environmental Health Risks and Safety Risks* (62 FR 19885, April 23, 1997), applies to any rule that: (1) is determined to be economically significant as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This rule is not subject to Executive Order 13045 because it requires emissions reductions of NO_x from a single stationary source. Because this action only applies to a single source and is not a rule of general applicability, it is not economically significant as defined under Executive Order 12866, and the rule also does not have a disproportionate effect on children. However, to the extent that the rule will reduce emissions of NO_x, which contributes to

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ozone formation, the rule will have a beneficial effect on children's health by reducing air pollution that causes or exacerbates childhood asthma and other respiratory issues.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Pub L. No. 104-113, 12 (10) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. VCS are technical standards (e.g., materials specifications, test methods, sampling procedures and business practices) that are developed or adopted by the VCS bodies. The NTTAA directs EPA to provide Congress, through annual reports to OMB, with explanations when the Agency decides not to use available and applicable VCS.

Consistent with the NTTAA, the Agency conducted a search to identify potentially applicable VCS. For the measurements listed below, there are a number of VCS that appear to have possible use in lieu of the EPA test methods and performance specifications (40 CFR Part 60, Appendices A and B) noted next to the measurement requirements. It would not be practical to specify these standards in the current rulemaking due to a lack of sufficient data on equivalency and validation and because some are still under development. However, EPA's Office of Air Quality Planning and Standards is in the process of reviewing all available VCS for incorporation by reference into the test methods and performance specifications of 40 CFR Part

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60, Appendices A and B. Any VCS so incorporated in a specified test method or performance specification would then be available for use in determining the emissions from this facility. This will be an ongoing process designed to incorporate suitable VCS as they become available.

Particulate Matter Emissions - EPA Methods 1 though 5

Opacity - EPA Method 9 and Performance Specification Test 1 for Opacity Monitoring

NO_x Emissions - Continuous Emissions Monitors

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Executive Order 12898 (59 FR 7629, February 16, 1994), establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population. This rule requires emissions reductions of one pollutant from a single stationary source, Reid Gardner Generating Station.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the

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agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. Section 804 exempts from section 801 the following types of rules (1) rules of particular applicability; (2) rules relating to agency management or personnel; and (3) rules of agency organization, procedure, or practice that do not substantially affect the rights or obligations of non-agency parties. 5 U.S 804 (3). EPA is not required to submit a rule report regarding today's action under section 801 because this is a rule of particular applicability and only applies to one facility, the Reid Gardner Generating Station..

L. Petitions for Judicial Review

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by [*insert date 60 days from publication in Federal Register*]. Filing a petition for reconsideration by the administrator of this final rule does not affect the finality of this rule for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (*See* CAA section 307(b) (2)).

[Approval and Promulgation of Air Quality Implementation Plans; Nevada; Regional Haze State and Federal Implementation Plans; BART Determination for Reid Gardner Generating Station

EPA-R09-OAR-2011-0130]

List of Subjects in 40 CFR Part 52

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Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen oxides, Particulate matter, Reporting and recordkeeping requirements, Sulfur dioxide, Visibility, Volatile organic compounds.

_____ _____

Dated: Lisa P. Jackson,

Administrator

Part 52, chapter I, title 40 of the Code of Federal Regulations is amended as follows:

PART 52--[AMENDED]

1. The authority citation for part 52 continues to read as follows:

AUTHORITY: 42 U.S.C. 7401 *et seq.*

Subpart DD - Nevada

2. Section 52.1470 is amended by:

a. In paragraph (c), Table 1 revising the entry for—445B.22096.||

b. In the table in paragraph (e), removing the existing entry for—Nevada Regional Haze State Implementation Plan (October 2009)|| and adding a new, revised entry for __Nevada Regional Haze State Implementation Plan (October 2009)|| after the entry for—Small Business Stationary Source Technical and Environmental Compliance Assistance Program," State-effective on 7/5/95.

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§ 52.1470 Identification of plan.

* * * * *

(c) * * *

Table 1—EPA-Approved Nevada Regulations and Statutes

State citation	Title/subject	State effective date	EPA approval date	Additional explanation
* * * * * * *				
445B.22096, excluding the NO_X averaging time and control type for units 1, 2 and 3 and the NO_X emission limit for unit 3 in sub-paragraph (1)(c), all of which EPA has disapproved.	Control measures constituting BART; limitations on emissions	1/28/10	[Insert page number where the document begins and publication date]	Included in supplemental SIP revision submitted on September 20, 2011, and approved as part of approval of Nevada Regional Haze SIP. Excluding the NO_X averaging time and control type for units 1, 2 and 3 and the NO_X emission limit for unit 3 of NV Energy's Reid Gardner Generating Station, all of which EPA has disapproved.
* * * * * * *				

* * * * *

(e) * * *

Name of SIP provision	Applicable geographic or nonattainment area	State submittal date	EPA approval date	Explanation
* * * * * * *				

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Nevada Regional Haze State Implementation Plan (October 2009), excluding the BART determination for NO_x at Reid Gardner Generating Station in sections 5.5.3, 5.6.3 and 7.2, which EPA has disapproved.	State-wide	11/18/09	[Insert page number where the document begins and publication date]	Excluding Appendix A (—Nevada BART Regulation‖). The Nevada BART regulation, including NAC 445B.029, 445B.22095, and 445B.22096, is listed above in 40 CFR 52.1470(c).
* * * * * * *				

3. Section 52.1488 is amended by:

a. Revising paragraph (e).

b. Adding paragraph (f).

The revision and addition read as follows:

§ 52.1488 Visibility protection.

* * * * *

(e) *Approval.* On November 18, 2009, the Nevada Division of Environmental Protection submitted the—Nevada Regional Haze State Implementation Plan.‖ With the exception of the BART determination for NO_x at Reid Gardner Generating Station in sections 5.5.3, 5.6.3 and 7.2; the NO_X averaging time and control type for units 1, 2 and 3 in sub-paragraph (1)(c) of Nevada Administrative Code section 445B.22096; and the NO_X emission limit for unit 3 in sub-paragraph (1)(c) of Nevada Administrative Code section 445B.22096; the Nevada Regional Haze State Implementation Plan, as supplemented and amended on February 18, 2010 and September

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20, 2011, meets the applicable requirements of Clean Air Act sections 169A and 169B and the Regional Haze Rule in 40 CFR 51.308.

(f) *Source-specific federal implementation plan for regional haze at Reid Gardner Generating Station Units 1, 2 and 3.* This paragraph (f) applies to each owner and operator of the coal-fired electricity generating units (EGUs) designated as Units 1, 2, and 3 at the Reid Gardner Generating Station in Clark County, Nevada.

(1) *Definitions*. Terms not defined below shall have the meaning given to them in the Clean Air Act or EPA's regulations implementing the Clean Air Act. For purposes of this paragraph (f):

Ammonia injection shall include any of the following: anhydrous ammonia, aqueous ammonia or urea injection.

Boiler operating day means any 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any of the units identified in paragraph (f) of this section.

Combustion controls shall mean new low NO_x burners, new overfire air, and/or rotating overfire air.

Continuous emission monitoring system or *CEMS* means the equipment required by 40 CFR Part 75 to determine compliance with this paragraph (f).

NO_x means nitrogen oxides expressed as nitrogen dioxide (NO_2).

Owner/operator means any person who owns or who operates, controls, or supervises an EGU identified in paragraph (f) of this section.

Unit means any of the EGUs identified in paragraph (f) of this section.

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Unit-wide means all of the EGUs identified in paragraph (f) of this section.

Valid data means data recorded when the CEMS is not out-of-control as defined by part 75 and which meets the relative accuracy requirements of this paragraph.

(2) *Emission limitations* – the total discharge of NOx from Units 1, 2, and 3, expressed as NO_2, shall not exceed 0.20 lb/MMBtu determined over a 30 successive boiler operating day period. For each boiler operating day, hourly emissions of NO_2, in pounds of NO_2, for units 1, 2 and 3 for that day shall be summed together. For each boiler operating day, heat input, in millions of BTU, for units 1, 2 and 3 for that day shall be summed together. Each day the 30 successive boiler operating day NO_2 emission rate, in lb/MMBtu, shall be determined by adding together that day and the preceding 29 boiler operating days' pounds of NO_2 and dividing that total pounds of NO_2 by the sum of the heat input during the same 30-day period.

(3) *Compliance date*. The owners and operators subject to this section shall comply with the emissions limitations and other requirements of this section by January 1, 2015 and thereafter.

(4) *Testing and Monitoring*. (i) At all times after the compliance date specified in paragraph (f)(3) of this section, the owner/operator of each unit shall maintain, calibrate, and operate a CEMS, in full compliance with the requirements found at 40 CFR part 75, to accurately measure NO_x, diluent, and stack gas volumetric flow rate from each unit. In addition to these requirements, relative accuracy test audits shall be performed for both the NO_2 pounds per hour measurement and the hourly heat input measurement. Each such relative accuracy test audit shall have a relative accuracy, as defined in 40 CFR part 60, appendix F § 2.6, of less than 20

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percent. This testing shall be evaluated each time the 40 CFR part 75 monitors undergo relative accuracy testing. Compliance with the emission limit for NO_2 shall be determined by using valid data that is quality assured in accordance with the requirements of this paragraph.

(ii) If a valid NO_x pounds per hour or heat input is not available for any hour for a unit, that heat input and NO_x pounds per hour shall not be used in the calculation of the unit-wide rolling 30 successive boiler operating day average. Each unit shall obtain at least 90 percent hours of data over each calendar quarter. 40 CFR part 60 Appendix A Reference Methods may be used to supplement the part 75 monitoring.

(iii) Upon the effective date of the unit-wide NO_x limit, the owner or operator shall have installed CEMS software that meets with the requirements of this section for measuring NO_2 pounds per hour and calculating the unit-wide 30 successive boiler operating day average as required in paragraph (f)(2) of this section.

(iv) Upon the completion of installation of ammonia injection on any of the three units, the owner or operator shall install, and thereafter maintain and operate, instrumentation to continuously monitor and record levels of ammonia consumption for that unit.

(5) *Notifications.* (i) The owner or operator shall notify EPA within two weeks after completion of installation of combustion controls or ammonia injection on any of the units subject to this section.

(ii) The owner or operator shall also notify EPA of initial start-up of any equipment for which notification was given in paragraph (f)(5)(i).

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(6) *Equipment Operations*. After completion of installation of ammonia injection on any of the three units, the owner or operator shall inject sufficient ammonia to minimize the NO_x emissions from that unit while preventing excessive ammonia emissions.

(7) *Recordkeeping.* The owner or operator shall maintain the following records for at least five years:

(i) for each unit, CEMS data measuring NO_x in lb/hr, heat input rate per hour, the daily calculation of the unit-wide 30 successive boiler operating day rolling lb NO_2/MMbtu emission rate as required in paragraph (f)(2) of this section.

(ii) Records of the relative accuracy test for NO_x lb/hr measurement and hourly heat input

(iii) Records of ammonia consumption for each unit, as recorded by the instrumentation required in paragraph (f)(4)(iv) of this section.

(8) *Reporting.* Reports and notifications shall be submitted to the Director of Enforcement Division, U.S. EPA Region IX, at 75 Hawthorne Street, San Francisco, CA 94105. Within 30 days of the end of each calendar quarter after the effective date of this section, the owner or operator shall submit a report that lists the unit-wide 30 successive boiler operating day rolling lb NO_2/MMBtu emission rate for each day. Included in this report shall be the results of any relative accuracy test audit performed during the calendar quarter.

(9) *Enforcement.* Notwithstanding any other provision in this implementation plan, any credible evidence or information relevant as to whether the unit would have been in compliance with applicable requirements if the appropriate performance or compliance test had been performed,

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can be used to establish whether or not the owner or operator has violated or is in violation of any standard or applicable emission limit in the plan.

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 8/14/2012 12:35:51 PM
Subject: Environ call today

Hi,

I've been busy with the ozone issues and other things and have not gotten far compared to last week, so I was thinking of canceling today's call with Environ/RTI. Any objections or issues that people need to cover today? We still don't have a CSAPR ruling.

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

To: gyarwood@environcorp.com;unopmongcol@environcorp.com;"snw@rti.org"[]; nopmongcol@environcorp.com;"snw@rti.org"[]; snw@rti.org"[]
Cc: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 8/14/2012 2:23:09 PM
Subject: Cancel call today

Hi,

We have been busy on other projects and have not made much progress on our tasks, so wanted to cancel the technical call today. I believe Ellen may still want to talk some contract issues with RTI, but we can have the next technical call on Tuesday next week.

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 8/14/2012 6:15:28 PM
Subject: Cancelled: TX RH: Meeting with Environ Followed By Meeting with RTI

To: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Thur 8/16/2012 3:46:02 PM
Subject: RTI/Environ

Joe -- our first technical discussion with Environ was Tuesday June 19th.

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

To: Uarporn Nopmongcol [unopmongcol@environcorp.com]
Cc: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;Greg Yarwood [gyarwood@environcorp.com]; N=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;Greg Yarwood [gyarwood@environcorp.com]; reg Yarwood [gyarwood@environcorp.com]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;"snw@rti.org" [snw@rti.org]; snw@rti.org" [snw@rti.org]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Michael Feldman/OU=R6/O=USEPA/C=US
Sent: Tue 8/21/2012 2:28:03 PM
Subject: Call with Environ 8/21

I suggest that we cancel today's call. A number of people are out of the office today or tied up with other things. We can reschedule for later this week or wait until next week. Please let me know if there are any objections or issues that need to be discussed today.

Thank you,

Michael Feldman
Environmental Engineer
Air Planning Section
U.S. EPA Region 6, 6PD-L
Phone: 214-665-9793
feldman.michael@epa.gov

To: Michael Feldman/R6/USEPA/US@EPA;Uarporn Nopmongcol [unopmongcol@environcorp.com]; arporn Nopmongcol [unopmongcol@environcorp.com]
Cc: Ellen Belk/R6/USEPA/US@EPA;Erik Snyder/R6/USEPA/US@EPA;Joe Kordzi/R6/USEPA/US@EPA;"snw@rti.org" [snw@rti.org]; rik Snyder/R6/USEPA/US@EPA;Joe Kordzi/R6/USEPA/US@EPA;"snw@rti.org" [snw@rti.org]; oe Kordzi/R6/USEPA/US@EPA;"snw@rti.org" [snw@rti.org]; snw@rti.org" [snw@rti.org]; ynde Schoellkopf/R6/USEPA/US@EPA[]
From: Greg Yarwood
Sent: Tue 8/21/2012 5:04:01 PM
Subject: RE: Call with Environ 8/21
feldman.michael@epa.gov

ENVIRON agrees with cancelling today's call

Regards - Greg

From: Michael Feldman [mailto:Feldman.Michael@epamail.epa.gov]
Sent: Tuesday, August 21, 2012 7:28 AM
To: Uarporn Nopmongcol
Cc: Ellen Belk; Erik Snyder; Greg Yarwood; Joe Kordzi; snw@rti.org; Lynde Schoellkopf
Subject: Call with Environ 8/21

I suggest that we cancel today's call. A number of people are out of the office today or tied up with other things. We can reschedule for later this week or wait until next week. Please let me know if there are any objections or issues that need to be discussed today.

Thank you,

Michael Feldman
Environmental Engineer
Air Planning Section
U.S. EPA Region 6, 6PD-L
Phone: 214-665-9793
feldman.michael@epa.gov

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To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Mon 8/27/2012 7:11:40 PM
Subject: Cancelled: TX RH: Meeting with Environ Followed By Meeting with RTI

To: Michael Feldman/R6/USEPA/US@EPA[]
Cc: Ellen Belk/R6/USEPA/US@EPA;Erik Snyder/R6/USEPA/US@EPA;"Greg Yarwood" [gyarwood@environcorp.com]; rik Snyder/R6/USEPA/US@EPA;"Greg Yarwood" [gyarwood@environcorp.com]; Greg Yarwood" [gyarwood@environcorp.com]; oe Kordzi/R6/USEPA/US@EPA;Lynde Schoellkopf/R6/USEPA/US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; ynde Schoellkopf/R6/USEPA/US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; Uarporn Nopmongcol" [unopmongcol@environcorp.com]
From: "Wolf, Susan N."
Sent: Tue 8/28/2012 6:13:50 PM
Subject: WA1-11 - 8/28 call?
feldman.michael@epa.gov

Hi all,

Has today's call been cancelled? Please let us know. Thanks.

-Susan

From: Michael Feldman [mailto:Feldman.Michael@epamail.epa.gov]
Sent: Tuesday, August 21, 2012 10:28 AM
To: Uarporn Nopmongcol
Cc: Ellen Belk; Erik Snyder; Greg Yarwood; Joe Kordzi; Wolf, Susan N.; Lynde Schoellkopf
Subject: Call with Environ 8/21

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Thank you,

Michael Feldman
Environmental Engineer
Air Planning Section
U.S. EPA Region 6, 6PD-L
Phone: 214-665-9793
feldman.michael@epa.gov

To: "Wolf, Susan N." [snw@rti.org]
Cc: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;"Greg Yarwood" [gyarwood@environcorp.com]; Greg Yarwood" [gyarwood@environcorp.com]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; Uarporn Nopmongcol" [unopmongcol@environcorp.com]
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 8/28/2012 6:30:14 PM
Subject: Re: WA1-11 - 8/28 call?
feldman.michael@epa.gov

Apologies. I thought Ellen sent an email to everyone canceling the call. It must have been just a cancelation on our Lotus Notes calendar that did not get circulated to you all. Sorry for the confusion. We are trying to determine internally how to move forward on Texas with the recent CSAPR modeling.

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

From: "Wolf, Susan N." <snw@rti.org>
To: Michael Feldman/R6/USEPA/US@EPA
Cc: Ellen Belk/R6/USEPA/US@EPA, Erik Snyder/R6/USEPA/US@EPA, "Greg Yarwood" <gyarwood@environcorp.com>, Joe Kordzi/R6/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA, "Uarporn Nopmongcol" <unopmongcol@environcorp.com>
Date: 08/28/2012 01:25 PM
Subject: WA1-11 - 8/28 call?

Hi all,
Has today's call been cancelled? Please let us know. Thanks.
-Susan

From: Michael Feldman [mailto:Feldman.Michael@epamail.epa.gov]
Sent: Tuesday, August 21, 2012 10:28 AM
To: Uarporn Nopmongcol
Cc: Ellen Belk; Erik Snyder; Greg Yarwood; Joe Kordzi; Wolf, Susan N.; Lynde Schoellkopf
Subject: Call with Environ 8/21

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objections or issues that need to be discussed today.

Thank you,

Michael Feldman
Environmental Engineer
Air Planning Section
U.S. EPA Region 6, 6PD-L
Phone: 214-665-9793
feldman.michael@epa.gov

To: "Wolf, Susan N." [snw@rti.org]
Cc: "Greg Yarwood" [gyarwood@environcorp.com]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; Uarporn Nopmongcol" [unopmongcol@environcorp.com]; N=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]; N=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]; N=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 8/28/2012 8:11:20 PM
Subject: Fw: INSIDE EPA: Appeals Court Vacates EPA Air Transport Rule For Exceeding Agency Authority
Court's Opinion
Court's Order

Susan,
Thank you for the discussion.
As I mentioned, we have been considering the recent court order regarding the Air Transport Rule and its implications for the Texas Regional Haze Evaluation work assignment (Contract No. EP-W-11-029).
We will keep you aprised of further developments.
Thank you very much,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

Appeals Court Vacates EPA Air Transport Rule For Exceeding Agency Authority
Posted: August 21, 2012
Court's Opinion
http://insideepa.com/iwpfile.html?file=aug2012%2Fepa2012_1568a.pdf
Court's Order
http://insideepa.com/iwpfile.html?file=aug2012%2Fepa2012_1568b.pdf

We vacate the Transport Rule and the Transport Rule FIPs and remand this proceeding to EPA. EPA must continue administering CAIR pending the promulgation of a valid replacement.
So ordered.
+ Dissenting opinion

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA[]
Cc: "Wolf, Susan N." [snw@rti.org]; Greg Yarwood" [gyarwood@environcorp.com]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; Uarporn Nopmongcol" [unopmongcol@environcorp.com]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 8/28/2012 8:19:39 PM
Subject: Re: WA1-11 - 8/28 call?
feldman.michael@epa.gov

Thanks Erik. And yes, apologies for the confusion. I thought I had sent a message to everyone yesterday, but realize now that because I sent it through Lotus Notes it did not go out to everyone as I had intended.

I will send an email by COB Monday the next time we plan to hold a Tuesday meeting.

Thank you.
Ellen

From: Erik Snyder/R6/USEPA/US
To: "Wolf, Susan N." <snw@rti.org>
Cc: Ellen Belk/R6/USEPA/US@EPA, "Greg Yarwood" <gyarwood@environcorp.com>, Joe Kordzi/R6/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA, Michael Feldman/R6/USEPA/US@EPA, "Uarporn Nopmongcol" <unopmongcol@environcorp.com>
Date: 08/28/2012 01:30 PM
Subject: Re: WA1-11 - 8/28 call?

Apologies. I thought Ellen sent an email to everyone canceling the call. It must have been just a cancelation on our Lotus Notes calendar that did not get circulated to you all. Sorry for the confusion. We are trying to determine internally how to move forward on Texas with the recent CSAPR modeling.

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

From: "Wolf, Susan N." <snw@rti.org>
To: Michael Feldman/R6/USEPA/US@EPA

Cc: Ellen Belk/R6/USEPA/US@EPA, Erik Snyder/R6/USEPA/US@EPA, "Greg Yarwood" <gyarwood@environcorp.com>, Joe Kordzi/R6/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA, "Uarporn Nopmongcol" <unopmongcol@environcorp.com>
Date: 08/28/2012 01:25 PM
Subject: WA1-11 - 8/28 call?

Hi all,
Has today's call been cancelled? Please let us know. Thanks.
-Susan

From: Michael Feldman [mailto:Feldman.Michael@epamail.epa.gov]
Sent: Tuesday, August 21, 2012 10:28 AM
To: Uarporn Nopmongcol
Cc: Ellen Belk; Erik Snyder; Greg Yarwood; Joe Kordzi; Wolf, Susan N.; Lynde Schoellkopf
Subject: Call with Environ 8/21

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Thank you,

Michael Feldman
Environmental Engineer
Air Planning Section
U.S. EPA Region 6, 6PD-L
Phone: 214-665-9793
feldman.michael@epa.gov

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Wed 8/29/2012 8:35:11 PM
Subject: Cancelled: TX RH: Meeting with Environ Followed By Meeting with RTI

To: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]; N=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]
Cc: CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA[]; N=Erik Snyder/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Thur 9/6/2012 8:39:05 PM
Subject: TX RH Evaluation WA: RTI Update

Ex. 4 - CBI

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

To: "Wolf, Susan N." [snw@rti.org]; reg Yarwood [gyarwood@environcorp.com]; arporn Nopmongcol [unopmongcol@environcorp.com]
Cc: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]; N=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Wed 9/26/2012 1:06:52 PM
Subject: Fw: TX RH: Meeting with Environ Followed By Meeting with RTI
(embedded image)

Hello,

We would like to resume our weekly meetings to discuss the "Texas Regional Haze (RH) Evaluation Task 2: Control Strategy Analysis, Including Modeling Support", beginning next Tuesday October 2 at 1:00 pm Central Time.

We look forward to our discussion next Tuesday. Please let me know if there are any conflicts.

Thank you,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

----- Forwarded by Ellen Belk/R6/USEPA/US on 09/26/2012 07:56 AM -----

Calendar Entry

Type: Meeting

Subject: TX RH: Meeting with Environ Followed By Meeting with RTI

When:

Starts:	Tue 10/02/2012	01:00 PM	Local time	
Ends:	Tue 10/02/2012	02:30 PM	Local time	1 hr 30 mins

Who:
Required: Erik Snyder/R6/USEPA/US@EPA, gyarwood@environcorp.com, Michael Feldman/R6/USEPA/US@EPA, snw@rti.org, unopmongcol@environcorp.com
Optional: Joe Kordzi/R6/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA
FYI: Guy Donaldson/R6/USEPA/US@EPA

Where:
Location: Call in number: Ex. 6 - Personal Privacy

Rooms: Houston Toad - 09.B02/R6 - 09th Floor@EPA

To: Erik Snyder/R6/USEPA/US@EPA;Michael Feldman/R6/USEPA/US@EPA;Ellen Belk/R6/USEPA/US@EPA;Joe Kordzi/R6/USEPA/US@EPA;Lynde Schoellkopf/R6/USEPA/US@EPA[]; ichael Feldman/R6/USEPA/US@EPA;Ellen Belk/R6/USEPA/US@EPA;Joe Kordzi/R6/USEPA/US@EPA;Lynde Schoellkopf/R6/USEPA/US@EPA[]; llen Belk/R6/USEPA/US@EPA;Joe Kordzi/R6/USEPA/US@EPA;Lynde Schoellkopf/R6/USEPA/US@EPA[]; oe Kordzi/R6/USEPA/US@EPA;Lynde Schoellkopf/R6/USEPA/US@EPA[]; ynde Schoellkopf/R6/USEPA/US@EPA[]
Cc: Greg Yarwood [gyarwood@environcorp.com]; Wolf, Susan N." [snw@rti.org]
From: Uarporn Nopmongcol
Sent: Thur 10/4/2012 9:25:41 PM
Subject: WA1-11 - CENRAP Meterorology

All,

Ex. 4 - CBI

Please let me know your thoughts on this. If okay, we will obtain the MM5 data as soon as we can.

Ou

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To: Uarporn Nopmongcol [unopmongcol@environcorp.com]
Cc: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;Greg Yarwood [gyarwood@environcorp.com]; reg Yarwood [gyarwood@environcorp.com]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Wolf, Susan N." [snw@rti.org]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Wolf, Susan N." [snw@rti.org]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Wolf, Susan N." [snw@rti.org]; Wolf, Susan N." [snw@rti.org]
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 10/9/2012 5:06:33 PM
Subject: Re: WA1-11 - CENRAP Meterorology

We can talk on the call, but I am working on getting the data. It may take a week or more to get to you, but I should have it by the end of the week. **Ex. 4 - CBI**

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

From: Uarporn Nopmongcol <unopmongcol@environcorp.com>
To: Erik Snyder/R6/USEPA/US@EPA, Michael Feldman/R6/USEPA/US@EPA, Ellen Belk/R6/USEPA/US@EPA, Joe Kordzi/R6/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA
Cc: Greg Yarwood <gyarwood@environcorp.com>, "Wolf, Susan N." <snw@rti.org>
Date: 10/04/2012 04:25 PM
Subject: WA1-11 - CENRAP Meterorology

All,

Ex. 4 - CBI

Please let me know your thoughts on this. If okay, we will obtain the MM5 data as soon as we can.

Ou

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message or any information contained within. If you have received this message in error, please contact the sender by electronic reply to email@environcorp.com and immediately delete all copies of the message.

To: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 10/9/2012 6:33:45 PM
Subject: Fw: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy
Hotspot
Hotspot
Hotspot
Hotspot
Hotspot

Are we ready to move forward with "Task 3 Control Cost and performance Capability Support" with Dr. Fox?

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

----- Forwarded by Ellen Belk/R6/USEPA/US on 10/09/2012 01:32 PM -----

TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

Tue 10/09/2012 1:00 PM - 2:00 PM

Ellen Belk

Chair: Erik Snyder/R6/USEPA/US

Rooms: Cypress Tree - 06.O02/R6 – 06th Floor@EPA

This entry has an alarm. The alarm will go off before the entry starts.

Ellen Belk/R6/USEPA/US@EPA, gyarwood@environcorp.com, Michael Feldman/R6/USEPA/US@EPA, snw@rti.org, unopmongcol@environcorp.com
Optional: Joe Kordzi/R6/USEPA/US@EPA, Jolynn Collins/RTP/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA

To: "Wolf, Susan N." [snw@rti.org]; reg Yarwood [gyarwood@environcorp.com]; arporn Nopmongcol [unopmongcol@environcorp.com]
Cc: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Thur 10/18/2012 3:05:27 PM
Subject: TX RH: Meeting with Environ Followed By Meeting with RTI

Rather than meeting next Tuesday, we would like to schedule our next meeting for Tuesday October 30th at 1 pm Central Time to discuss the "Texas Regional Haze (RH) Evaluation Task 2: Control Strategy Analysis, Including Modeling Support". I will send a meeting invitation through the calendar system as well.

Erik is working on making hard drive copies of the CENRAP modeling files.

We look forward to our discussion. Please let me know if there are any conflicts.

Thank you,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

To: "Wolf, Susan N." [snw@rti.org]
Cc: Ex. 6 - Personal Privacy CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Thur 11/8/2012 5:56:42 PM
Subject: TX RH: Control Cost Evaluation

Susan,
Thank you for the discussion earlier this week.

As we had discussed at the end of the call, I wanted to get back to you regarding our schedule for being able to provide the necessary data. Since our meeting, Joe has made significant progress, and now expects to be able to provide the additional information within a relatively short timeframe.

Thank you very much,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

To: Ellen Belk/R6/USEPA/US@EPA[]
Cc: Ex. 6 - Personal Privacy oe Kordzi/R6/USEPA/US@EPA[]
From: "Wolf, Susan N."
Sent: Tue 11/13/2012 3:51:58 PM
Subject: RE: TX RH: Control Cost Evaluation
belk.ellen@epa.gov

Hi everyone,

Just checking on the status of this. Thx.

-Susan

From: Belk.Ellen@epamail.epa.gov [mailto:Belk.Ellen@epamail.epa.gov]
Sent: Thursday, November 08, 2012 12:57 PM
To: Wolf, Susan N.
Cc: Ex. 6 - Personal Privacy Kordzi.Joe@epamail.epa.gov
Subject: TX RH: Control Cost Evaluation

Susan,
Thank you for the discussion earlier this week.

As we had discussed at the end of the call, I wanted to get back to you regarding our schedule for being able to provide the necessary data. Since our meeting, Joe has made significant progress, and now expects to be able to provide the additional information within a relatively short timeframe.

Thank you very much,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

To: Joe Kordzi/R6/USEPA/US@EPA[]
Cc: Ellen Belk/R6/USEPA/US@EPA;"Phyllis Fox" Ex. 6 - Personal Privacy ; Phyllis Fox" Ex. 6 - Personal Privacy
From: "Wolf, Susan N."
Sent: Tue 11/27/2012 1:24:11 AM
Subject: RE: TX RH: Control Cost Evaluation
<snw@rti.org>
<snw@rti.org>
Ex. 6 - Personal Privacy
Belk.Ellen@epamail.epa.gov
mailto:Belk.Ellen@epamail.epa.gov
Ex. 6 - Personal Privacy
Kordzi.Joe@epamail.epa.gov
belk.ellen@epa.gov

Hope everyone enjoyed a nice holiday weekend. Just checking on the status of this.

Kind regards,

Susan

From: Kordzi.Joe@epamail.epa.gov [mailto:Kordzi.Joe@epamail.epa.gov]
Sent: Tuesday, November 13, 2012 2:45 PM
To: Wolf, Susan N.
Cc: Belk.Ellen@epamail.epa.gov; Phyllis Fox
Subject: RE: TX RH: Control Cost Evaluation

Hi Susan,

I'm the holdup. I'm in Albuquerque now working on another project and may be there for the rest of the week. I have most of the data assembled but just need to work on it for a couple of days to finish it, but that is the problem.

Regards,

Joe

" ... and miles to go before I sleep."
-- Robert Frost

-----"Wolf, Susan N." <snw@rti.org> wrote: -----

To: Ellen Belk/R6/USEPA/US@EPA
From: "Wolf, Susan N." <snw@rti.org>
Date: 11/13/2012 09:52AM
Cc: Ex. 6 - Personal Privacy , Joe Kordzi/R6/USEPA/US@EPA

Subject: RE: TX RH: Control Cost Evaluation

Hi everyone,

Just checking on the status of this. Thx.

-Susan

From: Belk.Ellen@epamail.epa.gov [mailto:Belk.Ellen@epamail.epa.gov]
Sent: Thursday, November 08, 2012 12:57 PM
To: Wolf, Susan N.
Cc: Ex. 6 - Personal Privacy Kordzi.Joe@epamail.epa.gov
Subject: TX RH: Control Cost Evaluation

Susan,
Thank you for the discussion earlier this week.

As we had discussed at the end of the call, I wanted to get back to you regarding our schedule for being able to provide the necessary data. Since our meeting, Joe has made significant progress, and now expects to be able to provide the additional information within a relatively short timeframe.

Thank you very much,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

=

To: Ellen Belk/R6/USEPA/US@EPA[]
Cc: Joe Kordzi/R6/USEPA/US@EPA;snw@rti.org;Jolynn Collins/RTP/USEPA/US@EPA;Lynde Schoellkopf/R6/USEPA/US@EPA[]; nw@rti.org;Jolynn Collins/RTP/USEPA/US@EPA;Lynde Schoellkopf/R6/USEPA/US@EPA[]; olynn Collins/RTP/USEPA/US@EPA;Lynde Schoellkopf/R6/USEPA/US@EPA[]; ynde Schoellkopf/R6/USEPA/US@EPA[]
From: Phyllis Fox
Sent: Mon 12/10/2012 6:46:26 AM
Subject: Re: Invitation: TX RH: Conference Ex. 6 - Personal Privacy (Dec 11 02:00 PM CST in Houston Toad - 09.B02/R6 - 09th Floor@EPA)
Belk.Ellen@epamail.epa.gov

Would it be possible to move this call back to 11 or 11:30 PST?

I have discovered that I have another conference call at the same time that cannot be moved.

2012/12/5 <Belk.Ellen@epamail.epa.gov>

To: "Phyllis Fox" Ex. 6 - Personal Privacy len Belk/R6/USEPA/US@EPA[]
Cc: Joe Kordzi/R6/USEPA/US@EPA;Jolynn Collins/RTP/USEPA/US@EPA;Lynde Schoellkopf/R6/USEPA/US@EPA[]; olynn Collins/RTP/USEPA/US@EPA;Lynde Schoellkopf/R6/USEPA/US@EPA[]; ynde Schoellkopf/R6/USEPA/US@EPA[]
From: "Wolf, Susan N."
Sent: Tue 12/11/2012 3:54:29 PM
Subject: RE: Invitation: TX RH: Conference Call Ex. 6 - Personal Privacy (Dec 11 02:00 PM CST in Houston Toad - 09.B02/R6 - 09th Floor@EPA)
Belk.Ellen@epamail.epa.gov

Hi,

I am fine with a change in time – is that ok with EPA folks?

-Susan

From: Phyllis Fox [mailto: Ex. 6 - Personal Privacy
Sent: Monday, December 10, 2012 1:46 AM
To: Belk.Ellen@epamail.epa.gov
Cc: Kordzi.Joe@epamail.epa.gov; Wolf, Susan N.; Collins.Jolynn@epamail.epa.gov; Schoellkopf.Lynde@epamail.epa.gov
Subject: Re: Invitation: TX RH: Conference Call Ex. 6 - Personal Privacy (Dec 11 02:00 PM CST in Houston Toad - 09.B02/R6 - 09th Floor@EPA)

Would it be possible to move this call back to 11 or 11:30 PST?

I have discovered that I have another conference call at the same time that cannot be moved.

2012/12/5 <Belk.Ellen@epamail.epa.gov>

To: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]
Cc: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;"Phyllis Fox" Ex. 6 - Personal Privacy N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;"Phyllis Fox" Ex. 6 - Personal Privacy Phyllis Fox" Ex. 6 - Personal Privacy Wolf, Susan N." [snw@rti.org]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 12/11/2012 4:55:48 PM
Subject: RE: Invitation: TX RH: Conference Ex. 6 - Personal Privacy (Dec 11 1 PM Jacuarundi Conference Room)
Belk.Ellen@epamail.epa.gov

sure

note the change in Conference Room: Jacquarundi

From: Joe Kordzi/R6/USEPA/US
To: "Wolf, Susan N." <snw@rti.org>
Cc: Ellen Belk/R6/USEPA/US@EPA, Jolynn Collins/RTP/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA, "Phyllis Fox" Ex. 6 - Personal Privacy
Date: 12/11/2012 10:15 AM
Subject: RE: Invitation: TX RH: Conference Call & Ex. 6 - Personal Privacy (Dec 11 02:00 PM CST in Houston Toad - 09.B02/R6 - 09th Floor@EPA)

fine w/ me - Ellen?

Regards,

Joe

" ... and miles to go before I sleep."
-- Robert Frost

-----"Wolf, Susan N." <snw@rti.org> wrote: -----
To: "Phyllis Fox" Ex. 6 - Personal Privacy Ellen Belk/R6/USEPA/US@EPA
From: "Wolf, Susan N." <snw@rti.org>
Date: 12/11/2012 09:54AM
Cc: Joe Kordzi/R6/USEPA/US@EPA, Jolynn Collins/RTP/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA
Subject: RE: Invitation: TX RH: Conference Ex. 6 - Personal Privacy (Dec 11 02:00 PM CST in Houston Toad - 09.B02/R6 - 09th Floor@EPA)

Hi,
I am fine with a change in time – is that ok with EPA folks?
-Susan

From: Phyllis Fox Ex. 6 - Personal Privacy
Sent: Monday, December 10, 2012 1:46 AM
To: Belk.Ellen@epamail.epa.gov
Cc: Kordzi.Joe@epamail.epa.gov; Wolf, Susan N.; Collins.Jolynn@epamail.epa.gov; Schoellkopf.Lynde@epamail.epa.gov
Subject: Re: Invitation: TX RH: Conference Call Ex. 6 - Personal Privacy (Dec 11 02:00 PM CST in Houston Toad - 09.B02/R6 - 09th Floor@EPA)

Would it be possible to move this call back to 11 or 11:30 PST?

I have discovered that I have another conference call at the same time that cannot be moved.
2012/12/5 <Belk.Ellen@epamail.epa.gov>

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;gyarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; yarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; nw@rti.org;unopmongcol@environcorp.com[]; nopmongcol@environcorp.com[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Fri 12/14/2012 5:22:02 PM
Subject: Information Update - Room has changed: TX RH: Conference Call with Environ

Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;gyarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; yarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; nw@rti.org;unopmongcol@environcorp.com[]; nopmongcol@environcorp.com[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Mon 12/17/2012 5:25:45 PM
Subject: Rescheduled: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy (Dec 18 01:00 PM CST in Pine Tree - 06.O15/R6 – 06th Floor@EPA)

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;gyarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; yarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; nw@rti.org;unopmongcol@environcorp.com[]; nopmongcol@environcorp.com[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Mon 12/17/2012 7:06:59 PM
Subject: Information Update - Room has changed: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: Erik Snyder/R6/USEPA/US@EPA;Greg Yarwood [gyarwood@environcorp.com]; reg Yarwood [gyarwood@environcorp.com]
Cc: Michael Feldman/R6/USEPA/US@EPA;Joe Kordzi/R6/USEPA/US@EPA;Ellen Belk/R6/USEPA/US@EPA;Lynde Schoellkopf/R6/USEPA/US@EPA;"snw@rti.org" [snw@rti.org]; oe Kordzi/R6/USEPA/US@EPA;Ellen Belk/R6/USEPA/US@EPA;Lynde Schoellkopf/R6/USEPA/US@EPA;"snw@rti.org" [snw@rti.org]; llen Belk/R6/USEPA/US@EPA;Lynde Schoellkopf/R6/USEPA/US@EPA;"snw@rti.org" [snw@rti.org]; ynde Schoellkopf/R6/USEPA/US@EPA;"snw@rti.org" [snw@rti.org]; snw@rti.org" [snw@rti.org]; olynn Collins/RTP/USEPA/US@EPA[]
From: Uarporn Nopmongcol
Sent: Wed 12/19/2012 4:32:24 PM
Subject: RE: 2002 Met files
snyder.erik@epa.gov

Thanks for the update, Erik.

Ex. 4 - CBI

Ou

From: Snyder.Erik@epamail.epa.gov [mailto:Snyder.Erik@epamail.epa.gov]
Sent: Wednesday, December 19, 2012 7:23 AM
To: Greg Yarwood; Uarporn Nopmongcol
Cc: Feldman.Michael@epamail.epa.gov; Kordzi.Joe@epamail.epa.gov; Belk.Ellen@epamail.epa.gov; Schoellkopf.Lynde@epamail.epa.gov; snw@rti.org; Collins.Jolynn@epamail.epa.gov
Subject: 2002 Met files

Hi,

Met file update.

Ex. 4 - CBI

Thanks,
Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

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From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 1/8/2013 9:25:53 PM
Subject: Declined: TX RH: Conference Call with Environ

Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: Uarporn Nopmongcol [unopmongcol@environcorp.com]
Cc: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;Greg Yarwood [gyarwood@environcorp.com]; N=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;Greg Yarwood [gyarwood@environcorp.com]; reg Yarwood [gyarwood@environcorp.com]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;"snw@rti.org" [snw@rti.org]; snw@rti.org" [snw@rti.org]
From: CN=Michael Feldman/OU=R6/O=USEPA/C=US
Sent: Wed 1/9/2013 4:43:06 PM
Subject: RE: STARS emission inventory
CENRAP_emissions_for_39selected.xlsx
Hotspot
(embedded image)

Ex. 4 - CBI

Michael Feldman
Environmental Engineer
Air Planning Section
U.S. EPA Region 6, 6PD-L
Phone: 214-665-9793
feldman.michael@epa.gov

From: Uarporn Nopmongcol <unopmongcol@environcorp.com>
To: Michael Feldman/R6/USEPA/US@EPA
Cc: Ellen Belk/R6/USEPA/US@EPA, Joe Kordzi/R6/USEPA/US@EPA, Erik Snyder/R6/USEPA/US@EPA, "snw@rti.org" <snw@rti.org>, Greg Yarwood <gyarwood@environcorp.com>
Date: 07/12/2012 02:46 PM
Subject: RE: STARS emission inventory

All,

Ex. 4 - CBI

Regards,
Ou

Uarporn Nopmongcol | Manager
ENVIRON International Corporation

773 San Marin Drive | Suite 2115
Novato, CA 94998
T: +1 415 899 0700 | F: +1 415 899 0707
unopmongcol@environcorp.com

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To: Michael Feldman/R6/USEPA/US@EPA[]
Cc: Ellen Belk/R6/USEPA/US@EPA;Erik Snyder/R6/USEPA/US@EPA;Greg Yarwood [gyarwood@environcorp.com]; rik Snyder/R6/USEPA/US@EPA;Greg Yarwood [gyarwood@environcorp.com]; reg Yarwood [gyarwood@environcorp.com]; oe Kordzi/R6/USEPA/US@EPA;"snw@rti.org" [snw@rti.org]; snw@rti.org" [snw@rti.org]
From: Uarporn Nopmongcol
Sent: Wed 1/9/2013 4:52:00 PM
Subject: RE: STARS emission inventory
feldman.michael@epa.gov
unopmongcol@environcorp.com
snw@rti.org
snw@rti.org
gyarwood@environcorp.com
[IMAGE]
unopmongcol@environcorp.com
email@environcorp.com

Thanks, Michael.

Ex. 4 - CBI

Ou

From: Feldman.Michael@epamail.epa.gov [mailto:Feldman.Michael@epamail.epa.gov]
Sent: Wednesday, January 09, 2013 8:43 AM
To: Uarporn Nopmongcol
Cc: Belk.Ellen@epamail.epa.gov; Snyder.Erik@epamail.epa.gov; Greg Yarwood; Kordzi.Joe@epamail.epa.gov; snw@rti.org
Subject: RE: STARS emission inventory

Ex. 4 - CBI

Michael Feldman
Environmental Engineer

Air Planning Section
U.S. EPA Region 6, 6PD-L
Phone: 214-665-9793
feldman.michael@epa.gov

From: Uarporn Nopmongcol <unopmongcol@environcorp.com>
To: Michael Feldman/R6/USEPA/US@EPA
Cc: Ellen Belk/R6/USEPA/US@EPA, Joe Kordzi/R6/USEPA/US@EPA, Erik Snyder/R6/USEPA/US@EPA, "snw@rti.org" <snw@rti.org>, Greg Yarwood <gyarwood@environcorp.com>
Date: 07/12/2012 02:46 PM
Subject: RE: STARS emission inventory

All,

Ex. 4 - CBI

Regards,
Ou

[IMAGE]
Uarporn Nopmongcol | Manager
ENVIRON International Corporation
773 San Marin Drive | Suite 2115
Novato, CA 94998
T: +1 415 899 0700 | F: +1 415 899 0707
unopmongcol@environcorp.com

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email@environcorp.com and immediately delete all copies of the message.

********** ATTACHMENT NOT DELIVERED **********

This Email message contained an attachment named
image001.jpg
which may be a computer program. This attached computer program could
contain a computer virus which could cause harm to EPA's computers,
network, and data. The attachment has been deleted.

This was done to limit the distribution of computer viruses introduced
into the EPA network. EPA is deleting all computer program attachments
sent from the Internet into the agency via Email.

If the message sender is known and the attachment was legitimate, you
should contact the sender and request that they rename the file name
extension and resend the Email with the renamed attachment. After
receiving the revised Email, containing the renamed attachment, you can
rename the file extension to its correct name.

For further information, please contact the EPA Call Center at
(866) 411-4EPA (4372). The TDD number is (866) 489-4900.

********** ATTACHMENT NOT DELIVERED **********

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This Email message contained an attachment named
image001.jpg
which may be a computer program. This attached computer program could
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If the message sender is known and the attachment was legitimate, you
should contact the sender and request that they rename the file name
extension and resend the Email with the renamed attachment. After
receiving the revised Email, containing the renamed attachment, you can
rename the file extension to its correct name.

For further information, please contact the EPA Call Center at
(866) 411-4EPA (4372). The TDD number is (866) 489-4900.

********** ATTACHMENT NOT DELIVERED **********

To: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Michael Feldman/OU=R6/O=USEPA/C=US
Sent: Thur 1/10/2013 7:00:57 PM
Subject: Fw: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy
Hotspot
Hotspot
Hotspot
Hotspot
Hotspot

Michael Feldman
Environmental Engineer
Air Planning Section
U.S. EPA Region 6, 6PD-L
Phone: 214-665-9793
feldman.michael@epa.gov
----- Forwarded by Michael Feldman/R6/USEPA/US on 01/10/2013 01:00 PM -----

TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Thu 01/10/2013 1:00 PM - 2:00 PM

Michael Feldman

Chair: Ellen Belk/R6/USEPA/US

Location: Call in number: Ex. 6 - Personal Privacy
Call in number: Ex. 6 - Personal Privacy 2164 Rooms: Oklahoma City - 07.O15/R6 - 07th Floor@EPA

This entry has an alarm. The alarm will go off before the entry starts.

Erik Snyder/R6/USEPA/US@EPA, gyarwood@environcorp.com, Michael Feldman/R6/USEPA/US@EPA, snw@rti.org, unopmongcol@environcorp.com
Optional: Joe Kordzi/R6/USEPA/US@EPA, Jolynn Collins/RTP/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;gyarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; yarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; nw@rti.org;unopmongcol@environcorp.com[]; nopmongcol@environcorp.com[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Thur 1/10/2013 7:43:12 PM
Subject: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;gyarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; yarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; nw@rti.org;unopmongcol@environcorp.com[]; nopmongcol@environcorp.com[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Wed 1/30/2013 11:38:30 PM
Subject: Rescheduled: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy
Ex. 6 - Personal Privacy (Feb 5 12:00 PM CST in R6-ConfRm-OklahomaCity-07O15/R6 - 07th Floor@EPA)

To: Joe Kordzi/R6/USEPA/US@EPA[]
From: Phyllis Fox
Sent: Fri 2/1/2013 8:04:58 PM
Subject: Re: Pls send me your TX data
Emissions Summary 4-25-12.xls
Kordzi.Joe@epamail.epa.gov

Ex. 4 - CBI

On Fri, Feb 1, 2013 at 11:53 AM, <Kordzi.Joe@epamail.epa.gov> wrote:

Ex. 4 - CBI

Thanks.

To: Joe Kordzi/R6/USEPA/US@EPA[]
From: Phyllis Fox
Sent: Mon 2/4/2013 6:32:21 AM
Subject: install timelines
FGD Timelines 2012.pdf

IMPLEMENTATION SCHEDULE FOR FLUE GAS ENVIRONMENTAL CONTROLS FOR COAL-FIRED POWER PLANTS

Prepared for

May 26, 2011 Discussion with OMB

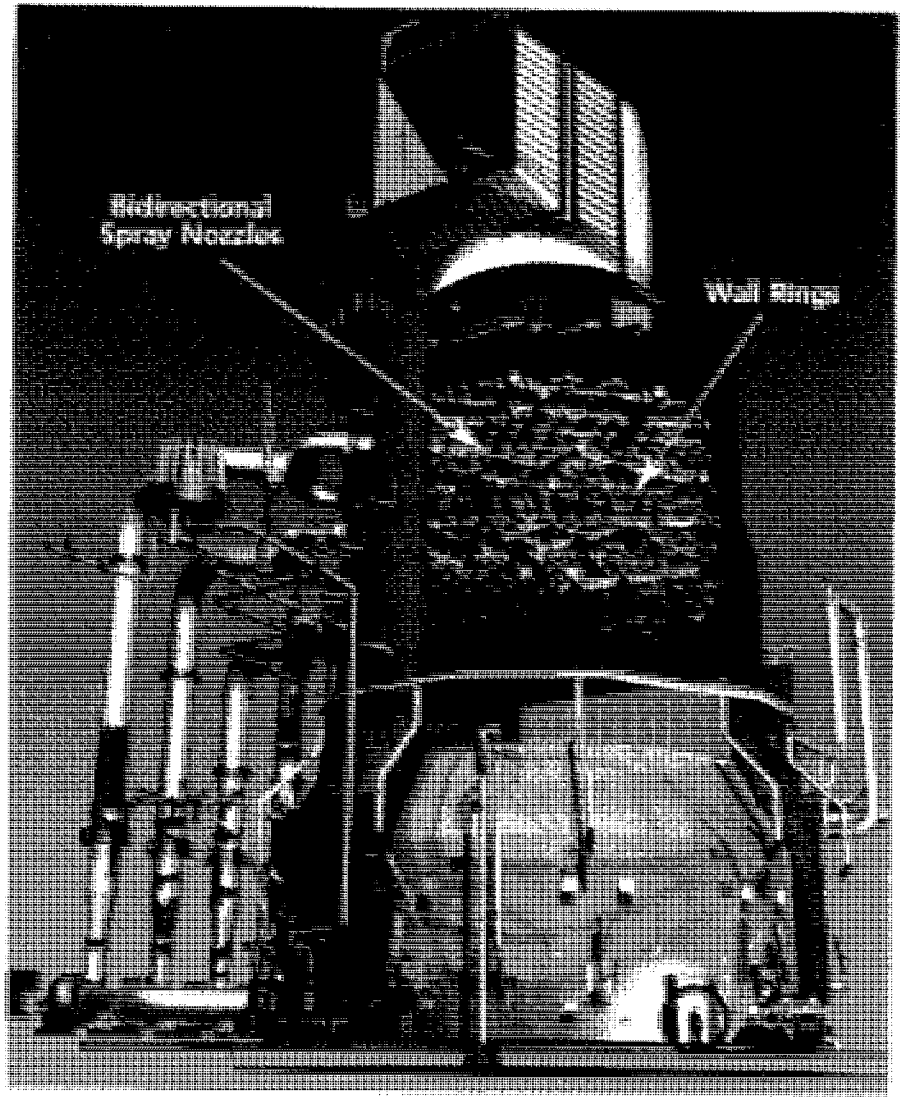
Prepared by

J. Edward Cichanowicz
J.P. Marchetti
Consultants to UARG

OVERVIEW

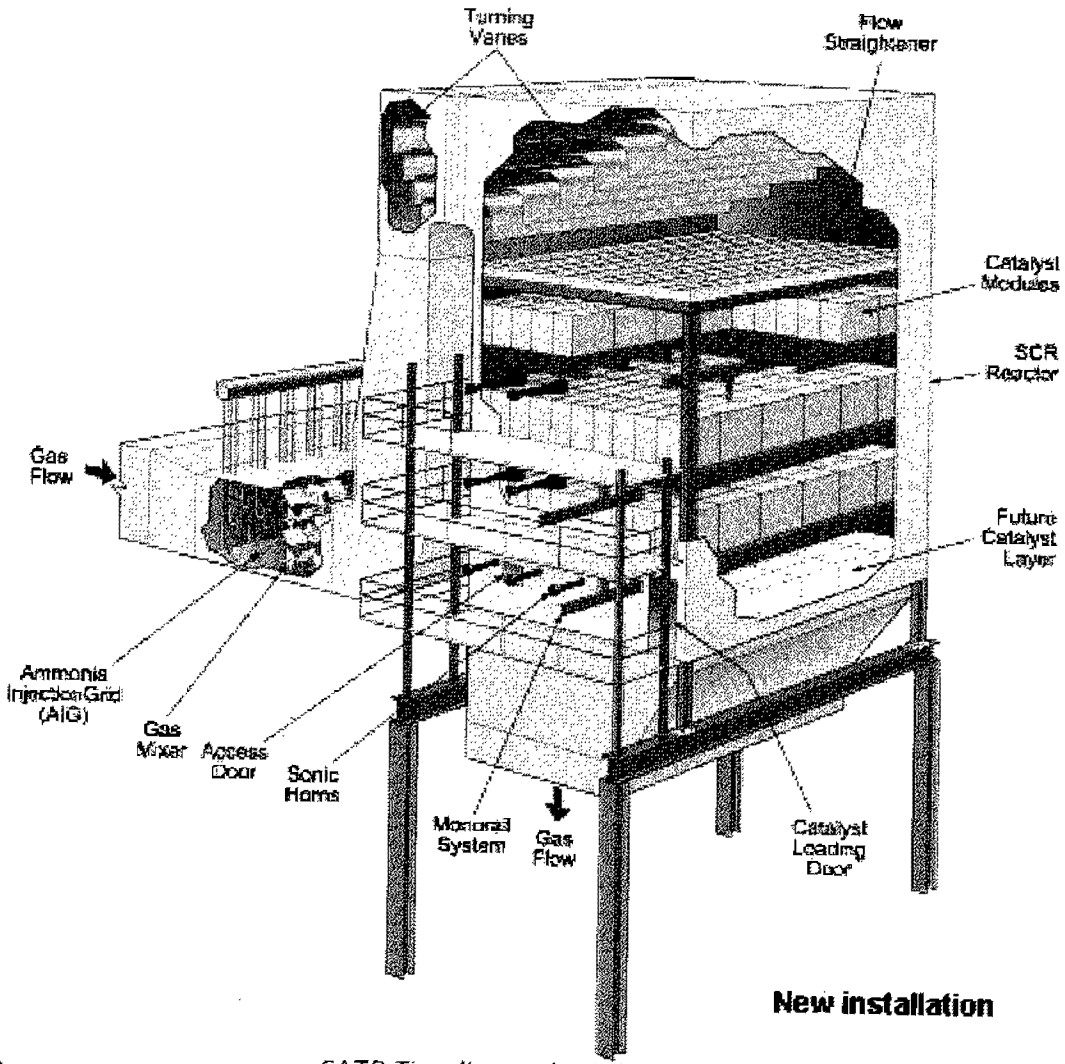
- Description of Flue Gas Process Equipment
- General Steps to Deploying Environmental Controls
- Time Needed for Installation of Controls at Individual Units – EPA and Industry Perspectives
- Projected Schedule for Installation of Equipment Industry-Wide

TYPICAL WET FGD ABSORBER TOWER
(Courtesy Babcock-Power)

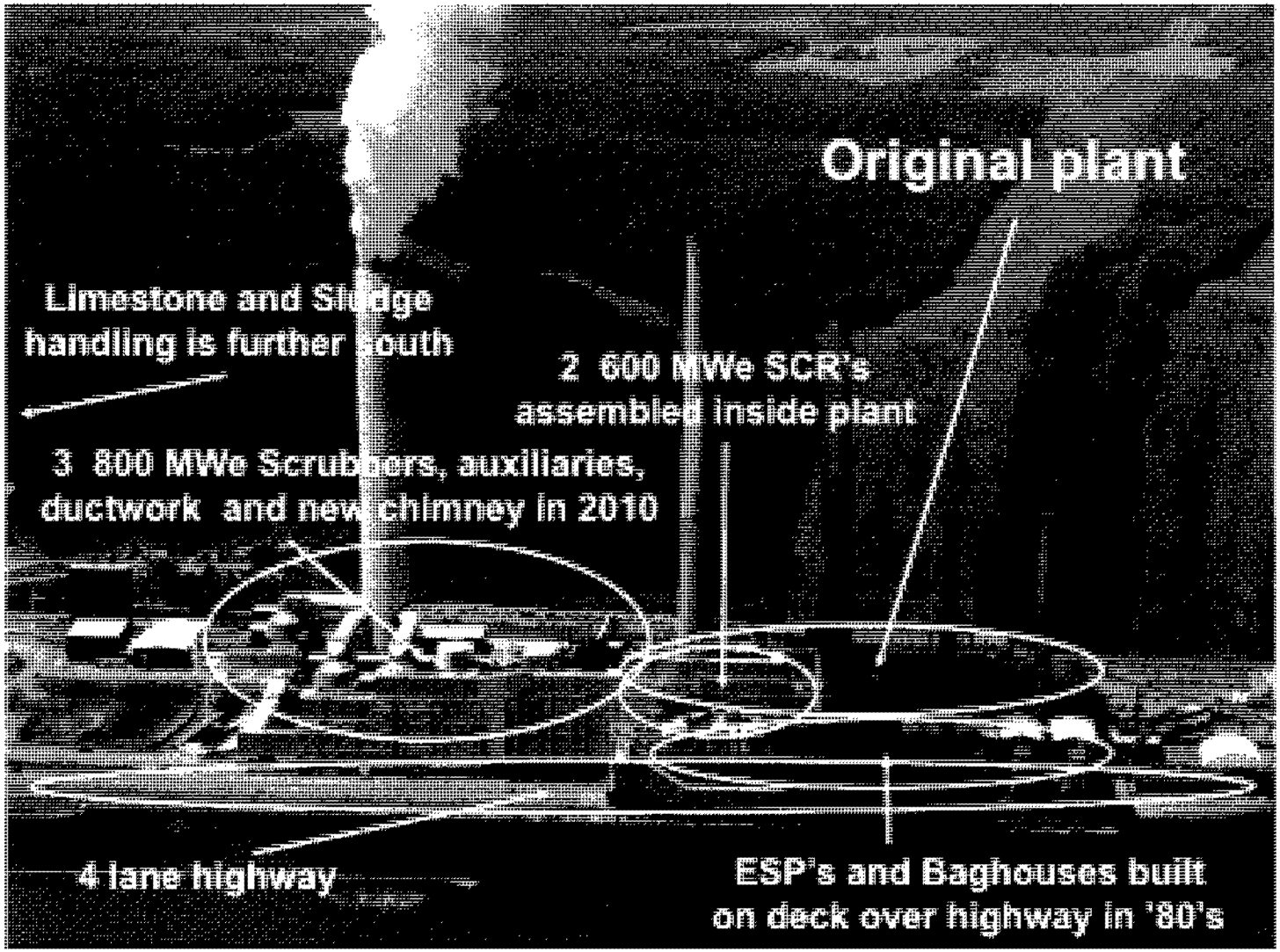


PERSPECTIVE: SCR REACTOR

(per Babcock & Wilcox)



FIRST ENERGY SAMMIS STATION



INSTALLATIONS AT INDIVIDUAL UNITS: EPA & INDUSTRY PROJECTIONS

- EPA Schedule (described in CATR Preamble):
  - -- SCR Installations: 21 Months
  - -- FGD Installations: 27 Months
- UARG Schedule: Based on Industry-Wide Survey From Fall 2010:
  - -- SCR Installations: Typically 30-40 months; up to > 4 years
  - -- FGD Installations: Typically 40-50 months; up to > 5 years
- Differences: EPA Does Not Take Into Account Key Activities (e.g., Permitting, Preliminary Engineering)

INSTALLATION SCHEDULES AT INDIVIDUAL UNITS: THE DETAILS

1. Conceptual Process Design, Prepare Specifications (6-12 months)
2. Identifying Qualified Contractors (1 month)
3. Solicit & Review Bids, Select Contractors (4-5 months)
4. Negotiation of Terms & Conditions (1-5 months, depending upon relationship with contractors)
5. Applying for/Acquiring Permits and Other Regulatory Approvals (less than 1 year to more than 4 years, depending on number and nature of permits)
6. **Finalization of Process Design and Preparation of Drawings (15-45 months)**

   -- Ordering Long-Lead-Time Items [see next slide for examples]

LEAD TIME FOR KEY FGD COMPONENTS (after Katzberger, 2007)

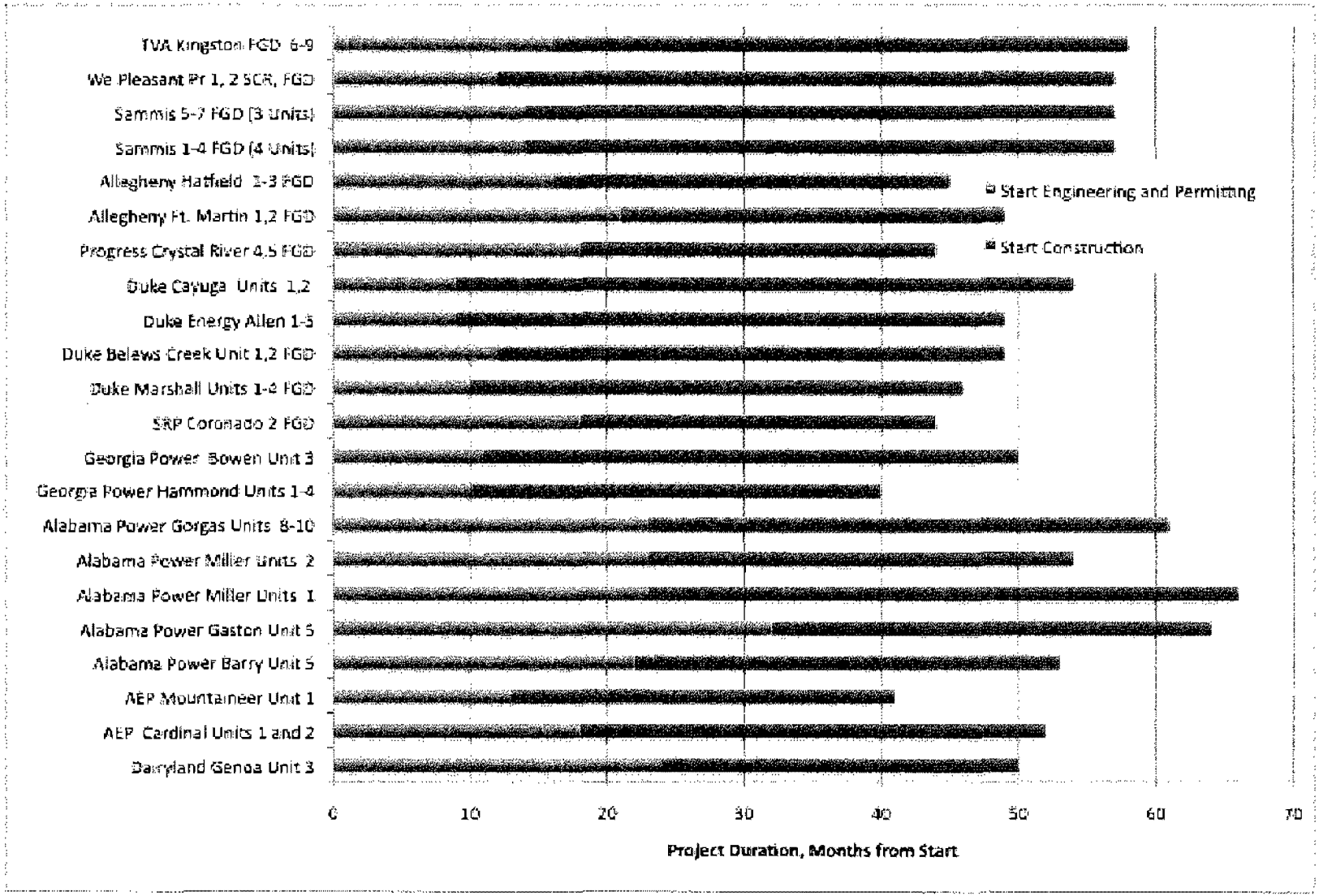
	Lead time (weeks)			
Equipment	Sept. 2003	Oct. 2005	Aug. 2006	Dec. 2006
Ball mills	32	65	68	70
Rubber-lined recycle pumps	26	52	92	112
Booster fans	NA	54	54	60
Oxidation air compressors	32	44	44	52
Internal-recycling alloy spray headers	28	40	40	48

Note: NA = Not available.

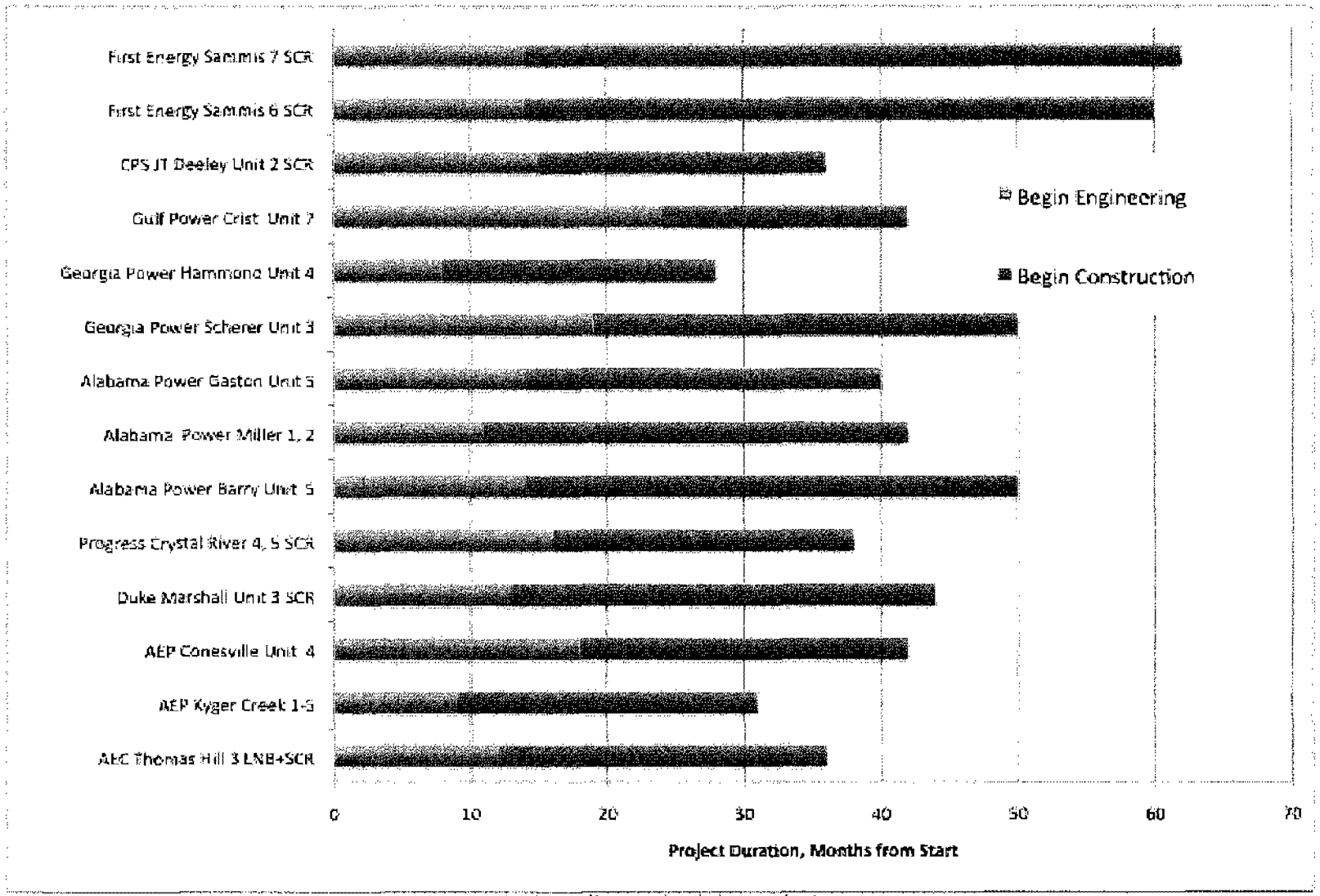
INSTALLATION SCHEDULES AT INDIVIDUAL UNITS: DETAILS (cont'd)

7. **Mobilize Workforce To Site (1-3 months)**
8. **Fabrication and Construction of Equipment (typically 25-30 months, but more than 40 months at challenging sites)**
9. **Tie-In to Plant (1 month)**
10. **Process Startup (1-3 months)**

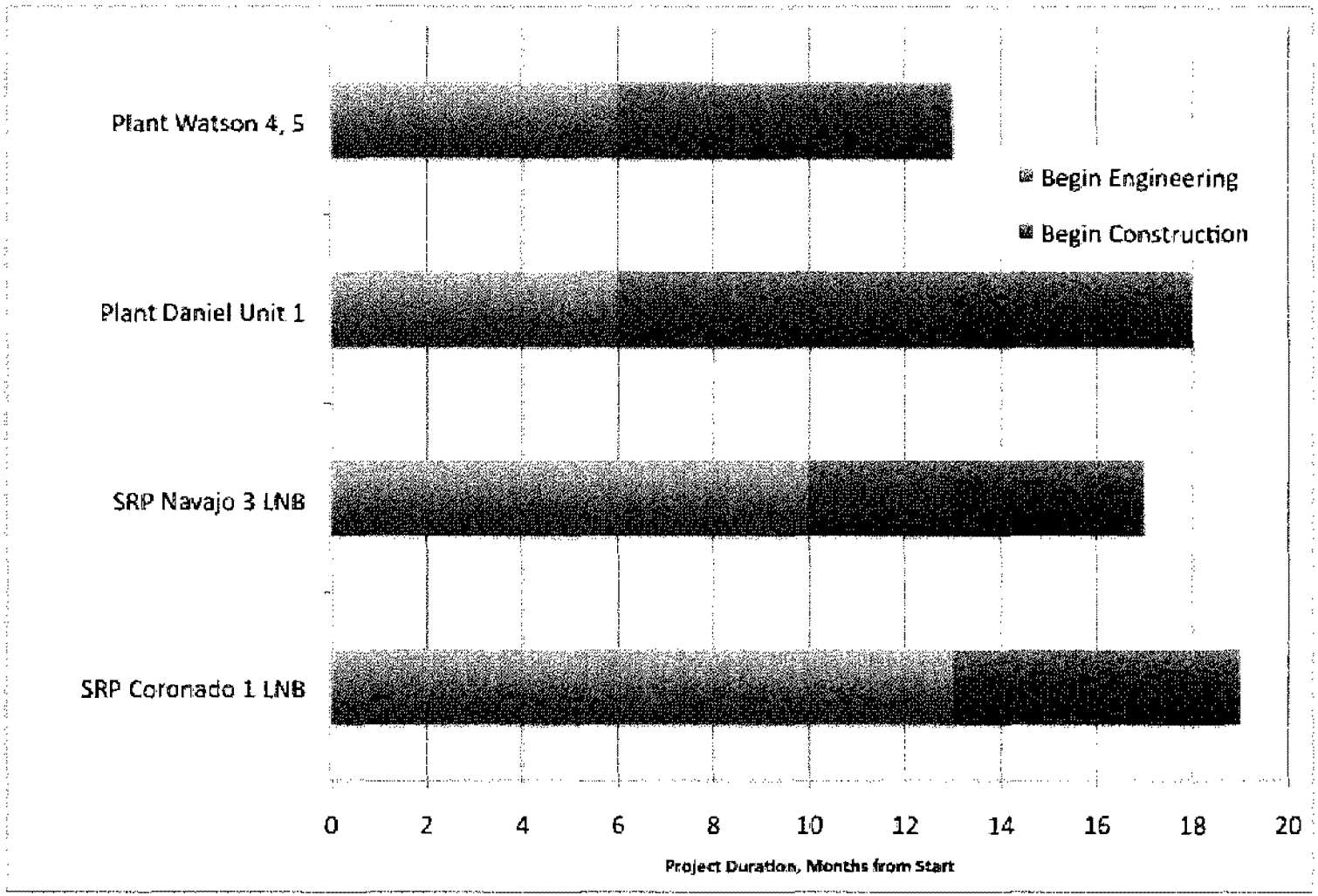
FGD TIMELINE: ENGINEERING-OPERATION



SCR TIMELINE: ENGINEERING-OPERATION



LNB TIMELINE: ENGINEERING-OPERATION



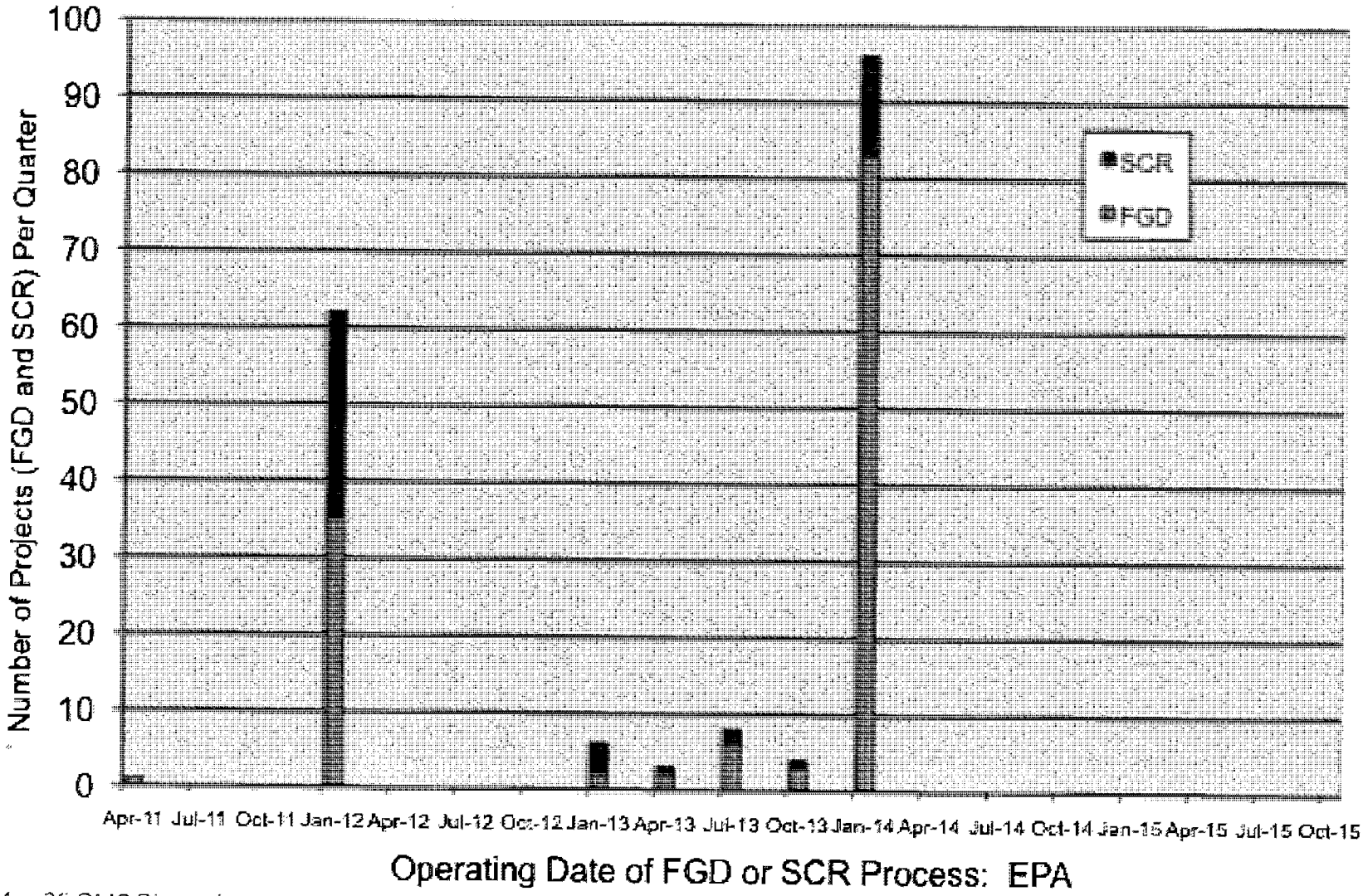
SCHEDULE FOR INSTALLATION OF EQUIPMENT INDUSTRY-WIDE

- Assuming work begins as soon as the rule is final (3Q 2011), when would all control systems be fully deployed?
- Basis:
  - How much generation will have to install SCR or FGD systems?
  - On what schedule will such installations proceed?
- EPA and Industry Disagree on Both

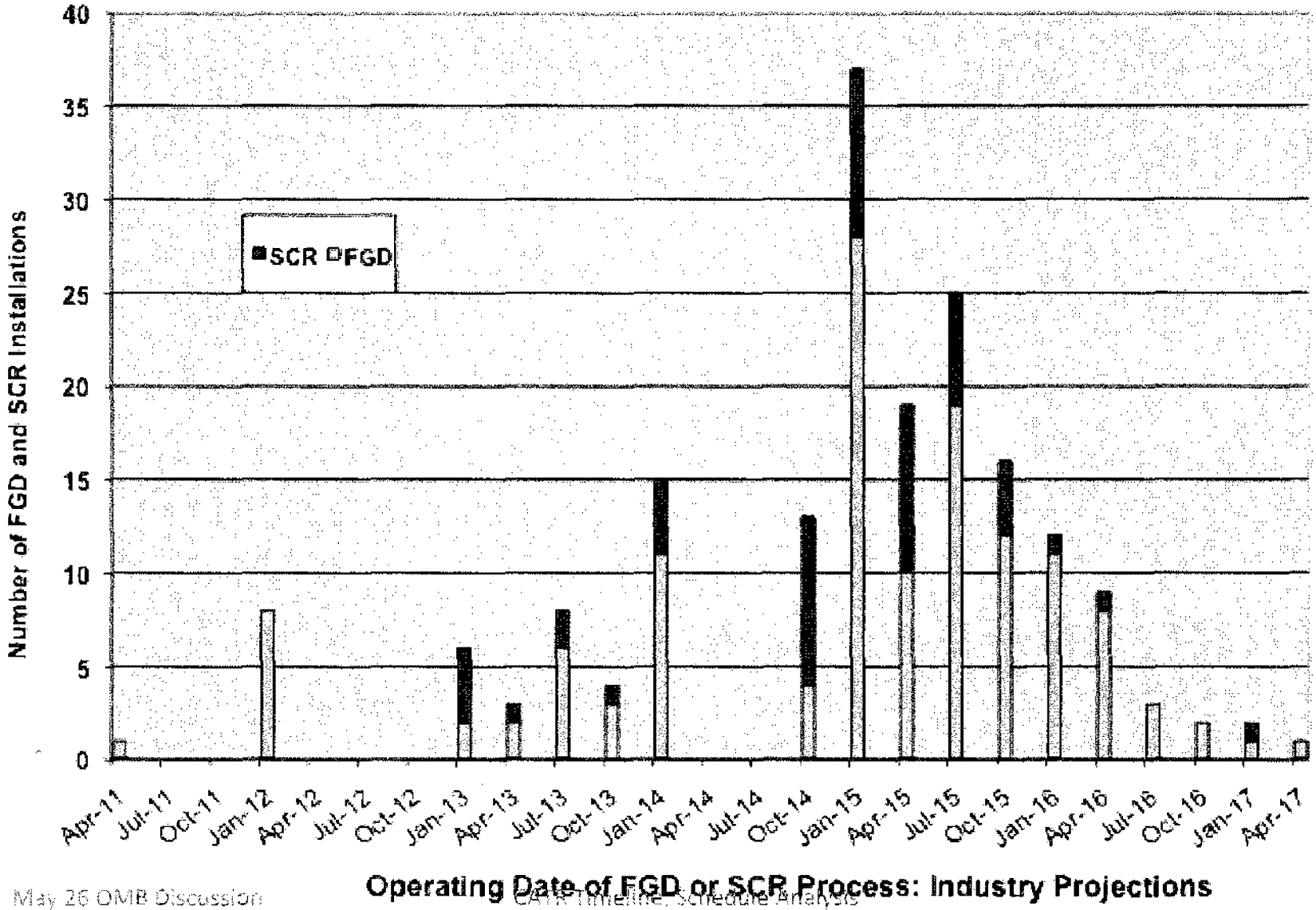
NATURE OF DISAGREEMENT ON GENERATION TO BE RETROFIT

- EPA's air quality modeling assumes many units will retrofit FGD and SCR systems through January 1, 2014:
  - FGD: 35.8 GW
    - -- CATR will drive FGD retrofits on 18.4 GW
    - -- Other initiatives are driving FGD retrofits on 17.4 GW
  - SCR: 19.1 GW
    - -- CATR will drive installation of SCR on less than 800 MW
    - -- Other initiatives are driving SCR retrofits on 18.3 GW
- To evaluate the feasibility of completing all these retrofits by CATR's deadlines, EPA considers <u>only</u> retrofits driven by CATR:
  - -- FGD: 18.4 GW
  - -- SCR: < 800 MW

EPA ESTIMATE OF FGD, SCR PROJECTS OPERATIONAL: 2011-2014



INDUSTRY SCHEDULE FOR FGD, SCR PROJECTS OPERATIONAL: 2011-2014



CONCLUSIONS

- Compliance Dates Cannot Be Attained
  - Only 27% of the targeted installations are projected to be completed "on time."
  - 54 "Phase I" installations are projected to be completed <u>after</u> the January 1, 2012 Phase I deadline.
  - 81 "Phase II" installations are projected to be completed <u>after</u> the January 1, 2014 Phase II deadline.

CONCLUSIONS (cont'd)

- More FGD and SCR Retrofits Than EPA Suggests Must Be Completed through January 1, 2014:
  - FGD: 35.8 GW affected rather than 18.4 GW
  - SCR: 19.1 GW affected rather than < 800 MW
- Individual Installations Will Take Longer
  - SCR installations will typically take at least 30-40 months, not 21 months
  - FGD installations will typically take at least 40-50 months, not 27 months

To: Joe Kordzi/R6/USEPA/US@EPA[]
From: Phyllis Fox
Sent: Wed 2/6/2013 3:52:30 AM
Subject: Re: Pls send me your TX data
Kordzi.Joe@epamail.epa.gov

Ex. 4 - CBI

On Tue, Feb 5, 2013 at 4:51 PM, <Kordzi.Joe@epamail.epa.gov> wrote:

Ex. 4 - CBI

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;gyarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; yarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; nw@rti.org;unopmongcol@environcorp.com[]; nopmongcol@environcorp.com[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 2/12/2013 2:43:06 PM
Subject: TX RH: Conference Call with Environ Cancelled Today and Rescheduled for Next Week

Good morning,
I just spoke with Erik, and he requested that this meeting be cancelled for today, and rescheduled for next week at the same time.
I will send out a schedule change notification in a few minutes.
Best regards,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

To: Joe Kordzi/R6/USEPA/US@EPA[]
From: Phyllis Fox
Sent: Tue 2/12/2013 11:07:10 PM
Subject: NAS Report
http://www.nap.edu/catalog.php?record_id=12568&utm_medium=etmail&utm_source=The%20National%20Academies%20Press&utm_campaign=NAP+mail+new+02.12.13&utm_content=Downloader&utm_term=

http://www.nap.edu/catalog.php?record_id=12568&utm_medium=etmail&utm_source=The%20National%20Academies%20Press&utm_campaign=NAP+mail+new+02.12.13&utm_content=Downloader&utm_term=

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 4:02:36 PM
Subject: TX RH: Meeting with Environ Followed By Meeting with RTI

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;gyarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; yarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; nw@rti.org;unopmongcol@environcorp.com[]; nopmongcol@environcorp.com[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 2/5/2013 7:25:57 PM
Subject: TX RH: Conference Call with Environ

Ex. 6 - Personal Privacy

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 3:16:07 PM
Subject: TX RH: Meeting with Environ and then with RTI

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 3:21:21 PM
Subject: TX RH: Meeting with Environ

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]
Cc: CN=Thomas Diggs/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Fri 8/24/2012 2:37:53 PM
Subject: TX RH: CSAPR Ruling and implications for the RTI contract

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;gyarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; yarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; nw@rti.org;unopmongcol@environcorp.com[]; nopmongcol@environcorp.com[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Wed 9/26/2012 12:56:03 PM
Subject: TX RH: Meeting with Environ

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;gyarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; yarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; nw@rti.org;unopmongcol@environcorp.com[]; nopmongcol@environcorp.com[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Wed 10/3/2012 4:52:01 PM
Subject: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;gyarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; yarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; nw@rti.org;unopmongcol@environcorp.com[]; nopmongcol@environcorp.com[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Thur 10/18/2012 3:07:15 PM
Subject: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

To: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA; Ex. 6 - Personal Privacy ;snw@rti.org[]; Ex. 6 - Personal Privacy snw@rti.org[]; nw@rti.org[]
Cc: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Wed 12/5/2012 8:26:53 PM
Subject: TX RH: Conference Call Ex. 6 - Personal Privacy

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
Bcc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Tue 8/14/2012 1:03:39 PM
Subject: Re: Environ call today

fine w/ me

Regards,

Joe

" ... and miles to go before I sleep."
-- Robert Frost

From: Erik Snyder/R6/USEPA/US
To: Ellen Belk/R6/USEPA/US@EPA
Cc: Michael Feldman/R6/USEPA/US@EPA, Joe Kordzi/R6/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA
Date: 08/14/2012 07:35 AM
Subject: Environ call today

Hi,

I've been busy with the ozone issues and other things and have not gotten far compared to last week, so I was thinking of canceling today's call with Environ/RTI. Any objections or issues that people need to cover today? We still don't have a CSAPR ruling.

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
Bcc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Tue 10/9/2012 6:36:00 PM
Subject: Re: Fw: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**
Hotspot
Hotspot
Hotspot
Hotspot
Hotspot

Ex. 5 - Deliberative

Regards,

Joe

" ... and miles to go before I sleep."
-- Robert Frost

From: Ellen Belk/R6/USEPA/US
To: Joe Kordzi/R6/USEPA/US@EPA
Date: 10/09/2012 01:33 PM
Subject: Fw: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

Are we ready to move forward with "Task 3 Control Cost and performance Capability Support" with Dr. Fox?

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

----- Forwarded by Ellen Belk/R6/USEPA/US on 10/09/2012 01:32 PM -----

TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

Tue 10/09/2012 1:00 PM - 2:00 PM

Ellen Belk

Chair: Erik Snyder/R6/USEPA/US

Rooms: Cypress Tree - 06.O02/R6 – 06th Floor@EPA

This entry has an alarm. The alarm will go off before the entry starts.

Ellen Belk/R6/USEPA/US@EPA, gyarwood@environcorp.com, Michael Feldman/R6/USEPA/US@EPA, snw@rti.org, unopmongcol@environcorp.com
Optional: Joe Kordzi/R6/USEPA/US@EPA, Jolynn Collins/RTP/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA

To: "Wolf, Susan N." [snw@rti.org]
Cc: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;"Phyllis Fox" Ex. 6 - Personal Privacy
Phyllis Fox" Ex. 6 - Personal Privacy
Bcc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Tue 11/13/2012 7:45:29 PM
Subject: RE: TX RH: Control Cost Evaluation
<snw@rti.org>
<snw@rti.org>
<phyllisfox@gmail.com>
Belk.Ellen@epamail.epa.gov
mailto:Belk.Ellen@epamail.epa.gov
phyllisfox@gmail.com
Kordzi.Joe@epamail.epa.gov
belk.ellen@epa.gov

Hi Susan,

I'm the holdup. I'm in Albuquerque now working on another project and may be there for the rest of the week. I have most of the data assembled but just need to work on it for a couple of days to finish it, but that is the problem.

Regards,

Joe

" ... and miles to go before I sleep."
-- Robert Frost

-----"Wolf, Susan N." <snw@rti.org> wrote: -----
To: Ellen Belk/R6/USEPA/US@EPA
From: "Wolf, Susan N." <snw@rti.org>
Date: 11/13/2012 09:52AM
Cc: Ex. 6 - Personal Privacy; Joe Kordzi/R6/USEPA/US@EPA
Subject: RE: TX RH: Control Cost Evaluation

Hi everyone,

Just checking on the status of this. Thx.

-Susan

From: Belk.Ellen@epamail.epa.gov [mailto:Belk.Ellen@epamail.epa.gov]
Sent: Thursday, November 08, 2012 12:57 PM
To: Wolf, Susan N.
Cc: phyllisfox@gmail.com; Kordzi.Joe@epamail.epa.gov
Subject: TX RH: Control Cost Evaluation

Susan,
Thank you for the discussion earlier this week.

As we had discussed at the end of the call, I wanted to get back to you regarding our schedule for being able to provide the necessary data. Since our meeting, Joe has made significant progress, and now expects to be able to provide the additional information within a relatively short timeframe.

Thank you very much,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

To: "Wolf, Susan N." [snw@rti.org]
Cc: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;"Phyllis Fox" Ex. 6 - Personal Privacy N=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;"Phyllis Fox" Ex. 6 - Personal Privacy N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;"Phyllis Fox" Ex. 6 - Personal Privacy Phyllis Fox"
Bcc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Tue 12/11/2012 4:15:03 PM
Subject: RE: Invitation: TX RH: Conference Call Ex. 6 - Personal Privacy (Dec 11 02:00 PM CST in Houston Toad - 09.B02/R6 - 09th Floor@EPA)
Belk.Ellen@epamail.epa.gov

fine w/ me - Ellen?

Regards,

Joe

" ... and miles to go before I sleep."
-- Robert Frost

-----"Wolf, Susan N." <snw@rti.org> wrote: -----
To: "Phyllis Fox" < Ex. 6 - Personal Privacy Ellen Belk/R6/USEPA/US@EPA
From: "Wolf, Susan N." <snw@rti.org>
Date: 12/11/2012 09:54AM
Cc: Joe Kordzi/R6/USEPA/US@EPA, Jolynn Collins/RTP/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA
Subject: RE: Invitation: TX RH: Conference Call Ex. 6 - Personal Privacy (Dec 11 02:00 PM CST in Houston Toad - 09.B02/R6 - 09th Floor@EPA)

Hi,

I am fine with a change in time – is that ok with EPA folks?

-Susan

From: Phyllis Fox [mailto: Ex. 6 - Personal Privacy
Sent: Monday, December 10, 2012 1:46 AM
To: Belk.Ellen@epamail.epa.gov
Cc: Kordzi.Joe@epamail.epa.gov; Wolf, Susan N.; Collins.Jolynn@epamail.epa.gov; Schoellkopf.Lynde@epamail.epa.gov
Subject: Re: Invitation: TX RH: Conference Call Ex. 6 - Personal Privacy (Dec 11 02:00 PM CST in Houston Toad - 09.B02/R6 - 09th Floor@EPA)

Would it be possible to move this call back to 11 or 11:30 PST?

I have discovered that I have another conference call at the same time that cannot be moved.

2012/12/5 <Belk.Ellen@epamail.epa.gov>

To: "Phyllis Fox" Ex. 6 - Personal Privacy
Cc: []
Bcc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Fri 2/1/2013 7:53:46 PM
Subject: Pls send me your TX data

Hi Phyllis,

Ex. 4 - CBI

To: "Phyllis Fox" Ex. 6 - Personal Privacy
Cc: []
Bcc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Fri 2/1/2013 8:28:05 PM
Subject: Re: Pls send me your TX data
Kordzi.Joe@epamail.epa.gov

Well that's certainly interesting. Thanks.

-----Phyllis Fox < Ex. 6 - Personal Privacy wrote: -----
To: Joe Kordzi/R6/USEPA/US@EPA
From: Phyllis Fox < Ex. 6 - Personal Privacy
Date: 02/01/2013 02:05PM
Subject: Re: Pls send me your TX data

Ex. 4 - CBI

On Fri, Feb 1, 2013 at 11:53 AM, <Kordzi.Joe@epamail.epa.gov> wrote:

Hi Phyllis,

Ex. 4 - CBI

[attachment "Emissions Summary 4-25-12.xls" removed by Joe Kordzi/R6/USEPA/US]

To: Phyllis Fox Ex. 6 - Personal Privacy
Cc: []
Bcc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Mon 2/4/2013 1:57:28 PM
Subject: Re: install timelines

I'd sure like to know how this "discussion" between Ed and OMB came about.

From: Phyllis Fox Ex. 6 - Personal Privacy
To: Joe Kordzi/R6/USEPA/US@EPA
Date: 02/04/2013 12:32 AM
Subject: install timelines

[attachment "FGD Timelines 2012.pdf" deleted by Joe Kordzi/R6/USEPA/US]

To: Phyllis Fox Ex. 6 - Personal Privacy
Cc: []
Bcc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Tue 2/5/2013 9:51:00 PM
Subject: Re: Pls send me your TX data

Ex. 4 - CBI

To: Phyllis Fox Ex. 6 - Personal Privacy
Cc: []
Bcc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Wed 2/6/2013 1:44:28 PM
Subject: Re: Pls send me your TX data
Kordzi.Joe@epamail.epa.gov

thanks

From: Phyllis Fox < Ex. 6 - Personal Privacy
To: Joe Kordzi/R6/USEPA/US@EPA
Date: 02/05/2013 09:52 PM
Subject: Re: Pls send me your TX data

Ex. 4 - CBI

On Tue, Feb 5, 2013 at 4:51 PM, <Kordzi.Joe@epamail.epa.gov> wrote:

Ex. 4 - CBI

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US[]
Cc: []
From: Jaquarundi - 09.O15/R6 - 09th Floor
Sent: Tue 7/10/2012 3:16:14 PM
Subject: Accepted: TX RH: Meeting with Environ and then with RTI

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 3:20:10 PM
Subject: Accepted: TX RH: Meeting with Environ and then with RTI

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 3:22:06 PM
Subject: Accepted: TX RH: Meeting with Environ and then with RTI

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 3:22:12 PM
Subject: Accepted: TX RH: Meeting with Environ

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Michael Feldman/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 3:43:52 PM
Subject: Accepted: TX RH: Meeting with Environ and then with RTI

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Michael Feldman/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 3:44:16 PM
Subject: Accepted: TX RH: Meeting with Environ

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 4:19:37 PM
Subject: Accepted: TX RH: Meeting with Environ Followed By Meeting with RTI

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 4:19:43 PM
Subject: Accepted: TX RH: Meeting with Environ

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 6:33:01 PM
Subject: Accepted: TX RH: Meeting with Environ and then with RTI

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 6:33:42 PM
Subject: Declined: TX RH: Meeting with Environ

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 6:34:14 PM
Subject: Accepted: TX RH: Meeting with Environ Followed By Meeting with RTI

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 6:34:23 PM
Subject: Accepted: TX RH: Meeting with Environ

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: gyarwood@environcorp.com;unopmongcol@environcorp.com;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; nopmongcol@environcorp.com;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 7/17/2012 1:50:54 PM
Subject: Environ call

Hi,

Apologize for the late notice. After a meeting yesterday afternoon, I am having to go to a meeting with representatives of Wise county today and will probably not be back for the call at 1. Michael is out sick, so don't expect him to be able to call in today. One technical question I had was if we could track VOC for the one facility without doing it for all sources. Think I know the answer, but thought I would ask. I know there are some other issues to cover, but I don't have any conclusive resolution yet on the two EI issues. Still working on those. If we need, we can have a call later this week or carry things to next Tuesday. There are other issues that you need to cover today so I know you won't be cancelling the call.

Thanks,
Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 7/17/2012 6:14:23 PM
Subject: Accepted: TX RH: Meeting with Environ

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US
Sent: Tue 7/17/2012 8:23:30 PM
Subject: Re: Fw: Changes/adjustments to RTI WA - draft email to RTI

The word "further" is misspelled. Other than that, it looks good. This looks good.

JoLynn Collins
Environmental Protection Specialist/Project Officer
U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
Central Operations and Resources
Research Triangle Park, NC 27711
(919) 541-5671

* * * * * * * * * * * * * * * NOTICE OF CONFIDENTIALITY * * * * * * * * * * * * * * * *
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subject to the Privacy Act (5 USC 552a) and should be treated accordingly.
* *

From: Ellen Belk/R6/USEPA/US
To: Jolynn Collins/RTP/USEPA/US@EPA
Date: 07/17/2012 01:05 PM
Subject: Fw: Changes/adjustments to RTI WA - draft email to RTI

Hi JoLynn,
Does the draft message to Susan below look alright to you?
Thanks,
Ellen
m: 214-551-0746

----- Forwarded by Ellen Belk/R6/USEPA/US on 07/17/2012 12:04 PM -----

From: Ellen Belk/R6/USEPA/US
To: Erik Snyder/R6/USEPA/US@EPA, Michael Feldman/R6/USEPA/US@EPA
Cc: Joe Kordzi/R6/USEPA/US@EPA
Date: 07/16/2012 08:49 AM
Subject: Changes/adjustments to RTI WA - draft email to RTI

Erik / Michael,
We have processed approval of the workplan with a change in title, and would like to provide technical direction for the following updates.
Are there any edits or additional items to include?
Thanks,

Ellen

****

Dear Susan,
We would like to provide the following technical direction on the WA for the Texas Regional Haze Evaluation:

Ex. 4 - CBI

Thank you very much.
Sincerely,
Ellen Belk

To: Ellen Belk/R6/USEPA/US@EPA[]
From: EAS.System@EPA
Sent: Tue 7/17/2012 9:07:31 PM
Subject: EAS Document Notification: For your review-Award: NEW AWARD - RTI - ECONOMIC ANALYSIS AND CONTROL STRATEGY (EP-W-11-029/1-11)

Award: EP-W-11-029/1-11 is ready for your review in EAS.
Project Title: NEW AWARD - RTI - ECONOMIC ANALYSIS AND CONTROL STRATEGY
Modification: 000002
Description: E. Belk - Work Plan Modifications
Owner: Jolynn Collins
Requisitioner: Barbara Bess
Contract Specialist: Natalia Fisher-Jackson
Contracting Officer: Natalia Fisher-Jackson
Project Officer: Jolynn Collins
Site: OAR/OAQPS
Contracting Office: RTPPOD

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 7/31/2012 12:32:25 PM
Subject: Accepted: TX RH: Meeting with Environ

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Michael Feldman/OU=R6/O=USEPA/C=US
Sent: Tue 7/31/2012 1:21:16 PM
Subject: Accepted: TX RH: Meeting with Environ

To: Erik Snyder/R6/USEPA/US@EPA;Michael Feldman/R6/USEPA/US@EPA[]; ichael Feldman/R6/USEPA/US@EPA[]
Cc: Greg Yarwood [gyarwood@environcorp.com]; Wolf, Susan N." [snw@rti.org]; llen Belk/R6/USEPA/US@EPA[]
From: Uarporn Nopmongcol
Sent: Tue 7/31/2012 7:09:55 PM
Subject: NORTH TEXAS CEMENT CO.
ashgrove.txt
[IMAGE]

Erik, Michael,

I attached a file containing toxic records for North Texas Cement Plant (listed as ASHGROVE) from the MATS2016 inventory.

Original Filename: ptinv_ptnonipm_2016cr_hap2005v2_revised_06oct2010_v0_orl.txt

The toxic emissions are quite small but they are there in the inventory.

Other non-EGU sources in this county are listed below. The last two sources are already mapped to facilities on our list

Plant name – Plant ID

AIRGASSPECIALTYPRODUCTSWAXAHACHIETX"-"75165LRCHN6260I"

"CHAPARRALSTEELMIDLOTHIANLP"-"18"

"DARTCOOFTEXASWAXAHACHI"-"40"

"DIVOFMETLSPANCORP"-"686"

"ELKCORPORATION"-"41"

"ENNISMUNI"-"F41"

"ENNISTRACTEBELPOWER"-"60"

"G.S.ROOFINGPRODUCTS"-"1"

"HOWARDCOMPRESSORSTATION"-"56"

"KORALINDUSTRIES"-"37"

"MAGNABLENDINCSTERRETT"-"75165MGNBLI35EA"

"MARTECHINC"-"39"

"MIDLOTHIANENERGYLP"-"59"

"Midlothian/WaxahachieM"-"JWY"

"OWENSCORNINGTRUMBULLASPHALTENNIS"-"25"

"RESINMFG"-"27"

"SAINT-GOBAINCONTAINERSINC."-"3"

"SKYLINERECYCLINGANDDIS"-"61"

"WAXAHACHIEPLANT"-"5"

"TexasIndustriesInc."-"9"

"Holcim(US)"-"22"

Hope this helps.

Ou

[IMAGE]

Uarporn Nopmongcol | Manager

ENVIRON International Corporation
773 San Marin Drive | Suite 2115

Novato, CA 94998
T: +1 415 899 0700 | F: +1 415 899 0707

unopmongcol@environcorp.com

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This Email message contained an attachment named
image001.jpg
which may be a computer program. This attached computer program could contain a computer virus which could cause harm to EPA's computers, network, and data. The attachment has been deleted.

This was done to limit the distribution of computer viruses introduced into the EPA network. EPA is deleting all computer program attachments sent from the Internet into the agency via Email.

If the message sender is known and the attachment was legitimate, you should contact the sender and request that they rename the file name extension and resend the Email with the renamed attachment. After receiving the revised Email, containing the renamed attachment, you can rename the file extension to its correct name.

For further information, please contact the EPA Call Center at (866) 411-4EPA (4372). The TDD number is (866) 489-4900.

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********** ATTACHMENT NOT DELIVERED **********

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To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Mon 8/6/2012 2:20:40 PM
Subject: Accepted: TX RH: Meeting with Environ Followed By Meeting with RTI

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Michael Feldman/OU=R6/O=USEPA/C=US
Sent: Tue 8/14/2012 1:30:21 PM
Subject: Accepted: TX RH: Meeting with Environ Followed By Meeting with RTI

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US
Sent: Tue 8/14/2012 6:03:48 PM
Subject: Update Requested: TX RH: Meeting with Environ Followed By Meeting with RTI

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Michael Feldman/OU=R6/O=USEPA/C=US
Sent: Fri 8/24/2012 2:39:27 PM
Subject: Accepted: TX RH: CSAPR Ruling and implications for the RTI contract

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US[]
Cc: []
From: CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US
Sent: Fri 8/24/2012 3:16:22 PM
Subject: Accepted:TX RH: CSAPR Ruling and implications for the RTI contract

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Fri 8/24/2012 4:25:36 PM
Subject: Accepted: TX RH: CSAPR Ruling and implications for the RTI contract

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Guy Donaldson/OU=R6/O=USEPA/C=US
Sent: Sat 8/25/2012 12:22:14 AM
Subject: Accepted: TX RH: CSAPR Ruling and implications for the RTI contract

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Mon 8/27/2012 4:43:44 PM
Subject: Declined: TX RH: CSAPR Ruling and implications for the RTI contract

To: Ellen Belk/R6/USEPA/US@EPA[]
From: EAS.System@EPA
Sent: Wed 9/12/2012 2:04:41 PM
Subject: EAS Document Notification: Courtesy Copy-Award: NEW AWARD - RTI - ECONOMIC ANALYSIS AND CONTROL STRATEGY (EP-W-11-029/1-11)

Award: EP-W-11-029/1-11 is sent as a courtesy copy to you in EAS.
Project Title: NEW AWARD - RTI - ECONOMIC ANALYSIS AND CONTROL STRATEGY
Modification: 000002
Description: E. Belk - Work Plan Modifications
Owner: Jolynn Collins
Requisitioner: Barbara Bess
Contract Specialist: Natalia Fisher-Jackson
Contracting Officer: Natalia Fisher-Jackson
Project Officer: Jolynn Collins
Site: OAR/OAQPS
Contracting Office: RTPPOD

To: Ellen Belk/R6/USEPA/US@EPA[]
From: EAS.System@EPA
Sent: Wed 9/12/2012 2:06:33 PM
Subject: EAS Document Notification: For your reference: Award: NEW AWARD - RTI - ECONOMIC ANALYSIS AND CONTROL STRATEGY (EP-W-11-029/1-11)

Award: EP-W-11-029/1-11 has been approved by Natalia Fisher-Jackson in EAS.
Project Title: NEW AWARD - RTI - ECONOMIC ANALYSIS AND CONTROL STRATEGY
Modification: 000002
Description: E. Belk - Work Plan Modifications
Owner: Jolynn Collins
Requisitioner: Barbara Bess
Contract Specialist: Natalia Fisher-Jackson
Contracting Officer: Natalia Fisher-Jackson
Project Officer: Jolynn Collins
Site: OAR/OAQPS
Contracting Office: RTPPOD

To: CN=Larry
Sorrels/OU=RTP/O=USEPA/C=US@EPA;bradley.lillian@epa.gov;CN=Elineth
Torres/OU=RTP/O=USEPA/C=US@EPA;CN=Linda
Lassiter/OU=RTP/O=USEPA/C=US@EPA;CN=Tom
Walton/OU=RTP/O=USEPA/C=US@EPA;CN=Justin
Spenillo/OU=R10/O=USEPA/C=US@EPA;CN=John
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Waite/OU=RTP/O=USEPA/C=US@EPA;fann.neal@epa.gov;Devlin.Robert@epa.gov[];
N=Amanda CurryBrown/OU=RTP/O=USEPA/C=US@EPA;CN=Ellen
Belk/OU=R6/O=USEPA/C=US@EPA;CN=Chris
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ann.neal@epa.gov;Devlin.Robert@epa.gov[]; evlin.Robert@epa.gov[]
Cc: []
From: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US
Sent: Wed 9/12/2012 6:44:59 PM
Subject: EP-W-11-029 (RTI) -- Past Performance Evaluation for April 1, 2011 - March 31, 2012
Past Performance Questionnaire Form 2-17-12.docx

Hi Everyone,

As you may know, at the end of each contract period of performance, we are required to evaluate the contractor's performance and document it in the interagency contractor performance system. You are receiving this email message because you were a WAM on the subject contract during the period, April 1, 2011 - March 31, 3012. Please complete the attached past performance questionnaire for RTI contract EP-W-11-029, Economic Analysis and Control Strategy, for the subject period only. Note, we are using a new past performance system which requires a new format. You will notice that each question requires you to provide a description of the performance that resulted in the rating you provide. You do not need to provide an elaborate explanation, just enough to justify the rating. You may find the information in the "Note" column on page 1 of the questionnaire helpful. The contracting office wants these by September 21, so I am asking for you to get them back to me as soon as you can, but no later than COB Wednesday, September 19, so that I may have a day or so to input the data into the new system. Let me know if you have questions about it. Thanks much!

JoLynn Collins
Environmental Protection Specialist/Project Officer
U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
Central Operations and Resources
Research Triangle Park, NC 27711
(919) 541-5671

* * * * * * * * * * * * * * NOTICE OF CONFIDENTIALITY * * * * * * * * * * * * * * *
This message may contain information that is confidential, deliberative, or
subject to the Privacy Act (5 USC 552a) and should be treated accordingly.
* *

Past Performance Questionnaire		
WAM Name:		
Contractor Name:		
Contract Number:		
Work Assignment Number:		
Rating Period:		
Rating	**Definition**	**Note**
Exceptional	Performance meets contractual requirements and exceeds many to the Government's benefit. The contractual performance of the element or sub-element being assessed was accomplished with few minor problems for which corrective actions taken by the contractor was highly effective.	To justify an Exceptional rating, identify multiple significant events and state how they were of benefit to the Government. A singular benefit, however, could be of such magnitude that it alone constitutes an Exceptional rating. Also, there should have been NO significant weaknesses identified.
Very Good	Performance meets contractual requirements and exceeds some to the Government's benefit. The contractual performance of the element or sub-element being assessed was accomplished with some minor problems for which corrective actions taken by the contractor was effective.	To justify a Very Good rating, identify a significant event and state how it was a benefit to the Government. There should have been no significant weaknesses identified.
Satisfactory	Performance meets contractual requirements. The contractual performance of the element or sub-element contains some minor problems for which corrective actions taken by the contractor appear or were satisfactory.	To justify a Satisfactory rating, there should have been only minor problems, or major problems the contractor recovered from without impact to the contract. There should have been NO significant weaknesses identified. Per DOD policy, a fundamental principle of assigning ratings is that contractors will not be assessed a rating lower than Satisfactory solely for not performing beyond the requirements of the contract.
Marginal	Performance does not meet some contractual requirements. The contractual performance of the element or sub-element being assessed reflects a serious problem for which the contractor has not yet identified correction actions. The contractor's proposed actions appear only marginally effective or were not fully implemented.	To justify Marginal performance, identify a significant event in each category that the contractor had trouble overcoming and state how it impacted the Government. A Marginal rating should be supported by referencing the management tool that notified the contractor of the contractual deficiency (e.g., management, quality, safety, or environmental deficiency report or letter).
Unsatisfactory	Performance does not meet most contractual requirements and recovery is not likely in a timely manner. The contractual performance of the element or sub-element contains a serious problem(s) for which the contractor's corrective actions appear or were ineffective.	To justify an Unsatisfactory rating, identify multiple significant events in each category that the contractor had trouble overcoming and state how it impacted the Government. A singular problem, however, could be of such serious magnitude that it alone constitutes an unsatisfactory rating. An Unsatisfactory rating should be supported by referencing the management tools used to notify the contractor of the contractual deficiencies (e.g., management, quality, safety, or environmental deficiency reports, or letters).
N/A	N/A (not applicable) should be used if the rating category does not apply.	Please explain all rating of N/A.

1. **Quality of Product or Service.** Assess the Contractor's conformance to contract requirements, specifications and standards of good workmanship (e.g. commonly accepted technical, professional, environmental, or safety and health standards).

- For example: Are reports/data accurate? Does the product or service provided meet the specifications of the contract? Does the Contractor's work measure up to commonly accepted technical or professional standards? Assess the degree of Government technical direction required to solve problems that arise during performance.

For Operations Support: Assess how successfully the Contractor meets program quality objectives such as ability to produce, reliability, maintainability and ability to inspect. The Assessing Official must be flexible in how Contractor success is measured; e.g. using data from field reliability and maintainability and failure reports, user comments and acceptance rates, and scrap and rework rates. These quantitative indicators may be useful later, for example, in source selection evaluations, in demonstrating continuous improvement, quality and reliability leadership that reflects progress in total quality management. Assess the Contractor's control of the overall production process to include material control, shop planning and control, and status.

Rating		Provide comments on Quality of Product or Service (2000 character maximum):
☐	Exceptional	
☐	Very Good	
☐	Satisfactory	
☐	Marginal	
☐	Unsatisfactory	

2. **Schedule.** Assess the timeliness of the Contractor against the completion of the contract, task orders, milestones, delivery schedules, and administrative requirements (e.g. efforts that contribute to or effect the schedule variance). This assessment of the Contractor's adherence to the required delivery schedule should include the Contractor's efforts during the assessment period that contributes to or effect the schedule variance. This element applies to contract closeout activities as well as contract performance. Instances of adverse actions such as the assessment of liquidated damages, or issuance of Cure Notices, Show Cause Notices, and Delinquency Notices are indicators of problems which may have resulted in variance to the contract schedule and should therefore be noted in the evaluation.

Rating		Provide comments on Schedule (2000 character maximum):
☐	Exceptional	
☐	Very Good	
☐	Satisfactory	
☐	Marginal	
☐	Unsatisfactory	

3. **Cost Control** *(Not required for Firm Fixed Price or Firm Fixed Price with Economic Price Adjustment).* Assess the Contractor's effectiveness in forecasting, managing, and controlling contract cost.

For example, does the Contractor keep within the total estimated cost (what is the relationship of the negotiated costs and budgeted costs to actual)? Did the Contractor do anything innovative that resulted in cost savings? Were billings current, accurate and complete? Are the Contractor's budgetary internal control adequate?

Rating		Provide comments on Cost Control (2000 character maximum):
☐	Exceptional	
☐	Very Good	
☐	Satisfactory	
☐	Marginal	
☐	Unsatisfactory	

4. **Business Relations.** Assess the integration and coordination of all activity needed to execute the contract, specifically the timeliness, completeness and quality of problem identification , corrective action plans, proposal submittals, the contractor's history of reasonable and cooperative behavior (to include timely identification of issues in controversy), customer satisfaction, timely award and management of subcontracts.
Include, as applicable, information on the following:

- Is the contractor oriented toward the customer?
- Is interaction between the contractor and the government satisfactory or does it need improvement?
- Include the adequacy of the contractor's accounting, billing, and estimating systems and the contractor's management of Government Property (GFP) if a substantial amount of GFP has been provided to the contractor under the contract.
- Address the timeliness of awards to subcontractors and management of subcontractors, including subcontract costs. Consider efforts taken to ensure early identification of subcontract problems and the timely application of corporate resources to preclude subcontract problems from impacting overall prime contractor performance.

Assess the prime contractor's effort devoted to managing subcontracts and whether subcontractors were an integral part of the contractor's team.

Rating		Provide comments on Business Relations (2000 character maximum):
☐	Exceptional	
☐	Very Good	
☐	Satisfactory	
☐	Marginal	
☐	Unsatisfactory	

5. **Management of Key Personnel** *(For Services and Information Technology Business Sectors only - Not Applicable to Operations Support)*. Assess the Contractor's performance in selecting, retaining, supporting, and replacing, when necessary, key personnel.
For example, how well did the Contractor match the qualifications of the key position, as described in the contract, with the person who filled the key position? Did the Contractor support key personnel so they were able to work effectively? If a key person did not perform well, what action was taken by the Contractor to correct this? If a replacement of a key person was necessary, did the replacement meet or exceed the qualifications of the position as described in the contract schedule?

Rating		Provide comments on Management of Key Personnel (2000 character maximum):
☐	Exceptional	
☐	Very Good	
☐	Satisfactory	
☐	Marginal	
☐	Unsatisfactory	

6. **Utilization of Small Business** *(Rating Definitions are different for this category, see descriptions below).*

Exceptional. Exceeded all negotiated subcontracting goals or exceeded at least one goal and met all of the other negotiated subcontracting goals for the current period. Had exceptional success with initiatives to assist, promote, and utilize small business (SB), small disadvantaged business (SDB), women-owned small business (WSOB), HUBZone small business, veteran-owned small business (VOSB) and service disabled veteran owned small business (SDVOSB). Complied with FAR 52.219-8, Utilization of Small Business Concerns. Exceeded any other small business participation requirements incorporated in the contract, including the use of small businesses in mission critical aspects of the program. Went above and beyond the required elements of the subcontracting plan and other small business requirements of the contract. Completed and submitted Individual Subcontract Reports and/or Summary Subcontract Reports in an accurate and timely manner.

Very Good. Met all of the negotiated subcontracting goals in the traditional socio-economic categories (SB, SDB, and WOSB) and met at least one of the other socio-economic goals (HUBZone, VOSB, SDVOSB) for the current period. Had significant success with initiatives to assist, promote and utilize SB, SDB, WOSB, HUBZone, VOSB, and SDVOSB. Complied with FAR 52.219-8, Utilization of Small Business Concerns. Met or exceeded any other small business participation requirement incorporated in the contract, including the use of small businesses in mission critical aspects of the program. Endeavored to go above and beyond the required elements of the subcontracting plan. Completed and submitted Individual Subcontract Reports and/or Summary Subcontract Reports in an accurate and timely manner.

Satisfactory. Demonstrated a good faith effort to meet all of the negotiated subcontracting goals in the various socio-economic categories for the current period. Complied with FAR 52.219-8, Utilization of Small Business Concerns. Met any other small business participation requirements included in the contract. Fulfilled the requirements of the subcontracting plan included in the contract. Completed and submitted Individual Subcontract Reports and/or Summary Subcontract Reports in an accurate and timely manner.

Marginal. Deficient in meeting key subcontracting plan elements. Deficient in complying with FAR 52.219-8, Utilization of Small Business Concerns, and any other small business participation requirements in the contract. Did not submit Individual Subcontract Reports and/or Summary Subcontract Reports in an accurate or timely manner. Failed to satisfy one or more requirements of a corrective action plan currently in place; however, does show an interest in bringing performance to a satisfactory level and has demonstrated a commitment to apply the necessary resources to do so. Required a corrective action plan.

Unsatisfactory. Noncompliant with FAR 52.219-8 and 52.219-9 and any other small business participation requirements in the contract. Did not submit Individual Subcontract Reports and/or Summary Subcontract Reports in an accurate or timely manner. Showed little interest in bringing performance to a satisfactory level or is generally uncooperative. Required a corrective action plan.

Rating		**Provide comments on Utilization of Small Business (2000 character maximum):**
☐	Exceptional	
☐	Very Good	
☐	Satisfactory	
☐	Marginal	
☐	Unsatisfactory	

7. **Customer Satisfaction**

Was the contractor committed to customer satisfaction?	☐	**Yes**	☐	**No**
Would you recommend the selection of this firm again?	☐	**Yes**	☐	**No**

Provide comments on Customer Satisfaction (2000 character maximum):

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Georgia Okstel/OU=R6/O=USEPA/C=US
Sent: Wed 9/12/2012 7:58:02 PM
Subject: Fw: EAS Document Notification: For your reference: Award: NEW AWARD - RTI - ECONOMIC ANALYSIS AND CONTROL STRATEGY (EP-W-11-029/1-11)

FYI

Best Regards,

Georgia
Georgia L. Okstel
Air, State and Tribal Operations Section, 6PD
Multimedia Planning and Permitting Division
U.S. Environmental Protection Agency
Office: 214-665-6699
okstel.georgia@epa.gov

----- Forwarded by Georgia Okstel/R6/USEPA/US on 09/12/2012 02:57 PM -----

From: EAS.System@EPA
To: Georgia Okstel/R6/USEPA/US@EPA
Date: 09/12/2012 09:06 AM
Subject: EAS Document Notification: For your reference: Award: NEW AWARD - RTI - ECONOMIC ANALYSIS AND CONTROL STRATEGY (EP-W-11-029/1-11)

Award: EP-W-11-029/1-11 has been approved by Natalia Fisher-Jackson in EAS.
Project Title: NEW AWARD - RTI - ECONOMIC ANALYSIS AND CONTROL STRATEGY
Modification: 000002
Description: E. Belk - Work Plan Modifications
Owner: Jolynn Collins
Requisitioner: Barbara Bess
Contract Specialist: Natalia Fisher-Jackson
Contracting Officer: Natalia Fisher-Jackson
Project Officer: Jolynn Collins
Site: OAR/OAQPS
Contracting Office: RTPPOD

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US[]
Cc: []
From: Houston Toad - 09.B02/R6 - 09th Floor
Sent: Wed 9/26/2012 12:56:29 PM
Subject: Accepted: TX RH: Meeting with Environ Followed By Meeting with RTI

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US[]
Cc: []
From: CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US
Sent: Wed 9/26/2012 12:58:05 PM
Subject: Accepted:TX RH: Meeting with Environ Followed By Meeting with RTI

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Wed 9/26/2012 1:18:25 PM
Subject: Accepted: TX RH: Meeting with Environ Followed By Meeting with RTI

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Greg Yarwood"
Sent: Wed 9/26/2012 2:34:59 PM
Subject: Accepted: TX RH: Meeting with Environ Followed By Meeting with RTI

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Wolf, Susan N."
Sent: Wed 9/26/2012 3:13:22 PM
Subject: RE: TX RH: Meeting with Environ Followed By Meeting with RTI
image001.gif
belk.ellen@epa.gov
gyarwood@environcorp.com
snw@rti.org
unopmongcol@environcorp.com

I will be "there" – talk with you soon.

-Susan

From: Ellen Belk [mailto:Belk.Ellen@epamail.epa.gov]
Sent: Wednesday, September 26, 2012 9:07 AM
To: Wolf, Susan N.; Greg Yarwood; Uarporn Nopmongcol
Cc: Erik Snyder; Michael Feldman; Joe Kordzi; Lynde Schoellkopf; Guy Donaldson
Subject: Fw: TX RH: Meeting with Environ Followed By Meeting with RTI

Hello,

We would like to resume our weekly meetings to discuss the "Texas Regional Haze (RH) Evaluation Task 2: Control Strategy Analysis, Including Modeling Support", beginning next Tuesday October 2 at 1:00 pm Central Time.

We look forward to our discussion next Tuesday. Please let me know if there are any conflicts.

Thank you,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

----- Forwarded by Ellen Belk/R6/USEPA/US on 09/26/2012 07:56 AM -----

Calendar Entry

Type:

Meeting

Subject:
TX RH: Meeting with Environ Followed By Meeting with RTI

When:
Starts:
Tue 10/02/2012
01:00 PM
Local time

Ends:
Tue 10/02/2012
02:30 PM
Local time
1 hr 30 mins

Who:
Required:
Erik Snyder/R6/USEPA/US@EPA, gyarwood@environcorp.com, Michael Feldman/R6/USEPA/US@EPA, snw@rti.org, unopmongcol@environcorp.com

Optional:
Joe Kordzi/R6/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA

FYI:
Guy Donaldson/R6/USEPA/US@EPA

Where:
Location:
Call in number: 866-299-3188; Code: 214-665-2164

Rooms:
Houston Toad - 09.B02/R6 - 09th Floor@EPA

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US[]
Cc: []
From: Jaquarundi - 09.O15/R6 - 09th Floor
Sent: Mon 10/1/2012 7:52:59 PM
Subject: Accepted: RTI Contract: Discussion of Work Assignment for Texas

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US
Sent: Mon 10/1/2012 7:57:42 PM
Subject: Accepted: RTI Contract: Discussion of Work Assignment for Texas

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US
Sent: Tue 10/2/2012 2:46:30 PM
Subject: Accepted: TX RH: Meeting with Environ Followed By Meeting with RTI

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US[]
Cc: []
From: Houston Toad - 09.B02/R6 - 09th Floor
Sent: Tue 10/2/2012 3:57:38 PM
Subject: Accepted: TX RH: Meeting with Environ

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Wolf, Susan N."
Sent: Tue 10/2/2012 3:58:58 PM
Subject: Accepted: TX RH: Meeting with Environ Followed By Meeting with RTI

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US[]
Cc: []
From: Baton Rouge - 07.B02/R6 - 07th Floor
Sent: Tue 10/2/2012 3:59:20 PM
Subject: Accepted: TX RH: EPA - RTI Meeting

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 10/2/2012 4:00:48 PM
Subject: Accepted: TX RH: Meeting with Environ

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Wolf, Susan N."
Sent: Tue 10/2/2012 4:01:07 PM
Subject: Accepted: Accepted: Invitation: TX RH: EPA - RTI Meeting (Oct 3 10:00 AM CDT in Baton Rouge - 07.B02/R6 - 07th Floor@EPA)

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US
Sent: Tue 10/2/2012 4:23:57 PM
Subject: Accepted: TX RH: Meeting with Environ

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Tue 10/2/2012 5:14:29 PM
Subject: Accepted: TX RH: Meeting with Environ

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Uarporn Nopmongcol"
Sent: Tue 10/2/2012 5:15:54 PM
Subject: Accepted: TX RH: Meeting with Environ

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US
Sent: Wed 10/3/2012 1:25:24 PM
Subject: Tentative: TX RH: EPA - RTI Meeting

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US
Sent: Wed 10/3/2012 1:26:23 PM
Subject: Declined: TX RH: Meeting with Environ

To: Uarporn Nopmongcol [unopmongcol@environcorp.com]
Cc: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;Greg Yarwood [gyarwood@environcorp.com]; reg Yarwood [gyarwood@environcorp.com]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Wolf, Susan N." [snw@rti.org]; Wolf, Susan N." [snw@rti.org]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 10/9/2012 5:17:07 PM
Subject: Re: NORTH TEXAS CEMENT CO.
Table 9-3.pdf
TRV - 1 Ash Grove Texas LP (amendment).doc
CND - 1 Ash Grove Texas LP (amendment).doc
Hotspot

Here is an table with the New Kiln identified. It has Elevation, Stack Parameters and Annual emission rates. Let me know if you need anything else. From the attached amendment, it appears they are shutting down Units 1&2 and Reconstructing #3.

Let me know if you have further questions or need anything else.

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

From: Uarporn Nopmongcol <unopmongcol@environcorp.com>
To: Erik Snyder/R6/USEPA/US@EPA, Michael Feldman/R6/USEPA/US@EPA
Cc: Greg Yarwood <gyarwood@environcorp.com>, "Wolf, Susan N." <snw@rti.org>, Ellen Belk/R6/USEPA/US@EPA
Date: 07/31/2012 02:10 PM
Subject: NORTH TEXAS CEMENT CO.

Erik, Michael,

I attached a file containing toxic records for North Texas Cement Plant (listed as ASHGROVE) from the MATS2016 inventory.
Original Filename: ptinv_ptnonipm_2016cr_hap2005v2_revised_06oct2010_v0_orl.txt
The toxic emissions are quite small but they are there in the inventory.

Other non-EGU sources in this county are listed below. The last two sources are already mapped to facilities on our list

Plant name – Plant ID
AIRGASSPECIALTYPRODUCTSWAXAHACHIETX"-"75165LRCHN6260I"
"CHAPARRALSTEELMIDLOTHIANLP"-"18"

"DARTCOOFTEXASWAXAHACHI"-"40"
"DIVOFMETLSPANCORP"-"686"
"ELKCORPORATION"-"41"
"ENNISMUNI"-"F41"
"ENNISTRACTEBELPOWER"-"60"
"G.S.ROOFINGPRODUCTS"-"1"
"HOWARDCOMPRESSORSTATION"-"56"
"KORALINDUSTRIES"-"37"
"MAGNABLENDINCSTERRETT"-"75165MGNBLI35EA"
"MARTECHINC"-"39"
"MIDLOTHIANENERGYLP"-"59"
"Midlothian/WaxahachieM"-"JWY"
"OWENSCORNINGTRUMBULLASPHALTENNIS"-"25"
"RESINMFG"-"27"
"SAINT-GOBAINCONTAINERSINC."-"3"
"SKYLINERECYCLINGANDDIS"-"61"
"WAXAHACHIEPLANT"-"5"
"TexasIndustriesInc."-"9"
"Holcim(US)"-"22"

Hope this helps.
Ou

Uarporn Nopmongcol | Manager
ENVIRON International Corporation
773 San Marin Drive | Suite 2115
Novato, CA 94998
T: +1 415 899 0700 | F: +1 415 899 0707
unopmongcol@environcorp.com

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********** ATTACHMENT NOT DELIVERED **********

This Email message contained an attachment named
image001.jpg
which may be a computer program. This attached computer program could contain a computer virus which could cause harm to EPA's computers, network, and data. The attachment has been deleted.

This was done to limit the distribution of computer viruses introduced into the EPA network. EPA is deleting all computer program attachments sent from the Internet into the agency via Email.

If the message sender is known and the attachment was legitimate, you

should contact the sender and request that they rename the file name extension and resend the Email with the renamed attachment. After receiving the revised Email, containing the renamed attachment, you can rename the file extension to its correct name.

For further information, please contact the EPA Call Center at (866) 411-4EPA (4372). The TDD number is (866) 489-4900.

********** ATTACHMENT NOT DELIVERED **********

[attachment "ashgrove.txt" deleted by Erik Snyder/R6/USEPA/US]

TABLE 9-3. MODELED PARAMETERS FOR NEW POINT SOURCES AND POINT SOURCES TO BE INCORPORATED INTO PERMIT NO. 1

Source and Point Sources to be Incorporated into Permit No. 1	Model I.D.	UTM E NAD83 Zone 14 (m)	UTM N NAD83 Zone 14 (m)	Elevation (ft)	Stack Height (ft)	Exhaust Gas Temp. (°F)	Exhaust Exit Velocity (ft/sec)	Stack Diameter (ft)	Modeled Emission Rates						
									$PM_{2.5}$ (lb/hr)	PM_{10} (lb/hr)	Annual NO_x (tpy)	Hourly NO_x (lb/hr)	Annual SO_2 (tpy)	Hourly SO_2 (lb/hr)	CO (lb/hr)
Solid Fuel Transfer BC050 to BC080	NEWBF020	687246.9	3599837.9	676.25	132.75	70	47.157	1.500	0.17	0.429	---	---	---	---	---
Solid Fuel Transfer BC080 to Solid Fuel Mill	NEWBF040	687265.0	3599836.1	681.23	132.75	70	47.157	1.500	0.17	0.429	---	---	---	---	---
Solid Fuel Mill	COALMILL	687276.3	3599848.5	680.18	137.79	185	56.004	3.280	0.80	2.003	6.45	1.47	0.04	0.01	1.24
New Kiln	NEWKILN	687339.2	3599846.0	687.89	344.5	321.8	69.6	11.50	43.82	44.324	711.75	500	189.8	1,650	300
Emergency Generator	EMERG_GEN	687262.7	3599846.3	681.24	137.5	1050	438	0.42	See Table 9-5						
Pulverized Fuel Bin A	BF560A	687279.7	3599842.3	680.96	100	-459.67	0.00328	0.00328	0.016	0.033	---	---	---	---	---
Pulverized Fuel Bin B	BF560B	687279.7	3599838.3	681.19	100	-459.67	0.00328	0.00328	0.016	0.033	---	---	---	---	---
Slag Silo 3 Weigh Belt	1-16A1	687382.9	3599860.5	695.77	45	-459.67	0.00328	0.00328	0.000036	0.00024	---	---	---	---	---
Slag Silo 3Weigh Belt	1-16A2	687383.4	3599864.2	695.77	45	-459.67	0.00328	0.00328	0.000036	0.00024	---	---	---	---	---
Clinker Transport Loading (outside pile)	3_19	687279.0	3599992.0	677.49	10	-459.67	0.00328	0.00328	0.00009	0.00057	---	---	---	---	---
Clinker Transfer to Inside Pile (RM Building)	F_RM4	687322.0	3599956.0	685.43	14.5	-459.67	0.00328	0.00328	0.000009	0.000057	---	---	---	---	---
Limestone Bin Dust Collector	1_29	687235.0	3599978.0	672.38	50	70	0.00328	0.00328	0.130	0.130	---	---	---	---	---
Limestone Transfer onto Clinker Belt 1	1_30	687237.0	3599967.0	672.80	50	70	37.880	0.750	0.089	0.089	---	---	---	---	---
Limestone Transfer onto Clinker Belt 2	1_31	687227.0	3599966.0	671.72	50	70	83.330	0.560	0.110	0.110	---	---	---	---	---
Reserve Solid Fuel Transfer Point (at Main Stockpile)	6_11	686981.0	3599815.0	654.86	15	-459.67	0.00328	0.00328	0.00007	0.00048	---	---	---	---	---
Reserve Solid Fuel Reclamation Transfer Point (at Reserve Stockpile)	6_13	687214.0	3599987.0	669.75	15	-459.67	0.00328	0.00328	0.00007	0.00048	---	---	---	---	---
Reserve Solid Fuel Reclamation Transfer Point (at Main Stockpile)	6_14	687322.0	3599972.0	684.61	15	-459.67	0.00328	0.00328	0.00007	0.00048	---	---	---	---	---
Reserve Solid Fuel Stockpile	6_12	687087.0	3599879.0	660.01	8	-459.67	0.00328	0.00328	0.016	0.096	---	---	---	---	---
Limestone Feed Hopper/Incline Conveyor	F_RM2	687008.0	3599878.0	654.76	40	-459.67	0.00328	0.00328	0.00002	0.00014	---	---	---	---	---
Clinker Reclaim Conveyor No. 6 Baghouse	3_15	687010.0	3599854.0	655.84	12	-459.67	75.45	0.75	0.06	0.06	---	---	---	---	---
Raw Material Building (Transfer onto Limestone Inside Stockpile)	1_27	686981.0	3599815.0	654.86	77.0	-459.67	0.00328	0.00328	0.003	0.01	---	---	---	---	---
Railcar Unloading Hopper	6_1	687214.0	3599987.0	669.75	35.0	-459.67	0.00328	0.00328	0.001	0.005	---	---	---	---	---
Coal Unloading Conveyor Belt	6_2	687322.0	3599972.0	684.61	40.0	-459.67	0.00328	0.00328	0.006	0.043	---	---	---	---	---
Drop from Coal Stacker to Stockpile	6_3	687087.0	3599879.0	660.01	27.0	-459.67	0.00328	0.00328	0.006	0.043	---	---	---	---	---
Stacker Pile Movement	6_4D	687008.0	3599878.0	654.76	15.0	-459.67	0.00328	0.00328	0.0207	0.0688	---	---	---	---	---

Permit Amendment
Source Analysis & Technical Review

Company	**Ash Grove Texas, L.P.**	Permit Number	**1**
City	**Midlothian**	Project Number	**173601**
County	**Ellis**	Account Number	**ED-0034-O**
Project Type	**Amend**	Regulated Entity Number	**RN100225978**
Project Reviewer	**Mr. Tan Nguyen, P.E.**	Customer Reference Number	**CN600132161**
Site Name	**Cement Manufacturing Facility**		

Project Overview

Ash Grove Texas, L.P. (Ash Grove) owns and operates a portland cement manufacturing plant in Midlothian, Texas. Ash Grove submitted a permit amendment application on January 17, 2012. The amendment proposes to decommission Kilns 1 and 2 and reconstruct Kiln 3 from a 1,080 ton per day (tpd) clinker wet process kiln to a preheater/precalciner kiln system with an average production rate of 2,600 tpd clinker. With the project, the plant-wide maximum annual clinker production will drop from 1,182,600 tons per year (tpy) to 949,000 tpy. Other new sources to be constructed include a clinker cooler, a clinker cooler discharge belt, two solid fuel mill feed belts, a solid fuel mill, two pulverized fuel bins and an emergency generator. Additionally, various permits by rule (PBRs), standard exemptions (SEs), and standard permits (SPs) are being incorporated by consolidation or reference.

Emission Summary

Air Contaminant	Current Allowable Emission Rates (tpy)	Proposed Allowable Emission Rates (tpy)	Change in Allowable Emission Rates (tpy)
PM	805.24	301.64	-503.60
PM_{10}	682.56	279.86	-402.70
$PM_{2.5}$	1.21[a]	169.35	168.14
VOC	122.4	69.52	-52.88
NO_X	9528	721.39	-8806.61
CO	1314	587.59	-726.41
SO_2	9198	190.04	-9007.96
H_2SO_4	--[b]	38.22	38.22
Pb	--[b]	0.04	0.04
Hg	--[b]	0.01	0.01
NH_3	--	78.03[c]	78.03

(a) $PM_{2.5}$ was not speciated for almost all EPNs in the previously issued MAERT because it was not required at the time those sources were permitted. This project is expected to result in a decrease in $PM_{2.5}$ since PM is decreasing.
(b) These emissions are not in the current permit but they are inherent in the process and have always existed at the plant site. These emissions are expected to decrease as a result of this project.
(c) SNCR was authorized under SP Registration No. 80048; this registration is being incorporated by consolidation into the NSR permit.

Compliance History Evaluation - 30 TAC Chapter 60 Rules

A compliance history report was reviewed on:	**05/16/2012**
Compliance period:	**01/17/2007 - 01/17/2012**
Site rating & classification:	**1.63 - average**
Company rating & classification:	**2.39 - average**
If the rating is 40<RATING<45, what was the outcome, if any, based on the findings in the formal report:	**n/a**
Has the permit changed on the basis of the compliance history or rating?	**No**

Public Notice Information - 30 TAC Chapter 39 Rules

Rule Citation	Requirement	
39.403	Is Public Notice Required?	**No**

Permit Amendment
Source Analysis & Technical Review

Regulated Entity No. RN100225978

If no, give reason:	**This project will not result in a net emissions increase for any pollutants.**

Construction Permit & Amendment Requirements - 30 TAC Chapter 116 Rules

Rule Citation	Requirement	
116.111(a)(2)(G)	Is the facility expected to perform as represented in the application?	**Yes**
116.111(a)(2)(A)(i)	Are emissions from this facility expected to comply with all TCEQ air quality Rules & Regulations, and the intent of the Texas Clean Air Act?	**Yes**
116.111(a)(2)(B)	Emissions will be measured using the following method:	**Existing kilns: NOx, CO, and SO2 CEMS; Reconstructed kiln: NOx, CO, SO2, PM, THC, and Hg CEMS.**
	Comments on emission verification:	
116.111(a)(2)(D)	Subject to NSPS?	**Yes**
	Subparts **A, F, Y, OOO, and IIII**	
116.111(a)(2)(E)	Subject to NESHAP?	**No**
	Subparts	
116.111(a)(2)(F)	Subject to NESHAP (MACT) for source categories?	**Yes**
	Subparts **A, LLL, and ZZZZ**	
116.111(a)(2)(H)	Is nonattainment review required?	**No**
	Is the site located in a nonattainment area?	**Yes**
	Is the site a federal major source for a nonattainment pollutant?	**Yes**
	Is the project a federal major source for a nonattainment pollutant by itself?	**No**
	Is the project a federal major modification for a nonattainment pollutant?	**No**
	Did the project emission increases for nonattainment pollutant minus the two-year average actual emissions trigger netting?	**Yes**
	Is the contemporaneous increase significant?	**No**
	If the contemporaneous increase is significant a nonattainment review is required.	
116.111(a)(2)(I)	Is PSD applicable?	**No**
	Is the site a federal major source (100/250 tons/yr)?	**Yes**
	Is the project a federal major source by itself?	**No**
	Is the project a federal major modification?	**No**
	Did project emission increases, without decreases, for pollutant of concern, minus the two-year average actual emissions trigger netting?	**Yes**
	Was the contemporaneous increase significant?	**No**
	If yes, explain:	
	Is the change excluded by 40 CFR 52.21(b)(2)(iii)?	**No**
	If yes, explain:	
116.111(a)(2)(L)	Is Mass Emissions Cap and Trade applicable to the new or modified facilities?	**No**
	If yes, did the proposed facility, group of facilities, or account obtain allowances to operate:	**n/a**
116.140 - 141	Permit Fee: $ **75,000** Fee certification:	**Yes**

Title V Applicability - 30 TAC Chapter 122 Rules

Rule Citation	Requirement	
122.10(13)(A)	Is the site a major source under FCAA Section 112(b)?	**No**
	Does the site emit 10 tons or more of any single HAP?	**No**
	Does the site emit 25 tons or more of a combination?	**No**
122.10(13)(C)	Does the site emit 100 tons or more of any air pollutant?	**Yes**
122.10(13)(D)	Is the site a non-attainment major source?	**Yes**
122.602	**Periodic Monitoring (PM) applicability:**	

	PM is applicable since the site is subject to 30 TAC Chapter 122 and currently holds Title V Permit No. O1054. The NSR permit specifies the following Periodic Monitoring requirements to demonstrate compliance: weekly visible emission/opacity observations for applicable EPNs, quarterly property line visible emission observations, monthly sorbent or stain tube testing for ammonia or alternately use an ammonia CEMS for the kilns, and annual fuel sulfur analysis or recordkeeping of vendor fuel specifications for the emergency diesel generator.
122.604	**Compliance Assurance Monitoring (CAM) applicability:** CAM is potentially applicable since the site is subject to 30 TAC Chapter 122. The existing kilns use ESPs and SNCR and the reconstructed kiln will use a baghouse and SNCR to control PM and NOx emissions, respectively. Also, the kilns each have a pre-control potential-to-emit (PTE) for PM and NOx emissions greater than the associated major source thresholds; therefore, CAM is applicable to these emission sources and the specific pollutants. The NSR permit requires PM and NOx CEMS to demonstrate compliance. The permit also requires CEMS for other pollutants, however, these are not specific to CAM. EPNs 3, 7, 5, 9, 10, 11, and 5-2A for the clinker coolers, finish mills, cement silos, and silo No. 3 each have the pre-control PTE for PM emissions greater than the major source threshold and are equipped with baghouses to control PM emissions. Therefore, CAM is applicable and the NSR permit requires daily visible emission/opacity observations to demonstrate compliance.

Request for Comments

Received From	Program/Area Name	Reviewed By	Comments
Region:	**4**	**Luke Jones/Sam Madison**	**The regional office had comments on recordkeeping and sampling requirements.**
City:	**Midlothian**		**n/a**
County:	**Ellis**		**n/a**
Toxicology:			**n/a**
Compliance:			**n/a**
Legal:			**n/a**
Comment resolution and/or unresolved issues:	**The draft permit was revised to add recordkeeping requirements and revise/clarify sampling requirements as requested by the regional office.**		

Process/Project Description

The Ash Grove Midlothian plant currently has three existing wet kilns. For a wet kiln, raw materials are mixed with water, and the resulting slurry is fed directly to the kiln. Ash Grove is proposing to decommission Kilns 1 and 2 and reconstruct Kiln 3 from a 1,080 tpd clinker wet process kiln to a preheater/precalciner kiln system with an average production rate of 2,600 tpd clinker. The reconstruction primarily involves reducing the existing Kiln 3 length by half and adding a preheater/precalciner tower.

Ash Grove will continue to create raw material slurry using the existing equipment. However, rather than feeding the slurry directly to the reconstructed kiln, the slurry will be fed into a new dryer/crusher where the slurry will be flash dried by hot kiln and precalciner gases. The flash dried material will be crushed and preheated as it passes through the dryer/crusher and into a preheater cyclone. The preheater cyclone will separate the preheated kiln feed from the gas that will exhaust through a new baghouse and stack. The preheated material will then enter the precalciner to be calcined. The hot gases leaving the kiln as well as gases generated from fuel combustion in the precalciner will provide the heat to the precalciner. A cyclone will separate the calcined kiln feed from the hot kiln and precalciner gases and send the kiln feed to the kiln. The kiln and precalciner gases will then be routed to the dryer/crusher to provide the heat source for the flash drying of the slurry. The "kiln system" refers to the entire pyroprocess comprised of the kiln, preheater, precalciner, and dryer/crusher. According to Ash Grove, there is only one other kiln system in the country that is configured similar to the new kiln system that Ash Grove is proposing - the kiln system at the Buzzi Unicem plant in Greencastle, Indiana. The reconstructed kiln will be capable of burning the same fuels that the existing wet kilns are capable of burning, including coal, petroleum coke, natural gas, fuel oil, used oil, tire derived fuel (TDF), and woodchips.

While the majority of the kiln gas will be routed directly to the precalciner, some gas will be diverted to a new bypass baghouse. Dust removed from the bypass baghouse will be transferred to the existing cement kiln dust (CKD) handling system. The exhaust from the bypass dust collector will rejoin the kiln exhaust entering the dryer/crusher.

The precalciner will have the ability to combust coal, petroleum coke, natural gas, TDF, and woodchips. Further, the precalciner can be fueled by tires, where the tires will be combusted in a "hot disk reactor". The combustion of fuel in the precalciner will generate significant heat that together with the heat in the kiln gas will serve to calcine the kiln feed coming from the preheater cyclone. The heat that remains in the kiln and precalciner gases is used to flash dry the slurry in the dryer/crusher, and further preheat the kiln feed that has been flash dried.

In addition to the main baghouse for particulate matter (PM) control, other emission reduction measures have been designed into the reconstructed kiln system. Dry low-NOx burners (DLN) and Selective Noncatalytic Reduction (SNCR) will be used to reduce NOx emissions from the kiln, and activated carbon injection (ACI) or other sorbent may be used to reduce mercury emissions from the kiln. Further, the dryer/crusher is being designed to be in-line with the reconstructed kiln. Constructing the kiln and dryer/crusher as an in-line system allows the kiln exhaust to pass through the dryer/crusher to provide a heat source to flash dry the slurry (in addition to heat generated from combustion in the precalciner). This heat recovery mechanism reduces the kiln system's fuel requirements, thus, lowers combustion emissions. Further, it allows any sulfur compounds or acid gases in the kiln exhaust to be absorbed by the kiln feed.

Clinker produced in the reconstructed kiln will be transferred to a new clinker cooler where it will be cooled using ambient air. Clinker leaving the new clinker cooler will be handled by a new conveyor belt (FIN 3-4H) that will transport the material to existing material handling equipment. When the solid fuel mill is operating, the hot (ambient) air from the clinker cooler will pass through a new cyclone that will capture any coarse clinker material entrained in the air and combine it with the product from the clinker cooler. The hot air will then route to a new indirect fired solid fuel mill, where the heat in the air will dry the coal (and other applicable solid fuels) in the mill. When the solid fuel mill is not operating, the cooler exhaust will pass through a process dust collector and heat exchanger (existing) and be recirculated back to the clinker cooler. The material collected in the process dust collector will be combined with the product from the clinker cooler. Some recirculation of the clinker cooler exhaust through the process dust collector and heat exchanger may also occur when the solid fuel mill is operating, although at a significantly lower rate.

The pulverized fuel from the mill will be transferred with the exhaust from the solid fuel mill to a new baghouse. The baghouse will separate the pulverized coal (and other applicable solid fuels) from the exhaust air and the pulverized solid fuel will be routed to the two new pulverized fuel bins. Each bin has a vent with a small dedusting filter. Pulverized solid fuel from the new bins will be conveyed to the kiln and the precalciner burner pipes. As Ash Grove is uncertain on the VOC emission rate from the solid fuel mill, Ash Grove will install a regenerative thermal oxidizer (RTO) on the solid fuel mill to maintain VOC emissions from the project to less than the calculated potential emissions.

In order to ensure adequate drying of the solid fuel, a natural gas fired hot gas generator (15 MMBtu/hr) will be used to make hot gas that can supplement the heat in the clinker cooler air on an as needed basis or that can be used as the sole heat source for the solid fuel drying if the kiln and clinker cooler are not operating at adequate temperature to dry the solid fuel. Any clinker cooler gas that cannot be sent to the solid fuel mill will be diverted back to the clinker cooler heat exchanger, cooled and used to cool the hot clinker. Due to the design of the clinker cooling system, there will not be a dedicated clinker cooler exhaust stack emission point.

After the new clinker cooler belt, FIN 3-4H, the clinker produced in the reconstructed kiln will be handled using existing equipment. Since both raw materials and product will be handled using existing equipment, the changes to the plant are limited to construction of the converted preheater/precalciner kiln system, a clinker cooler (and associated conveyor belt), and a solid fuel mill. Two new belt conveyors will be installed to transfer coal and other applicable solid fuels from the existing Solid Fuel Day Tank (FIN 6-9) to the new solid fuel mill. Both of the conveyors will utilize baghouses for dust control. For emergency situations, a 400 kW output (473 kW input, 635 hp input, 536 hp output) emergency generator will be installed. It will only operate during critical times, such as power outages, to run the auxiliary kiln drive, burner pipe emergency fan, and other sensitive equipment and will replace old units currently in use at the plant.

A summary of the new emission sources to be added (or reconstructed in the case of Kiln 3) as a result of the Kiln 3 reconstruction project is as follows:

- Kiln 3 (part of kiln system) – FIN 431.KL100, EPN 331.SK410
- Dryer/Crusher (part of kiln system) – FIN 411.DC100, EPN 331.SK410
- Precalciner (part of kiln system) – FIN 421.CI400, EPN 331.SK410
- Preheater Cyclone (part of kiln system) – FIN 421.CN010, EPN 331.SK410
- Precalciner Cyclone (part of kiln system) – FIN 421.CN110, EPN 331.SK410
- Clinker Cooler – FIN 441.CC100, EPN 461.SK405

- Solid Fuel Mill – FIN 461.RM100, EPN 461.SK405
- Hot Gas Generator – FIN 461.HG700, EPN 461.SK405
- Clinker Cooler Belt – FIN 3-4H, EPN F-MB2
- Solid Fuel Transfer Solid Fuel Day Tank to BC050 – FIN 6-15A/B/C, EPN 6-15
- Solid Fuel Transfer BC050 to BC080 – FIN 461.BC050, EPN 461.BF020
- Solid Fuel Transfer BC080 to Solid Fuel Mill – FIN 461.BC080, EPN 461.BF040
- Pulverized Fuel Bin A – FIN 461.BI550A, EPN 461.BF560A
- Pulverized Fuel Bin B – FIN 461.BI550B, EPN 461.BF560B
- Emergency Diesel Generator – FIN EG1, EPN EG1.SK1

A summary of existing equipment associated with the Kiln 3 reconstruction project is as follows:

- Slag/Mill Scale Silo 3 Weigh Belt – FIN 1-16A, EPA 1-16A1 and 1-16A2

The existing weigh belt listed above is the conveyor that currently sends raw materials, such as slag, to the existing Kiln 3. Following the Kiln 3 reconstruction project, the conveyor will continue to handle raw material or product, but the amount handled could be greater than it is now.

A summary of equipment to be decommissioned as a result of the Kiln 3 reconstruction project is as follows:

- Kiln 1 and the associated electrostatic precipitator (ESP) (FIN 2-1, EPN 2)
- Kiln 2 and the associated ESP (FIN 2-2, EPN 6)
- Kiln 3 ESP (EPN 12)
- Kiln 1 Clinker Cooler (FIN 3-1, EPN 3)
- Kiln 2 Clinker Cooler (FIN 3-2, EPN 7)
- Kiln 3 Clinker Cooler (FIN 3-3, EPN 131)
- Kiln 1 Clinker Cooler Belt (FIN 3-4A, EPN F-MB22)
- Kiln 2 Clinker Cooler Belt (FIN 3-4B, EPN F-MB23)
- Kiln 3 Clinker Cooler Belt (FIN 3-4C, EPN F-MB24)
- Solid Fuel Mills 1, 2, and 3 (FIN 6-10A/B/C, EPN 6-10)
- Slag/Mill Scale Silo 1 (FIN 1-14, EPN 1-125)
- Slag/Mill Scale Silo 1 Weigh belt (FIN 1-14A, EPN 1-14A1, EPN 1-14A2)
- Slag/Mill Scale Silo 2 (FIN 1-15, EPN 1-126)
- Slag/Mill Scale Silo 2 Weigh Belt (FIN 1-15A, EPN 1-15A1, EPN 1-5A2)
- Kiln 1 Auxiliary Drive Engine (FIN 1-43, EPN 1-43)
- Kiln 2 Auxiliary Drive Engine (FIN 1-44, EPN 1-44)
- Kiln 3 Auxiliary Drive Engine (FIN 1-45, EPN 1-45)

Additionally, various permits by rule (PBRs), standard exemptions (SEs), and standard permits (SPs) are being incorporated by consolidation. They are as follows: (See BACT below for additional information.)

- PBR Registration No. 82608 (EPNs F-RM2, 1-29, 1-30, 1-31, 3-19 and F-RM4)
- PBR Registration No. 90808 (EPNs 6-11, 6-13, 6-14, and 6-12)
- PBR Registration No. 76379 (EPNs 6-1, 6-2, 6-3, 23, and 6-4D)
- PBR Registration No. 74145 (EPNs 3-15, F-RM1, F-RM2, 1-29, 1-30, and 1-31)
- SE 91 Registration No. 34329 (EPNs 10 and 11)
- SE 106 (APD-CERT 03/11/2005) (EPN 6-4C)
- SP Registration No. 74149 (EPN 3-15)
- SP Registration No. 80048 (EPNs 7-1-1, 7-1-3, 7-4, 7-5, 7-6, and 7-7)

PBR Registration No. 71845 (CKD Silo 3 and Pug Mill) is being incorporated by reference per the applicant's request since the authorized sources do not directly impact any permitted facilities.

Pollution Prevention, Sources, Controls and BACT- [30 TAC 116.111(a)(2)(C)]

Reconstructed No. 3 Cement Kiln (*kiln, dryer/crusher, precalciner, and preheater*), EPN 331.SK410

NOx
NSPS Subpart F limits emissions of NOx for new and reconstructed kilns to less than 1.5 lb/ton clinker, based on a 30-day rolling average. Ash Grove will comply with the NOx limit by using DLN (staged combustion) in combination with SNCR. SNCR is the most efficient NOx reduction technology demonstrated on U.S. cement kilns. A NOx limit of 1.5 lb/ton clinker (30-day rolling average), as required by NSPS Subpart F, is lower than the NOx BACT determinations made for other recently permitted kilns. Thus, using DLN in combination with SNCR to meet a limit of 1.5 lb/ton clinker (30-day rolling average) for NOx is BACT for the kiln system.

CO and VOC
CO and VOC emissions are generated as products of incomplete combustion and as a result of the decomposition of organic material in the kiln feed. There are add-on control devices such as oxidizers that can reduce emissions of CO and VOC. However, there are no kilns in the U.S. for which a BACT determination has resulted in the installation of these devices. Recent BACT determinations for CO and VOC have relied on good combustion practices as a means of limiting CO and VOC emissions. Ash Grove evaluated the economic feasibility of an RTO. The methodology specified in the EPA Air Pollution Control Cost Manual - Sixth Edition (EPA 452/B-02-001) was used to calculate the economic feasibility in annual $/ton pollutant removed. The resulting economic cost was $132,318/ton VOC controlled, $11,464/ton CO controlled, or $10,277/ton CO+VOC controlled. None of the costs are economically feasible. Since RTO is not cost effective, and recent BACT determinations have relied on good combustion practice, Ash Grove will use good combustion practices as BACT for CO (1.23 lb/ton clinker, 30-day rolling average) and VOC (0.138 lb/ton clinker, 12-month rolling period) for the kiln system.

$PM/PM_{10}/PM_{2.5}$
The new kiln system will be subject to both NSPS Subpart F and NESHAP Subpart LLL. The NSPS and NESHAP limit emissions of filterable PM for new and reconstructed kilns to 0.01 lb/ton clinker, based on a 30-day rolling average. This is an extremely low PM limit, resulting in potential filterable PM emissions from the new kiln system of less than 5 tpy. A baghouse is the most efficient control device for controlling filterable PM, as well as PM_{10} and $PM_{2.5}$. Ash Grove will install a baghouse to meet a limit of 0.01 lb/ton clinker for filterable $PM/PM_{10}/PM_{2.5}$, based as a 30-day rolling average, to comply with the NSPS and NESHAP limits. This is BACT for the kiln system.

SO_2 and H_2SO_4
NSPS Subpart F limits emissions of SO_2 for new and reconstructed kilns to less than 0.4 lb/ton clinker, based on a 30-day rolling average, or 90% control. This limit is lower than the SO_2 BACT determinations made for other similar kilns in Texas. Ash Grove will comply with the SO_2 limit by operating a dryer/crusher in line with the kiln. The dryer/crusher is part of the "preheat" portion of the overall preheater/precalciner kiln system, with the primary purpose of grinding, flash drying and preheating the wet kiln feed slurry using heat contained in the kiln and precalciner gases. While the primary purpose of the dryer/crusher is to heat, dry and grind the slurry, it also acts as an inherent scrubber for SO_2 and acid gases in the kiln exhaust (similar to the inherent scrubbing experienced in an in-line raw mill). Thus, meeting a limit of 0.4 lb/ton clinker (30-day rolling average) for SO_2 through process inherent scrubbing is BACT for the kiln system. A portion of the SO_2 generated in the process is converted to H_2SO_4. Therefore, limiting SO_2 emissions will also limit H_2SO_4 emissions, which is BACT.

Hg
NESHAP Subpart LLL limits emissions of Hg for new and reconstructed kilns to 21 lb/million tons clinker, based on a 30-day rolling average. This is a very low emission limit, and BACT for Hg has generally not been evaluated for previous similar kilns in Texas. Ash Grove will comply with the NESHAP limit by installing an activated carbon injection system or other sorbent system to control Hg emissions from the kiln. This is BACT.

NH_3
An alternative case specific specification (pursuant to 30 TAC 117.3125) for an ammonia emission limit of 35 ppm for the kilns was approved under a permit alteration issued on June 1, 2010. This is BACT and will apply to the reconstructed kiln.

<u>Clinker Cooler/ Solid Fuel Mill (EPN 461.SK405)/ Pulverized Fuel Bins (EPNs 461.BF560A and 461.BF560B)/ Solid Fuel Transfers (EPNs 461.BF020 and 461.BF040)/ Clinker Cooler Belt (EPN F-MB2)</u>

The new clinker cooler will not have a direct emission point; emissions will be routed to the solid fuel mill.

Emissions from the solid fuel mill stack and the two solid fuel transfer points preceding the solid fuel mill will be routed to baghouses that will control emissions of filterable PM for these sources to 0.01 gr/dscf. This is BACT.

Emissions from the pulverized fuel bins will be routed to dedusting filters that will control emissions of filterable PM for these sources to 0.01 gr/dscf. This is BACT.

Solid fuel from the exiting solid fuel day tank will be transferred to a new belt conveyor. The transfer will occur inside a well-enclosed building. The inherent moisture content of the fuel (> 7%) along with the well-enclosed building will control PM emissions to at least 90%. This is BACT.

Similarly, the new clinker cooler belt conveyor will transfer material to the existing clinker handling system in an enclosure and within a building to obtain at least 90% PM control. This is BACT.

Ash Grove does not have VOC data for the new solid fuel mill. Further, no BACT determinations have ever been made for VOC from solid fuel mills (i.e., coal mills). Ash Grove is estimating that the concentration of VOCs in the exhaust gas, resulting from the hot air drying the coal (and other applicable solid fuels), is 10 percent of the NESHAP standard for THCs for the kiln system. The NESHAP standard is 24 ppmvd at 7% oxygen. The actual predicted conditions for the kiln stack are 5.7% oxygen and 40.4% moisture, resulting in an actual stack THC concentration of 15.6 ppmv. This results in a concentration of 1.56 ppmv VOC for the solid fuel mill. Thus, Ash Grove is expecting to achieve a VOC concentration in the solid fuel mill exhaust of 1.56 ppmv or less. This is much less than the VOC limit that qualifies for an exemption from control requirements in 30 TAC Chapter 115, Subpart B, Division 2. This is BACT.

Hot Gas Generator

The hot gas generator will be fired with natural gas and operated with good combustion practices. NO_x emissions will be limited to 30 ppmvd corrected to 3 percent O_2. This is BACT.

Emergency Generator

The emergency generator will be fired with diesel containing no more than 15 ppm sulfur and will be certified to NSPS Subpart IIII Tier 3 standards. This is BACT.

PBR Sources Incorporated by Consolidation

EPN	Facility	BACT
6-2	Coal Unloading Conveyor Belt	Limited drop distance and high inherent moisture content (> 7%) and low emissions.
6-3	Drop from Coal Stacker to Stockpile	
6-4D	Stacker Pile Movement	
6-12	Reserve Solid Fuel Stockpile	
6-4C	Solid Fuel Unloading - Drop from Front End Loader to Stockpile	
6-11	Reserve Solid Fuel Transfer Point (at Main Stockpile)	
6-13	Reserve Solid Fuel Reclamation Transfer Point (at Reserve Stockpile)	
6-14	Reserve Solid Fuel Reclamation Transfer Point (at Main Stockpile)	
F-RM1	Raw Material Building (Transfer onto Limestone Inside Stockpile)	Building enclosure and limited drop distance and low emissions.
F-RM2	Raw Material Building (Limestone Feed Hopper/Incline Conveyor)	
F-RM4	Clinker Transfer to Inside Pile (RM Building)	
6-1	Railcar Unloading Hopper	
3-19	Clinker Transport Loading (outside pile)	Limited drop distance and low emissions (< 0.01 tpy PM).
3-15	Clinker Reclaim Conveyor No. 6 Baghouse	Emissions routed to fabric filter dust collector with an outlet grain loading of equal to or less than 0.01 gr/dscf.
1-29	Limestone Bin Dust Collector	
1-30	Limestone Transfer onto Finish Mill Collection Belt 1	

Permit Amendment
Source Analysis & Technical Review

1-31	Limestone Transfer onto Finish Mill Collection Belt 2	
23	Railcar Unloading Baghouse	
32	CKD Tank 1 Baghouse	
10	Cement Silo 1 Baghouse	
11	Cement Silo 2 Baghouse	

Impacts Evaluation - 30 TAC 116.111(a)(2)(J)

Was modeling conducted?	**Yes**	Type of Modeling:	**AERMOD**
Will GLC of any air contaminant cause violation of NAAQS?			**No**
Is this a sensitive location with respect to nuisance?			**No**
[§116.111(a)(2)(A)(ii)] Is the site within 3000 feet of any school?			**No**
Additional site/land use information:			

Summary of Modeling Results

AERMOD modeling was submitted by the applicant. The modeling was audited and approved by the Air Dispersion Modeling Team.

The modeling results indicate that the maximum off-property predicted concentrations for SO_2 (1-hr, 3-hr, 24-hr, and annual averaging periods), PM_{10} (24-hr averaging period), $PM_{2.5}$ (24-hr and annual averaging periods), NO_2 (1-hr and annual averaging periods), and CO (1-hr and 8-hr averaging periods) are below the respective de minimis concentrations and no further analysis is required.

Modeling Results for Minor NSR De Minimis			
Pollutant	**Averaging Time**	**GLCmax (µg/m³)**	**De Minimis (µg/m³)**
SO_2	1-hr	6.9	7.8
SO_2	3-hr	5	25
SO_2	24-hr	1.5	5
SO_2	Annual	0.01	1
PM_{10}	24-hr	2.8	5
$PM_{2.5}$	24-hr	1.18	1.2
$PM_{2.5}$	Annual	0.003	0.3
NO_2	1-hr	6.9	7.5
NO_2	Annual	0.04	1
CO	1-hr	22	2000
CO	8-hr	9	500

Additionally, the modeling results indicate that the state property line regulations for SO_2 (1-hr averaging period) and H_2SO_4 (1-hr and 24-hr averaging periods) are not exceeded.

Project-Related Modeling Results for State Property Line			
Pollutant	**Averaging Time**	**GLCmax (µg/m³)**	**De Minimis (µg/m³)**
SO_2	1-hr	11.2	20.4
H_2SO_4	1-hr	0.05	1
H_2SO_4	24-hr	0.01	0.3

The Modeling and Effects Review Applicability (MERA) analysis was conducted for non-criteria pollutants. All pollutants for the project fell off the MERA at Step 1C (there is no overall net increase in both short-term and annual emissions). Therefore, no further analysis is necessary.

Based on the above information, the project is not expected to have an adverse effect on human health or the environment.

Permit Concurrence and Related Authorization Actions

Is the applicant in agreement with special conditions?	**Yes**
Company representative(s):	**Scott Nielson**
Contacted Via:	**phone**
Date of contact:	**05/23/2012**
Other permit(s) or permits by rule affected by this action:	**Yes**
List permit and/or PBR number(s) and actions required or taken:	**PBR, SE, and SP Registration Nos. 34329, 74145, 74149, 76379, 80048, 82608, and 90808 have been incorporated by consolidation and will be voided with this permit action.**

Project Reviewer Date Team Leader/Section Manager/Backup Date

Special Conditions

Permit Number 1

Emission Limitations

1. This permit covers only those sources of emissions listed in the attached table, entitled "Emission Sources - Maximum Allowable Emission Rates,", and those sources are limited to the emission limits and other conditions specified in that attached table.

2. The sources shall not exceed the following emission limits (in addition to the limits identified in the maximum allowable emission rates table [MAERT] for the sources): **(5/12)**

   A. Reconstructed No. 3 Cement Kiln [Emission Point Number (EPN) 331.SK410]:
      (1) Nitrogen Oxides (NO_x) - 1.5 pounds per ton (lb/T) clinker, 30-day rolling average;
      (2) Carbon Monoxide (CO) - 1.23 lb/T clinker, 30-day rolling average;
      (3) Sulfur Dioxide (SO_2) - 0.4 lb/T clinker, 30-day rolling average;
      (4) Particulate Matter (PM) filterable ($PM/PM_{10}/PM_{2.5}$) - 0.01 lb/T clinker, 30-day rolling average;
      (5) Total Hydrocarbons (THC) - 24 parts per million by volume dry (ppmvd) corrected to 7 percent oxygen (O_2), 30-day rolling average
      (6) Mercury (Hg) - 21 lb/million tons clinker, 30-day rolling average;
      (7) Dioxins/Furans (D/F) - 0.40 nanogram per dry standard cubic meter (TEQ), corrected to 7 percent O_2; and
      (8) Ammonia (NH_3) - 35 ppmvd corrected to 7 percent O_2, 24-hour rolling average.

   B. Solid Fuel Mill Baghouse Stack (EPN 461.SK405):
      (1) PM and PM_{10} filterable - 0.01 grain per dry standard cubic foot (gr/dscf)
      (2) $PM_{2.5}$ filterable - 0.004 gr/dscf
      (3) NO_x - 30 ppmvd corrected to 3 percent O_2

   C. Solid Fuel Transfer BC050 to BC080 Baghouse (EPN 461.BF020)
      (1) PM and PM_{10} filterable - 0.01 gr/dscf
      (2) $PM_{2.5}$ filterable - 0.004 gr/dscf

   D. Solid Fuel Transfer BC080 to Solid Fuel Mill Baghouse (EPN 461.BF040)
      (1) PM and PM_{10} filterable - 0.01 gr/dscf
      (2) $PM_{2.5}$ filterable - 0.004 gr/dscf

Fuel Specifications

3. Fuel shall be limited as follows:

   A. Fuel fired in Kiln Nos. 1, 2, and 3: **(10/01)**

(1) Coal,
(2) Coke,
(3) New or used oil,
(4) Wood chips,
(5) Tire-derived fuel (TDF), and
(6) Natural gas.

B. Firing of TDF is limited to a maximum of 35 percent of total British thermal units requirements for Kiln Nos. 1, 2, and 3 [Facility Identification Numbers (FINs) 2-1, 2-2, and 2-3].

C. Fuel fired in the Reconstructed No. 3 Cement Kiln (FIN 431.KL100): **(5/12)**
(1) Coal,
(2) Coke,
(3) New or used oil, and
(4) Natural gas.

D. Fuel fired in the Precalciner (FIN 421.CI400): **(5/12)**
(1) Coal,
(2) Coke,
(3) New or used oil,
(4) Wood chips,
(5) TDF, and
(6) Natural gas.

E. Fuel fired in the Hot Gas Generator (FIN 461.HG700): natural gas. **(5/12)**

F. Fuel fired in the Emergency Diesel Generator: diesel containing no more than 15 ppm by weight sulfur. **(5/12)**

4. Upon request by the Executive Director of the Texas Commission on Environmental Quality (TCEQ) or the TCEQ Regional Director or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuels utilized in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

Federal Applicability

5. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources (NSPS) in Title 40 Code of Federal Regulations (40 CFR) Part 60, specifically the following:

A. Subpart A - General Provisions;

B. Subpart F - Portland Cement Plants (applies to facilities listed below); **(5/12)**

Facility	FIN	EPN
Kiln No. 3	2-3	12
No. 3 Clinker Cooler Stack	3-3	13
Reconstructed No. 3 Cement Kiln	431.KL100	331.SK410
Dryer/Crusher	411.DC100	331.SK410
Precalciner	421.CI400	331.SK410
Preheater Cyclone	421.CN010	331.SK410
Precalciner Cyclone	421.CN110	331.SK410
Clinker Cooler Belt	3-4H	F-MB2

C. Subpart Y - Coal Preparation and Processing Plants (applies to facilities listed below); **(5/12)**

Facilities that commenced construction, reconstruction, or modification after October 27, 1974, and on or before April 28, 2008:

Facility	FIN	EPN
Railcar Unloading Hopper	6-1	6-1
Drop from Conveyor to Stack Conveyor	6-2	6-2
Drop from Coal Stacker to Stock Pile	6-3	6-3
East Transfer from Stock Pile to Reclaim Hopper	6-5A	6-5A
West Transfer from Stock Pile to Reclaim Hopper	6-5B	6-5B
East Drop from Reclaim Hopper to Conveyor	6-6-1	6-6A
West Drop from Reclaim Hopper to Conveyor	6-6-2	6-6B
East Drop from Hopper Conveyor to Conveyor Crusher	6-6-1	6-6C
West Drop from Hopper Conveyor to Conveyor Crusher	6-6-2	6-6D
Coal Crusher and Drops	6-6A, 6-7, 6-8	6-6E, 6-7, 6-8
Drop to Day Tank	6-9	6-9
Inside Building Transfer Points	6-10A, 6-10B, 6-10C	6-10

Facilities that commenced construction, reconstruction, or modification after May 27, 2009:

Facility	FIN	EPN
Solid Fuel Transfer Solid Fuel Day Tank Conveyor to BC050	6-15A/B/C	6-15
Clinker Cooler	441.CC100	461.SK405
Solid Fuel Mill	461.RM100	461.SK405
Hot Gas Generator	431.HG700	461.SK405
Pulverized Fuel Bin A	461.BI550A	461.BF560A
Pulverized Fuel Bin B	461.BI550B	461.BF560B
Solid Fuel Transfer BC050 to BC080	461.BC050	461.BF020
Solid Fuel Transfer BC080 to Solid Fuel Mill	461.BC080	461 BF040

D. Subpart OOO - Nonmetallic Mineral Processing Plants (applies to limestone and shale handling/processing facilities); and **(5/04)**

E. Subpart IIII - Stationary Compression Ignition Internal Combustion Engines (applies to the Emergency Diesel Generator). **(5/12)**

6. These facilities shall comply with all applicable requirements of the EPA regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories (NESHAP) in 40 CFR Part 63, specifically the following:

A. Subpart A - General Provisions;

B. Subpart LLL - Portland Cement Manufacturing Industry (applies to facilities listed below); and **(5/12)**

Facility	FIN	EPN
Kiln No. 1	2-1	2
Kiln No. 2	2-2	6
Kiln No. 3	2-3	12
Reconstructed No. 3 Cement Kiln	431.KL100	331.SK410
Dryer/Crusher	411.DC100	331.SK410
Precalciner	421.CI400	331.SK410
Preheater Cyclone	421.CN010	331.SK410
Precalciner Cyclone	421.CN110	331.SK410

C. Subpart ZZZZ - Reciprocating Internal Combustion Engines (applies to the Emergency Diesel Generator) **(5/12)**

7. If any condition of this permit is more stringent than the regulations so incorporated, the permit shall govern and be the standard by which compliance shall be demonstrated. **(5/12)**

Opacity/Visible Emission Limitations

8. Except for those periods described in Title 30 Texas Administrative Code (30 TAC) §§ 101.201 and 101.211, no visible emissions, when adjusted for uncombined water vapor, shall leave the plant property as determined by Method 22 for a three-minute period out of any 30-minute period. If this condition is violated, further controls shall be installed and/or implemented as required to limit visible emissions.

9. Opacity of emissions from the EPNs listed in the table below shall not exceed 5 percent averaged over a six-minute period, and according to EPA Test Method 9 or equivalent. **(5/12)**

EPNs						
1-2A	1-2B	1-2C	1-2F	1-6C	1-6D	1-12
1-18	1-19	1-21	1-23	1-25	1-29	1-30
1-31	3-15	4	5	5-2A	8	9
10	11	23	24	25	27	28
29	30	32	33	35	461.BF560 A	461.BF560 B
461.BF02 0	461.BF04 0					

10. Opacity of emissions from EPNs 331.SK410 (Reconstructed No. 3 Cement Kiln) and 461.SK405 (Solid Fuel Mill Stack) shall not exceed 10 percent averaged over a six-minute period. **(5/12)**

Operational Limitations, Work Practices, And Plant Design

11. The Reconstructed No. 3 Cement Kiln (FIN 431.KL100, EPN 331.SK410) production rate shall not exceed 130 tons per hour of clinker and 949,000 tons per year of clinker on a rolling 12-month basis. **(5/12)**

12. Emissions from the following facilities shall be collected and exhausted through a fabric filter. **(5/12)**

Facility	FIN	Facility	FIN
Transfers to/from Quarry Belt 3	1-2B	Transfers into CKD Tank 1	2-4
Transfers to/from Quarry Belt 4	1-2A	Transfers into CKD Tank 2	2-5
Transfers to/from Quarry Belt 5	1-2C	Transfers into Clinker Silo 1	3-4F, 3-5
Transfers to/from Quarry Belt 6	1-2E	Transfers into Clinker Silo 2	3-4F, 3-5
Transfers to/from Quarry Belt 7	1-2D	Transfers into Clinker Silo 21	3-4G,

			3-6
Transfers from the Slag Elevator	1-12	Transfers into Clinker Silo 22	3-4G, 3-6
Slag Conveyor 2	1-13	Transfers onto Clinker Belt 1	3-7
Transfers into Slag Silo 1	1-14	Transfers onto Clinker Belt 2	3-8
Transfers into Slag Silo 2	1-15	Transfers to/from the Clinker Stacker	3-9
Transfers into Slag Silo 3	1-16	Finish Mill 1	4-1
Transfers to/from Quarry Conveyor 1	1-18	Finish Mill 2	4-2
Transfers into Limestone Day Tank	1-19	Transfers into Gypsum Silo 1 and Transfers from Gypsum Conveyor 1 to Gypsum Conveyor 2	4-3
Transfers to Limestone Belt 2	1-21	Transfers into Gypsum Silo 2	4-4
Transfers to Limestone Belt 3	1-23	Transfers from Gypsum Weigh Conveyor No. 2	4-6
New Crusher	1-25	Cement Loading - Railside	5-3
Transfers to/from Quarry Fixed Conveyor 3	1-26	Cement Loading - Truck	5-4
Limestone Bin	1-29	Cement Loading - Special	5-5
Limestone Transfer onto Finish Mill Collection Belt 1	1-30	Cement Railcar Unloading	5-6
Limestone Transfer onto Finish Mill Collection Belt 2	1-31		

13. Outdoor stockpiles (i.e., gypsum, clinker, coal, sand, and mill scale and the cement kiln dust (CKD) disposal area) shall be sprinkled with water as necessary to control fugitive dust emissions. **(5/04)**

14. Emission Sources (EPNs 1-4A, 1-5A, 1-6A, 2-7A, 2-7B, 6-2, 6-3, 6-4C, 6-4D, 6-11, 6-12, 6-13, and 6-14) shall employ wet material and reduced drop as represented in the permit application to reduce fugitive dust emissions. **(5/12)**

15. Emission Sources (FINs 1-6A, 3-4D, and 3-4E) shall be enclosed as represented in the permit application to reduce fugitive dust emissions. **(5/04)**

16. Transfer of CKD from storage silos to the Pugmill (FIN 2-6) shall be through an enclosed conveyor. Also, the transfer to the Pugmill shall be enclosed. **(5/04)**

17. Emission Sources (FINs 1-6B, 1-7A, 1-7B, 1-7C, 1-7D, 1-7E, 3-4A, 3-4B, 3-4C, 3-7, 3-8, 4-3, 4-4, and 4-5) shall employ partial enclosure as represented in the permit application to reduce fugitive dust emissions. **(3/07)**

18. The following facilities and operations are authorized by the indicated standard exemption (SE) or permit by rule (PBR): **(5/12)**

Facility/Operation	EPN	Authorization
Fuel Oil Truck Unloading	18	SE 51(July 15, 1988)
Waste Oil Fuel Tank Nos. 1 through 4	36	SE 51(October 4, 1995)
Storage Tank Piping	7-1	SE 51(October 4, 1995)
Unloading Piping	7-2	SE 51(October 4, 1995)
Kiln Transfer Piping	7-3	SE 51(October 4, 1995)
Line Heater	15	SE 7 (April 25, 1986)
CKD Silo 3 and Pug Mill	2-9	PBR Registration No. 71845
CKD Silo 3 Truck Spout	2-10	PBR Registration No. 71845
CKD Silo 3 Pug Mill Loadout	2-11	PBR Registration No. 71845

19. Paved plant roads shall be swept or washed and unpaved roads shall be sprinkled with water and/or environmentally sensitive dust suppressant chemicals as necessary to control dust emissions. **(5/04)**

20. All hoods, ducts, and collection systems shall be effective in preventing fugitive emissions. When compliance with this condition is required to be tested, compliance shall be determined by the EPA Reference Method 22 with no visible emissions persisting for more than one six-minute period in a half-hour. **(5/04)**

21. The on-site oil storage tanks that store oil for kiln fuel are authorized to store used oil meeting the requirements of 40 CFR Part 279, Standards for the Management of Used Oil.

22. Each kiln (Kiln Nos. 1, 2, and 3) shall have an individual maximum allowable sulfur dioxide (SO_2) emission rate of 1,131 pounds per hour (lb/hr). Additionally, all three kilns in aggregate shall operate under a total combined SO_2 emission rate of 2,100 lb/hr.

    Records demonstrating compliance with this condition shall be kept accordingly and, upon request, made immediately available to representatives of the TCEQ or any local air pollution program having jurisdiction.

23. Ammonia emissions from each of the kiln stacks, when using Selective Non-Catalytic Reduction, shall not exceed a limit of 35 ppmvd at 7.0 percent O_2, on a 24-hour rolling average basis. **(9/10)**

24. Emission rates are based on and the facilities shall be limited to the following: **(5/12)**

Facility/Operation	Max Hourly Throughput	Max Annual (Tons)

	(Tons)	
Stamler Feeder (FIN1-24)	800	2,500,000
Outdoor Storage Hopper (FIN 1-6)	200	1,001,100
Coal Crusher/Hammer Mill (FIN 6-7)	150	873,600
Kiln Nos. 1, 2, and 3 (FINs 2-1, 2-2, and 2-3)	45 (Clinker, each)	394,200 (Clinker, each)

25. The Emergency Diesel Generator is limited to operating 100 hours per year on a rolling 12-month basis for non-emergency operation. **(5/12)**

Initial Determination of Compliance (5/12)

26. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Reconstructed No. 3 Cement Kiln Stack (EPN 331.SK410), Solid Fuel Mill Stack (EPN 461.SK405), Solid Fuel Transfer BC050 to BC080 Stack (EPN 461.BF020), and Solid Fuel Transfer BC080 to Solid Fuel Mill Stack (EPN 461.BF040). Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after initial startup of the Reconstructed No. 3 Cement Kiln Project. Sampling must be conducted in accordance with the TCEQ Sampling Procedures Manual and in accordance with applicable EPA 40 CFR 60, Appendix A, or other applicable reference method procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling.

    A. Air contaminants emitted from the Reconstructed No. 3 Cement Kiln Stack (EPN 331.SK410) to be tested for include PM_{10}, $PM_{2.5}$, D/F, lead, and methane. Initial determination of compliance for PM, NO_x, CO, SO_2, THC, and Hg shall be performed in accordance with the applicable initial compliance requirements of NSPS Subparts A and F, and NESHAP Subpart LLL. Initial determination of compliance for volatile organic compounds (VOC) shall be performed in accordance with Special Condition No. 32H.

    B. Air contaminants emitted from the Solid Fuel Mill Stack (EPN 461.SK405) to be tested for include filterable PM, VOC, and NO_x, except NO_x testing is not required if there is vendor data for the Hot Gas Generator showing compliance with the NO_x limit in Special Condition No. 2B(3). Testing for VOC shall be performed while the regenerative thermal oxidizer (RTO) is operating and while the RTO is not operating, in order to determine the RTO control efficiency. Compliance with the pounds per hour VOC emission limit in the MAERT for the Solid Fuel Mill Stack is not required while performing initial testing with the RTO not operating. The stack testing data may be used to determine compliance with the limits in Special Condition No. 2 and the MAERT.

C. Air contaminants emitted from the Solid Fuel Transfer BC050 to BC080 Stack (EPN 461.BF020) to be tested for include filterable PM. The stack testing data may be used to determine compliance with the limits in Special Condition No. 2 and the MAERT.

D. Air contaminants emitted from the Solid Fuel Transfer BC080 to Solid Fuel Mill Stack (EPN 461.BF040) to be tested for include filterable PM. The stack testing data may be used to determine compliance with the limits in Special Condition No. 2 and the MAERT.

Demonstration of Continuous Compliance

27. Upon request by the TCEQ Executive Director or the TCEQ Regional Director having jurisdiction, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the cement kilns to demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions and/or otherwise prove satisfactory equipment performance. Sampling must be conducted in accordance with the TCEQ Sampling Procedures Manual or in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director or the appropriate TCEQ Regional Director prior to conducting sampling.

    Air contaminants emitted from the kilns to be tested for include (but are not limited to) PM, NO_x, CO, VOC, and SO_2. **(4/12)**

28. The permit holder shall make visible emissions observations for the fabric filter baghouses or dedusting filters with the EPNs listed in the table below. Visible emissions observations shall be made and recorded once per week. **(5/12)**

EPNs						
1-2A	1-2B	1-2C	1-2F	1-6C	1-6D	1-12
1-18	1-19	1-21	1-23	1-25	1-29	1-30
1-31	3-15	4	8	23	24	25
27	28	29	30	32	33	35
461.BF560A	461.BF560B	461.BF020	461.BF040	461.SK405		

Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as

it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.

Deviation Limit: If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If a Test Method 9 is performed, the opacity limit is 5 percent, except the opacity limit for EPN 461.SK405 is 10 percent. If the result of the Test Method 9 is opacity above the applicable limit, the permit holder shall report a deviation.

29. The permit holder shall make visible emissions observations pursuant to Special Condition No. 8 (property line visible emissions observations) on a quarterly basis and maintain records of the observations. Contributions from uncombined water shall not be included in determining compliance with this condition. If visible emissions are observed crossing the property line for more than a cumulative three-minute period out of the 30-minute period, then an evaluation and identification of the source and cause of the visible emissions shall be conducted within 24 hours and documented. Corrective action to eliminate the source of visible emissions shall be taken promptly and documented within one week of first observation of the visible emissions. **(5/12)**

30. The NH_3 concentrations at Kiln Nos. 1, 2, and 3 (EPNs 2, 6, and 12) and the Reconstructed Kiln 3 (EPN 331.SK410) shall be monitored or calculated according to one of the methods listed below and shall be tested or calculated according to the associated frequency listed below. Testing for NH_3 slip is only required when the selective non-catalytic reduction (SNCR) unit is in operation. **(5/12)**

    A. The holder of this permit may install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) to measure and record the concentrations of NH_3. The NH_3 measurements shall be used to determine compliance with the MAERT.

    B. The NH_3 slip may be measured using a sorbent or stain tube device specific for NH_3 measurement in the appropriate range. The frequency of sorbent or stain tube testing shall be monthly.

        (1) If the sorbent or stain tube testing indicates an ammonia (NH_3) slip concentration that exceeds 10 parts per million (ppm) at any time, the permit holder shall begin NH_3 testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or EPA Conditional Test Method (CTM) 27 on a quarterly basis in addition to the monthly sorbent or stain tube testing.

        (2) If the quarterly testing indicates NH_3 slip is 10 ppm or less, the Phenol Nitroprusside Indophenol CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 10 ppm NH_3 slip or greater.

C. The permit holder may install and operate a second NO_x CEMS probe located between the kiln and the SNCR, upstream of the stack NO_x CEMS, which may be used in association with the SNCR efficiency and NH_3 injection rate to estimate NH_3 slip. This condition shall not be construed to set a minimum NO_x reduction efficiency on the SNCR unit.

D. The permit holder may install and operate a dual stream system of NO_x CEMS at the exit of the SNCR. One of the exhaust streams would be routed, in an unconverted state, to one NO_x CEMS, and the other exhaust stream would be routed through a NH_3 converter to convert NH_3 to NO_x and then to a second NO_x CEMS. The NH_3 slip concentration shall be calculated from the delta between the two NO_x CEMS readings (converted and unconverted).

E. Any other method used for measuring NH_3 slip shall require prior approval from the TCEQ Air Permits Division in Austin.

31. The sulfur content of the diesel fuel to be used in the Emergency Diesel Generator shall be demonstrated by an annual representative sample analysis. The fuel sample may be performed by the permit holder, a service contractor, fuel vendor, or any other qualified agency. The permit holder may elect not to monitor the fuel provided that the fuel quality characteristics in a valid purchase contract specify that the fuel meets the requirements of Special Condition No. 3. **(5/12)**

Compliance Assurance Monitoring

32. The holder of this permit shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) to measure and record the opacity of the No. 3 Clinker Cooler Stack (EPN 13) and each kiln stack (EPNs 2, 6, and 12), and a continuous emission monitoring system (CEMS) to measure and record the in-stack concentration of NO_x, CO, SO_2, and oxygen from each kiln (EPNs 2, 6, and 12). The holder of this permit shall install, calibrate, maintain, and operate a CEMS to measure and record the in-stack concentration of NO_x, CO, SO_2, PM, THC, Hg, and oxygen from the Reconstructed No. 3 Cement Kiln (EPN 331.SK410). Additionally, the holder of this permit shall install, calibrate, maintain, and operate a continuous flow rate sensor to measure and record the exhaust flow rate in the stack. **(5/12)**

A. Each CEMS and COMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specifications No. 1 through 4, 8A, or 11 of 40 CFR Part 60, Appendix B, as applicable. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division in Austin for requirements to be met. **(5/12)**

B. The flow rate sensor shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and

reporting requirements specified in Performance Specification No. 6, 40 CFR Part 60, Appendix B. **(12/04)**

C. The SO_2, NO_x, CO, PM, and THC CEMS and the continuous flow rate sensor shall be used as a continuous emission rate monitoring system for SO_2, NO_x, CO, PM, and VOC. **(5/12)**

For EPN 331.SK410, after the initial determination of compliance, the PM CEMS shall be used to determine continuous compliance with the opacity limitations in Special Condition No. 10. Compliance with the PM mass emission limit will be considered to demonstrate compliance with the opacity limit; however, the TCEQ may use EPA Test Method 9 to determine opacity at any time. **(5/12)**

D. Each system shall be zeroed and spanned daily and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span are not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days, unless the monitor is required by a subpart of NSPS or National Emission Standards for Hazardous Air Pollutants, in which case zero and span shall be done daily without exception.

Each monitor shall be quality-assured at least quarterly in accordance with the appropriate audit specified in 40 CFR Part 60, Appendix F, Procedure 1 (gaseous CEMS), Procedure 2 (PM CEMS), or Procedure 5 (Hg CEMS). An equivalent quality assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

Cylinder gas audits of CEMS with exceedances of 15 percent accuracy shall be reported to the TCEQ Regional Director, and necessary corrective action shall be taken. The TCEQ Regional Director shall be notified as soon as possible after the discovery of any CEMS malfunction which is expected to result in more than 24 hours of lost data. At the discretion of the TCEQ Regional Director, the permit holder may be required to take supplemental stack concentration measurements. **(12/04)**

E. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rate in lb/hr at least once every week.

F. All monitoring data and quality-assurance data shall be maintained by the source for a period of five years and shall be made available to the Executive Director of the TCEQ or designated representative upon request. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit. **(5/12)**

G. For NSPS sources subject to Appendix F, the appropriate TCEQ Regional Office shall be notified at least 30 days prior to each annual relative accuracy testing audit in order to provide them the opportunity to observe the testing.

H. The VOC mass emission rate for EPN 331.SK410 shall be calculated from the THC emission rate determined using the THC emission rate monitoring system by multiplying the THC mass emission rate by a Methane Reduction Factor. The following equation shall be used

VOC = THC * Methane Reduction Factor

Where, the Methane Reduction Factor is the methane concentration divided by the THC concentration subtracted from 1 [i.e., methane reduction factor = (1-(methane/THC))].

The methane concentration shall be determined using periodic stack testing for methane. The methane concentrations measured shall be used to determine the Methane Reduction Factor to be used in the subsequent calculations for VOC.

The methane concentration shall be determined by performing stack testing on a quarterly basis for the first four tests, then annually thereafter. Once four stack tests have been performed, the methane concentration used to determine VOC emissions will be the average of the four stack tests. Thereafter, the methane concentration used to determine VOC emissions will be the average of the most recent four stack tests.

33. The permit holder shall make visible emissions observations for the fabric filter baghouses on EPNs 3, 5, 7, 9, 10, 11, and 5-2A. Visible emissions observations shall be made and recorded once per day and in accordance with the requirements specified in 40 CFR § 64.7(c).

Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.
Deviation Limit: If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity, consistent with Test Method 9, as soon as practicable but no later than 24 hours after observing visible emissions. If a Test Method 9 is performed, the opacity limit for EPNs 5, 9, 10, 11, and 5-2A, is 5 percent, and for EPNs 3 and 7 the opacity limit is 30 percent. If the result of Test

Method 9 is opacity above the applicable limit, the permit holder shall report a deviation. **(9/10)**

Sampling Requirements **(4/12)**

34. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at their own expense. Sampling ports and platforms shall be incorporated into the design of the stacks according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities" prior to stack sampling. Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Office with jurisdiction.

35. Sampling shall be conducted in accordance with the TCEQ Sampling Procedures Manual and EPA Test Methods in 40 CFR Part 60, Appendix A, and other applicable reference test method procedures, as follows:

    A. Test Methods 1 through 4, as appropriate, for exhaust flow, diluent, and moisture concentration;

    B. Test Method 5 or 17, modified with a controlled condensate method subject to approval from the TCEQ prior to sampling, for the concentration of total PM;

    C. Test Method 5 or 17 for the filterable concentration of PM (front-half catch);

    D. Test Method 7E, or equivalent methods, for the concentrations of NO_x;

    E. Test Method 10 for the concentration of CO;

    F. Test Method 25A (measuring total carbon as propane) in order to quantify THC and ASTM Method D6348-03 or EPA Method 18, in order to speciate and exclude methane and ethane from THC, for an accurate concentration and representation of VOC;

    G. Test Method 9 for opacity;

    H. Test Method 6, 6A, or 6C for the concentration of SO_2; and

    I. Test Method 201, 201A, or 202 for in stack PM_{10}, or condensable PM, 40 CFR 51, Appendix M.

36. If stack sampling and/or other testing is required pursuant to Special Condition Nos. 26 or 27, a pretest meeting shall be held with personnel from the TCEQ before the required tests are performed. The TCEQ Regional Office with jurisdiction shall be notified not less than 30 days prior to sampling to schedule a pretest meeting. The notice shall include:

    A. Date for pretest meeting;

B. Date sampling will occur;

C. Points or sources to be sampled;

D. Name of firm conducting sampling;

E. Type of sampling equipment to be used; and

F. Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

37. Alternate sampling methods and representative unit testing may be proposed by the permit holder. A written proposed description of any deviation from sampling procedures or emission sources specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. Such a proposal must be approved, in writing, by the TCEQ Regional Office with jurisdiction and the TCEQ Office of Air, Air Permits Division in Austin at least two weeks prior to sampling.

38. Requests to waive testing for any pollutant specified shall be submitted, in writing, for approval to the TCEQ Office of Air, Air Permits Division in Austin.

39. During stack sampling emission testing, the facilities shall operate at maximum represented production rates. Primary operating parameters that enable determination of production rates shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting.

    If the plant is unable to operate at the maximum represented production/throughput rates during testing, then additional stack testing shall be required when the production rate exceeds the previous stack test production rate by +10 percent unless otherwise determined, in writing, by the TCEQ Executive Director.

40. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office with jurisdiction. Additional time to comply with the applicable federal requirements requires EPA approval, and requests shall be submitted to the TCEQ Regional Office with jurisdiction.

41. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

    A. One paper copy and one computer compact disc (CD) to the TCEQ Regional Office with jurisdiction.

B. One paper copy to the TCEQ Office of Air, Air Permits Division in Austin.

C. One paper copy to each appropriate local air pollution control program with jurisdiction.

42. If, as a result of stack sampling, compliance with the permitted emission rates cannot be demonstrated, the holder of this permit shall adjust any operating parameters so as to comply with Special Condition No. 1 and the permitted emission rates.

43. If the holder of this permit is required to adjust any operating parameters for compliance, then beginning no later than 60 days after the date of the test conducted, the holder of this permit shall submit to the TCEQ, on a monthly basis, a record of adjusted operating parameters and daily records of production sufficient to demonstrate compliance with the permitted emission rates. Daily records of production and operating parameters shall be distributed as follows:

A. One copy to the TCEQ Regional Office with jurisdiction.

B. One copy to the TCEQ Office of Air, Air Permits Division in Austin.

Reporting Requirements

44. The holder of this permit shall submit quarterly NO_x, SO_2, and CO CEMS reports for Kiln Nos. 1, 2, and 3 (EPN 2, 6, and 12) (one copy) and quarterly PM, NO_x, CO, SO_2, THC, and Hg CEMS reports for the Reconstructed No. 3 Cement Kiln Stack (EPN 331.SK410) to the TCEQ Regional Office; however, submission of opacity data is not required. In addition to hard copies, all CEMS reports shall be submitted electronically either as an electronic spreadsheet file, a Portable Document Format (.pdf), or another format acceptable to the TCEQ Regional Director. All reports shall be postmarked by the 30th day following the end of each calendar quarter and shall include the following information for each monitor: **(5/12)**

A. The date and duration of time from the commencement to the completion of an event which resulted in excess stack emissions.

B. The date and time of the commencement and completion of each specific time period of excess stack emissions within that event.

C. The total time duration of excess stack emissions.

D. The magnitude of the excess stack emissions including the highest and average (hourly) emission rate(s). For the purposes of this quarterly CEMS report, all excess stack emissions shall be converted into the units of the permit with conversion factors and equations included.

E. The nature and cause of any malfunction resulting in excess emissions and the corrective action taken and/or preventative measures adopted.

F. The date and time identifying each period during which a CEMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.

G. When no excess emissions have occurred or the respective CEMS has not been inoperative or repaired, such information shall be stated in the report.

H. The total tons of NO_x, SO_2, and CO emitted during the quarter from Kiln Nos. 1, 2, and 3 (EPNs 2, 6, and 12), the total tons of PM, NO_x, CO, SO_2, VOC, and Hg emitted during the quarter from the Reconstructed No. 3 Cement Kiln Stack (EPN 331.SK410), and the total hours of kiln operation. **(5/12)**

I. The reporting of excess emissions required by this condition does not relieve the holder of this permit from notification requirements of emission events as required by 30 TAC § 101.201 or notification of scheduled maintenance, start-up, and shutdown as required by 30 TAC § 101.211.

J. Written records of all test results from quarterly gas audits.

45. The permit holder shall submit annual reports of the rolling 12-month VOC emissions calculated in accordance with Special Condition No. 32(H) to the TCEQ Regional Office. The reports shall be submitted by March 31 of each year for the previous calendar year.

Miscellaneous

46. The holder of this permit shall physically identify (minimum 3" letters/numbers) and mark in a conspicuous location all equipment that has the potential of emitting air contaminants as follows within 90 days of the approval of these revised conditions:

A. The FINs as submitted to the Emissions Inventory Section of the TCEQ.

B. The EPNs as listed on the MAERT.

Recordkeeping Requirements

47. The following records shall be kept at the plant site for the life of the permit. All records required in this permit shall be made available at the request of personnel from the TCEQ, EPA, or any air pollution control agency with jurisdiction. **(5/12)**

A. A copy of this permit.

B. A complete copy of the testing reports and records of the initial performance testing and initial determination of compliance completed pursuant to Special Condition No. 26 to demonstrate initial compliance.

C. Stack sampling results or other air emissions testing (other than CEMS data) that may be conducted on units authorized under this permit after the date of issuance of this permit.

48. The following information shall be maintained at the plant site and made available at the request of personnel from the TCEQ, EPA, or any air pollution control agency with jurisdiction to demonstrate compliance with permit limitations. These records shall be totaled (as applicable) for each calendar month, retained for a rolling 60-month period, and include the items identified below. Records generated before May 16, 2010 are not subject to the 60-month retention requirement. **(5/12)**

A. Hourly and annual Stamler Feeder (FIN 1-24) raw material throughput.

B. Hourly and annual Outside Hopper (FIN 1-6) throughput.

C. Hourly and annual Hammer Mill/Coal Crusher (FIN 6-7) throughput.

D. Hourly and annual clinker throughput for Kiln Nos. 1, 2, and 3 (FINs 2-1, 2-2, and 2-3) and the Reconstructed No. 3 Cement Kiln (FIN 431.KL100). **(5/12)**

The hourly Stamler Feeder throughput shall be calculated from records of the material throughput and hours of operation for the calendar month and recorded by the 15th day of the month following the month to which the records pertain. A rolling 12-month total throughput for the Stamler Feeder shall be based on monthly throughput records and recorded by the 15th day of the month following the month to which the records pertain.

The hourly outside hopper and hammer mill/coal crusher throughput shall be calculated and recorded at least once per calendar year from measurements of the time required to move a known quantity of material through these facilities. A rolling 12-month total throughput for the outside hopper and hammer mill/coal crusher shall be based on monthly throughput records and recorded by the 15th day of the month following the month to which the records pertain.

The hourly throughputs for Kiln Nos. 1, 2, and 3 and the Reconstructed No. 3 Cement Kiln shall be calculated from daily records of clinker throughputs and hours of operation for Kilns Nos. 1, 2, and 3 and the Reconstructed No. 3 Cement Kiln. A rolling 12-month total clinker throughput for Kilns 1, 2, and 3 and the Reconstructed No. 3 Cement Kiln shall be based on monthly throughput records and recorded by the 15th day of the month following the month to which the records pertain. **(5/12)**

E. Records of daily visible emissions observations for the EPNs required by Compliance Assurance Monitoring required in Special Condition No. 33. **(9/10)**

F. Records of weekly visible emissions observations for the EPNs required by Periodic Monitoring required in Special Condition No. 28. **(9/10)**

G. Records of quarterly property line visible emissions observations and any corrective action taken as required by Periodic Monitoring required in Special Condition No. 29. **(5/12)**

H. Records of any Test Method 9 conducted as specified in Special Condition Nos. 28 and 33. **(9/10)**

I. Records of NH_3 concentrations monitored or calculated pursuant to Special Condition No. 30 and the corresponding NH_3 emissions. **(5/12)**

J. Records of sulfur content of diesel fuel pursuant to Special Condition No. 31. **(5/12)**

K. Records of NO_x, CO, diluent gases (O_2 or CO_2), PM, SO_2, THC, and Hg CEMS emissions data, as applicable, and continuous flow rate monitoring data to demonstrate compliance with the emission rates listed in the MAERT. **(5/12)**

L. Raw data files of all CEMS data including calibration checks and adjustments and maintenance performed on these systems. **(5/12)**

M. Records of methane concentrations and VOC emissions calculated pursuant to Special Condition No. 32H. **(5/12)**

N. Records of the hours of operation of the Emergency Diesel Generator to demonstrate compliance with Special Condition No. 25. **(5/12)**

Special Provision

49. After completion of construction and initial shakedown of the Reconstructed No. 3 Cement Kiln, Kiln Nos. 1 and 2 shall be shut down and rendered permanently inoperable. During the 180-day shakedown period following completion of construction, the Reconstructed No. 3 Cement Kiln may operate for clinker production only while Kiln Nos. 1 and 2 are not operating for production of clinker. **(5/12)**

50. Upon completion of construction of the Reconstructed No. 3 Cement Kiln, the permit holder shall notify the TCEQ Regional Office of the project completion within 30 days and submit a permit alteration to the TCEQ Air Permits Division within 180 days to revise this permit to remove the shutdown facilities and associated requirements. **(5/12)**

Dated: May 25, 2012

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Tue 10/9/2012 6:36:00 PM
Subject: Re: Fw: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy
Hotspot
Hotspot
Hotspot
Hotspot
Hotspot

Ex. 5 - Deliberative

Regards,

Joe

" ... and miles to go before I sleep."
-- Robert Frost

From: Ellen Belk/R6/USEPA/US
To: Joe Kordzi/R6/USEPA/US@EPA
Date: 10/09/2012 01:33 PM
Subject: Fw: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Are we ready to move forward with "Task 3 Control Cost and performance Capability Support" with Dr. Fox?

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

----- Forwarded by Ellen Belk/R6/USEPA/US on 10/09/2012 01:32 PM -----

Ex. 6 - Personal Privacy

Tue 10/09/2012 1:00 PM - 2:00 PM

Ellen Belk

Chair: Erik Snyder/R6/USEPA/US

Rooms: Cypress Tree - 06.O02/R6 – 06th Floor@EPA

This entry has an alarm. The alarm will go off before the entry starts.

Ellen Belk/R6/USEPA/US@EPA, gyarwood@environcorp.com, Michael Feldman/R6/USEPA/US@EPA, snw@rti.org, unopmongcol@environcorp.com
Optional: Joe Kordzi/R6/USEPA/US@EPA, Jolynn Collins/RTP/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US
Sent: Thur 10/18/2012 3:07:59 PM
Subject: Tentative: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Wolf, Susan N."
Sent: Thur 10/18/2012 3:11:22 PM
Subject: Accepted: Accepted: Invitation: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy
Code: Ex. 6 - Personal Privacy (Oct 30 01:00 PM CDT in Pine Tree - 06.O15/R6 ? 06th Floor@EPA)

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Greg Yarwood"
Sent: Thur 10/18/2012 3:16:41 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Uarporn Nopmongcol"
Sent: Thur 10/18/2012 5:40:28 PM
Subject: Accepted: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Thur 10/18/2012 6:42:56 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US
Sent: Thur 10/18/2012 9:03:31 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: EAS.System@EPA
Sent: Thur 10/25/2012 9:01:55 PM
Subject: EAS Document Notification: For your reference: Award: NEW AWARD - RTI - ECONOMIC ANALYSIS AND CONTROL STRATEGY (EP-W-11-029/1-12)

Award: EP-W-11-029/1-12 has been approved by Natalia Fisher-Jackson in EAS.
Project Title: NEW AWARD - RTI - ECONOMIC ANALYSIS AND CONTROL STRATEGY
Description: E. Belk -- See attached SOW.
Owner: Jolynn Collins
Requisitioner: Barbara Bess
Contract Specialist: Natalia Fisher-Jackson
Contracting Officer: Natalia Fisher-Jackson
Project Officer: Jolynn Collins
Site: OAR/OAQPS
Contracting Office: RTPPOD

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 10/30/2012 5:59:19 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

GEORGE C. Marshall INSTITUTE

Changes in the Fuel Mix Used to Produce Power in the U.S.

Michael E. Canes

The Marshall Institute – Science for Better Public Policy

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Changes in the Fuel Mix Used to Produce Power in the U.S.

Michael E. Canes

George C. Marshall Institute
Arlington, Va.

About the Author

Michael E. Canes is a Distinguished Fellow at LMI, a not-for-profit government consulting firm located in McLean, VA. Dr. Canes has studied patterns of energy use in the U.S. economy over many years, including that in vehicle, industrial and utility markets. He also has examined how such energy use relates to greenhouse gas emissions in those sectors. Dr. Canes was formerly Vice President and Chief Economist of the American Petroleum Institute, and before that a member of the faculty of the Graduate School of Management at the University of Rochester, Rochester, NY and an analyst at the Center for Naval Analyses, Alexandria, VA.

Executive Summary

Over the years, there have been significant changes in the fuel mix used to generate electricity in the United States. Generally, this mix has become less carbon-intensive, relying less on coal and more on natural gas and renewable sources. Nevertheless, concerns over the environment and a desire to promote the emergence of "clean energy" industries have led a number of people to advocate policy measures to induce, if not compel, power suppliers in the United States to alter their fuel mix away from fossil fuels and towards non-carbon sources. For example, many states have established Renewable Portfolio Standards (RPSs), which compel power suppliers to utilize minimum percentages of renewable fuels that usually rise over time. At the federal level, President Obama has proposed a 'clean energy standard' and Senator Jeff Bingaman (D-New Mexico), Chairman of the Senate Energy Committee, recently introduced a RPS bill that would compel power suppliers everywhere in the country to meet that standard.

In this paper, we examine what actually has been happening over time with respect to the power producing fuel mix in the United States. The purpose is to see whether such mix already is being shaped by market forces that are driving it towards lower carbon content. If so, question arises whether there is any need for policy measures such as RPSs or subsidies for non-carbon sources. Further, as mandates or subsidies have substantial costs, question arises whether these costs are justified.

Our findings are that:

- The U.S. power generation fuel mix has been falling in carbon intensity for the past 50 years.
- This trend towards a less carbon intensive fuel mix has accelerated in recent years as the price of natural gas has fallen relative to that of coal.
- Federal projections of the power production fuel mix into the future suggest the trend will continue for many years.
- Though virtually all forms of energy are subsidized by the government to some degree, renewable sources have received very large subsidies per unit of output in recent years, likely affecting power generation choices at the margin.
- Subsidies and mandates impose substantial costs on taxpayers and on ratepayers. They also induce rent-seeking behavior by suppliers which impose deadweight costs on society and which breed cynicism about the U.S. system of government and its relation to economic activity. Given continuing market trends, no expansion of such mandates or subsidies is justified. Indeed, with the exception of basic research, a relaxation of mandates and a reduction in energy subsidies if not their complete disappearance would be the more desirable course of action.

Introduction

One of the most important questions concerning energy and environmental policy in the United States is what fuel mix should be used to generate power. On the one hand, low-cost fuels provide power relatively inexpensively to consumers, which helps stimulate economic growth and maintain economic well-being. On the other, low-cost fuels include coal, which is carbon-intensive, and oil and natural gas, which are less so but not as pollutant-free as, say, wind or solar power.

This question of power generation fuel mix has stimulated a good deal of interest among policy makers. At the federal level, President Obama has proposed a Clean Energy Standard that purportedly would double the production of power from renewable sources, nuclear, natural gas and coal with carbon capture.[1] The proposed standard was incorporated into a bill introduced by Senator Jeff Bingaman, the Clean Energy Standard Act of 2012, which would impose a RPS on power generators at the federal level (S. 2146). Already, 29 states plus the District of Columbia impose this type of constraint upon local power generators.

In addition, federal and state officials have granted a number of subsidies to renewable fuels and to nuclear power to stimulate their production and use in power generation. The President's Fiscal Year 2013 (FY13) budget included $5 billion in direct subsidies for the manufacture of clean energy sources, extension of tax credits for renewable sources such as wind, and continuation of programs featuring payments in lieu of tax credits.[2] Debate over the level of subsidies and how long to extend them is ongoing.

In this paper, we first take a close look at what has actually been happening with respect to the power generation fuel mix in the United States. We look at this question over the longer term (60 years), an intermediate term (over the past 15 years) and the short term (17 months). We also look at worldwide changes over the past few years. The results of this examination are intended to inform debate about whether new constraints should be imposed on U.S. power producers at this time.

We then examine some of the drivers for the fuel mix changes that have taken place. This discussion focuses on relative fuel prices, changes in technology and the role of subsidies.

We briefly discuss some implications of imposing new constraints on power producers, and of continuing, if not increasing, subsidies to various fuels. Among other things, we discuss implications for consumers, taxpayers, and the U.S. political system of imposing the constraints and granting the subsidies. Finally, we offer conclusions and recommendations.

Background

One of the more contentious issues in the U.S. today is how best to deal with environmental challenges such as climate change. At one level, there is scientific debate whether the climate is changing as a result of anthropogenic activity, and if so, to what extent. At another, there is policy debate over what to do. Because power generation accounts for roughly 40% of U.S. greenhouse gas (GHG) emissions, much of this policy debate has centered on that sector, and in particular on the fuel mix used for generation.

As above mentioned, many states have imposed RPS constraints on their local utilities. These constraints set schedules for producing some minimum level of power from renewable sources such as wind, geothermal and solar. In some cases, hydroelectric power is included in the mix, in others not. Montana for example, though a coal-producing state, has set an RPS which includes certain hydropower sources plus several other forms of renewable energy under a schedule which requires that 5% of a supplier's electricity be generated by renewable sources in 2005, 10% by 2010, and 15% by 2015 and thereafter. Ohio provides a second example. That state requires that 25% of power generation come from alternative energy sources by 2025, but includes energy efficiency measures, 3rd generation nuclear power and clean coal (CO_2-free) among eligible sources.

Senator Bingaman's Clean Energy Standard Act of 2012 would amend the Public Utility Regulatory Policies Act of 1978 to require utilities to obtain a certain percentage of the power they supply from what are defined as "clean" energy sources. A wide variety of sources is included, including natural gas, and the following schedule is proposed:[3]

Table 1. Ever-Increasing Calendar Year Minimum Annual Percentages of Clean Fuel Alternative Sources of Power are Specified in S.2146

2015	24%
2020	39%
2025	54%
2030	69%
2035	84%

Essentially, S. 2146 is aimed at removing coal and oil from the power generation mix unless GHGs associated with those sources are captured and stored so as not to enter the atmosphere.

Another approach taken to encourage changes in the nation's power mix has been to strongly subsidize non-fossil fuel sources of energy, including nuclear power, geothermal, wind and solar. Nuclear power, for example, receives subsidies in the form of insurance guarantees, loan guarantees, tax credits and ongoing government-sponsored research and development. The American Recovery and Reinvestment Act (ARRA) included almost $400 million in spending on geothermal energy, over and above typical annual federal spending on this energy source of a little under $50 million. Wind and solar energy receive around $15 billion annually in the form of tax credits, loan guarantees, R&D and other activity, and because these sources are a small part of the energy mix the $15 billion generates very large per unit subsidies, as much as $776 per megawatt hour for solar energy in 2010.[4] Per unit subsidies are directly relevant to power generation choice since decisions regarding what to invest in are made at the margin, where the unit costs of alternatives are directly compared.

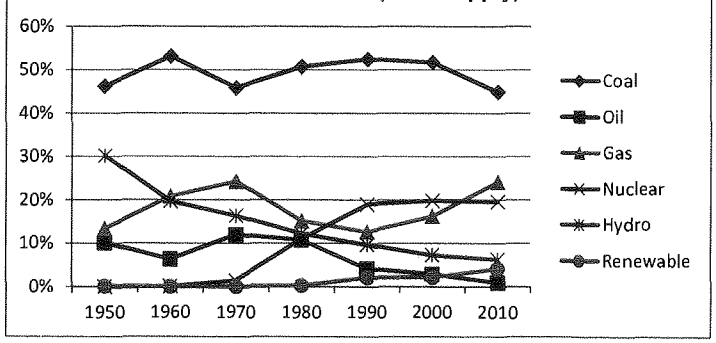
These and other energy subsidies, including fossil fuel subsidies, have caused a good deal of controversy and legislative activity over the years. They often are advocated as means to create jobs and generate income.[5] We resume discussion of this method of encouraging change in the power mix later in this paper.

Trends in the U.S. Power Generation Mix

Long Term Trends

We first examine how the U.S. power generation fuel mix has changed since 1950. Figure 1, based on data from the Energy Information Administration (EIA) shows the percentage of power produced over that period from each of 6 sources: coal, oil, natural gas, nuclear, hydropower, and other renewable sources. The figure shows that coal has more or less held its own, natural gas rose for a time, then fell, and then rose again in the 20 years since 1990. Oil and hydro show steady declines in their generation share, nuclear rose and then leveled off, and renewable sources other than hydro have increased somewhat in recent decades.

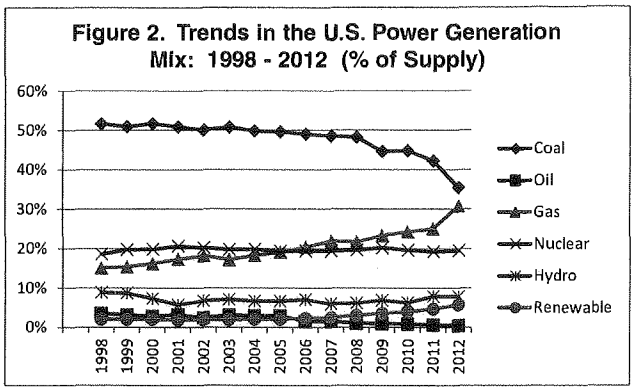
Figure 1. Trends in the U.S. Power Generation Mix: 1950-2010 (% of Supply)



Source: EIA, Annual Energy Review 2010.

Intermediate Term Trends

We next examine more recent trends by looking at a similar chart covering the past 15 years, from 1998 through the first few months of 2012. This is shown in Figure 2.

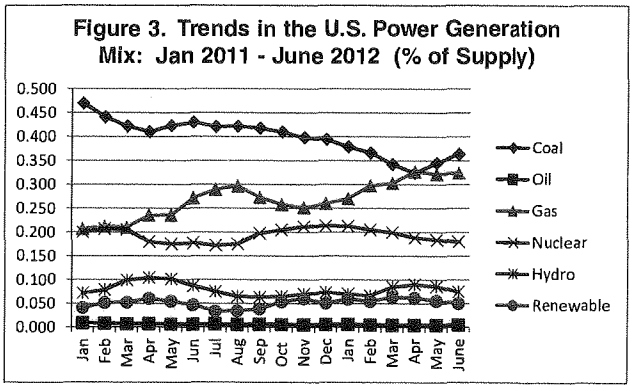


Source: EIA, Monthly Energy Review

Looking only at the past 15 years provides a somewhat different picture. Coal clearly has been losing share, while natural gas and renewable sources other than hydro have been gaining share. Hydro and nuclear more or less have held their own while oil has dropped from a low level to an even lower one. The substitution of natural gas for coal occurred steadily over the period, and appears to have accelerated within the past few years.

Short Term Trends

Lastly, we look at the mix of generation sources over just the past 18 months, through June 2012 (the latest available data from EIA at the time of this writing). This is shown in Figure 3.

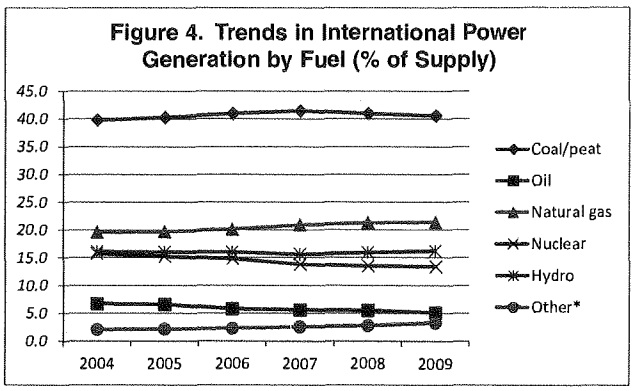


Source: EIA Monthly Energy Review

If anything, the trend towards substitution of gas for coal is accentuated in this figure. Oil, nuclear and hydro vary a little from month to month and renewable sources other than hydro increase some, but the change in generation mix over this period clearly is dominated by the gas for coal substitution.

Worldwide Trends

The trends shown for the U.S. above are consistent with predictions made by Ausubel for the world at large.[6] Ausubel cites a chart compiled by Victor that shows that the global carbon intensity of primary energy use steadily declined between 1850 and 2000.[7] Primary energy use is a broader category than fuel for power generation, for which there is comparatively little data. However, the International Energy Agency (IEA) has published annual estimates of the worldwide power general fuel mix between 2004 and 2009, and these are summarized in Figure 4.



* Other includes geothermal, biofuels, wind, solar, waste, and captured heat.
Source: IEA Key World Energy Statistics, various years.

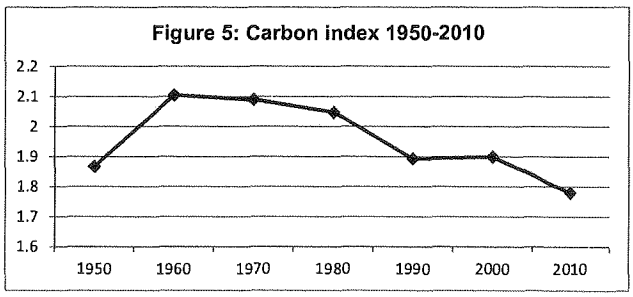
The chart shows that coal, natural gas and renewable sources other than hydro have slightly gained market share over the 5-year period while nuclear and oil lost market share. One driving force in international power markets has been rapid economic growth in such countries as China, India and Brazil, which in turn has driven increased power consumption, much of it from fossil fuels. China, for example, is the world's largest coal consumer, and its consumption alone rose from 1066 million metric tons of oil equivalent in 2004 to 1580 million metric tons in 2009, a gain of over 48%.[8] On balance, the carbon intensity of the world's power generation fuel mix has not much changed over this 5-year period, but the period is too short to draw firm conclusions in any direction.

Carbon Intensity of U.S. Power Production

As previously mentioned, there is ongoing concern in the U.S. and elsewhere over anthropogenic causes of climate change, including the possible contribution of U.S. power production to such change. For that reason, we next calculate how the carbon intensity of U.S. power production has changed through time. To do so, we calculate a simple index of carbon intensity as follows: Coal is given a value of 3, oil a value of 2.5, natural gas a value of 1.7, and all other sources a value of 0, as these numbers are roughly consistent with EIA estimates of relative quantities of CO_2 produced per BTU of bituminous coal, residual fuel oil and natural gas.[9] We then multiply the relative proportion of each fuel in a given year by these numbers to obtain the value of the index in that year (non-fossil fuel sources are multiplied by zero and do not enter the index). The numbers do not incorporate life cycle considerations such as the building of plants, non-fuel inputs to those plants, and plant disposition and residues. Still, they give a first order indication of how the carbon intensity of U.S. power generation has changed with time.

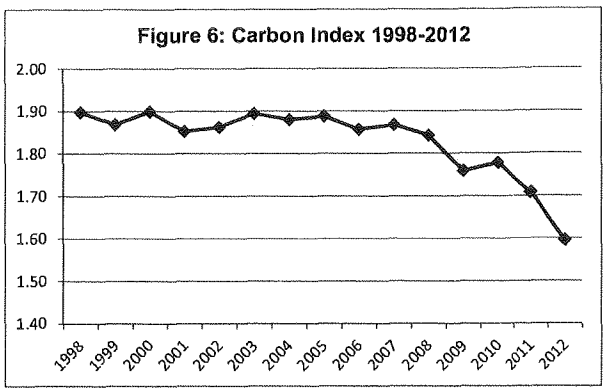
Long-Term Carbon Intensity

Figure 5 provides data on long term changes in the carbon intensity of U.S. power generation. The vertical axis shows the level of the index. According to the figure, carbon intensity rose significantly between 1950 and 1960 as more coal and natural gas were used, but has fallen fairly steadily ever since. By this measure, the 2010 figure is the lowest over the entire period, and the reduction in intensity between 2000 and 2010 among the most rapid over any 10-year period shown.



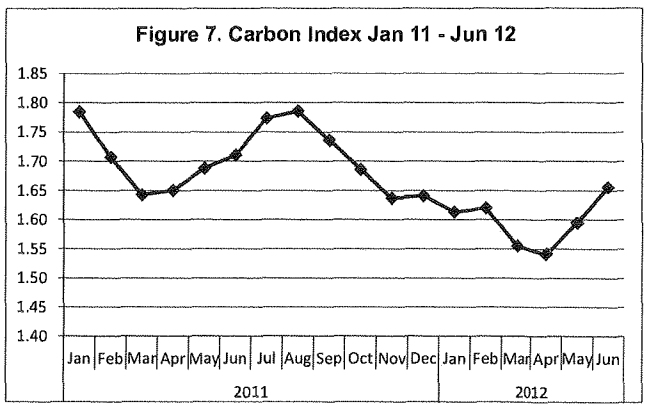
Medium-Term Carbon Intensity

In Figure 6, changes in the carbon intensity of the U.S. power generation mix are shown over the period 1998 through the first several months of 2012. These numbers show a slow decline in intensity between 1998 and 2008, followed by a much steeper decline over the past 4 years, through 2012. Overall, as measured by this index, the carbon intensity of the U.S. power mix declined by almost 16% over the period.



Short-Term Carbon Intensity

Finally, we examine changes in the carbon intensity of the U.S. power generation fuel mix over the past 18 months, between January 2011 and June 2012. These changes are shown in Figure 7. Generally, the carbon intensity declines over the period, though it rises in the late spring and summer of 2011 before resuming its longer term trend, and rises again in May and June of 2012. Presumably the late spring and summer increase is related to the increased use of fossil-fuel plants to meet demand during those months.



Driving Forces

What accounts for the changes in fuel mix choices and in the carbon intensity of this mix over the period studied? Between 1998 and 2012 in particular, we see that natural gas has largely substituted for coal, while oil has lost share and non-hydro renewable sources have gained. We here examine some major forces that likely drove much of this change: relative prices of the various fossil fuels, technological change, regulation and relative government subsidies.

Relative Prices

In Table 2, we show relative prices of oil, natural gas and coal over the period 1998-2012. All figures are annual average prices except for those in 2012, where the numbers are averages over the first 4 months.

Table 2. How Fossil Fuel Prices Changed Between 1998 and 2012

	Oil (¢ per gallon of residual fuel)	Natural Gas to utilities ($ per MCF)	Coal to utilities ($ per short ton)
1998	28.0	2.40	25.64
1999	35.4	2.62	24.72
2000	56.6	4.38	24.28
2001	47.6	4.61	24.68
2002	53.0	3.68	24.74
2003	66.1	5.57	25.82
2004	68.1	6.11	27.30
2005	97.1	8.47	31.22
2006	113.6	7.11	34.26
2007	135.0	7.31	35.29
2008	186.6	9.26	40.69
2009	134.2	4.93	43.33
2010	169.7	5.27	44.27
2011	233.6	4.87	46.80
2012*	265.2	3.28	47.00

*Average of first four months.

Several things are apparent from the table. The price of oil rose steadily throughout the period and by 2012 had reached a nominal value almost 10 times that in 1998. Little wonder that oil lost market share in power generation over the period.[10]

The price of natural gas is seen to generally rise between 1998 and 2008 but to have fallen dramatically since then. The latter is due to improvements in natural gas extraction technology that have made immense quantities of this resource economic to extract. The improvements are a combination of reservoir fracturing techniques and horizontal drilling, which increases access to pockets of gas within a fractured reservoir. These techniques have enabled producers to extract gas resources which previously had been left in the ground, mainly in shale rock formations. The result has been record

additions to U.S. natural gas reserves, 28.8 trillion cubic feet (TCF) in 2009 and 33.8 TCF in 2010. Because of additions of this magnitude, total U.S. gas reserves have risen from 192 TCF in 2000 to 318 TCF in 2010 despite production of about 20 TCF annually between 2000 and 2007, with increases since then reaching 23 TCF in 2010.

Rising natural gas production and reserves led to a situation where, by the early months of 2012, the average nominal price of natural gas to utilities had fallen by almost two-thirds relative to its 2008 level and had risen by only 37% since 1998, whereas the price of coal had risen by over 83% since that year. This fall in the relative price of gas relative to the price of coal is a major reason why gas has been substituted so extensively in U.S. power production.

What of the relative prices of wind and solar energy? Estimation of their cost is complicated by their intermittency, the subsidies they receive and the conditions under which they operate (i.e., whether in "good" or not so good areas for wind or solar power generation). Nevertheless, according to one source, the cost of wind power fell from around 25 cents per kWh in the early 1980s to under 10 cents per kWh by the late 1990s.[11] A variety of wind-advocacy sources indicate this cost has reached around 8 cents per kWh today, though a DOE estimate shown in Table 3 below suggests a levelized cost of 9.7 cents per kWh in 2017.

Solar power also has come down in cost, but that cost remains well above those of other power generation technologies. For example, a recent DOE national laboratory report indicates that the behind-the-meter average cost of installed photovoltaic power dropped from $11/watt in 1998 to $6.20/watt in 2010 and had fallen further in the early months of 2011.[12] To be competitive, however, that cost would have to drop considerably further, to approximately $1/watt.[13] These costs are at a household level, however. DOE levelized cost projections for solar shown in Table 3 below are for utility level projects.

Power Plant Technology and Regulation

There are several other drivers of recent substitutions of natural gas and renewable sources for coal. One is that gas-fired plants can be economically constructed at smaller sizes than coal plants, reducing capital risk. This smaller size also enables faster construction once permits have been obtained, on the order of 6 to 12 months for a single cycle plant and 18 to 30 months for a combined cycle plant (in a combined cycle plant the heat from combustion is captured and utilized as an input to the production of power rather than dissipated). An optimally sized coal plant normally takes about 3 to 4 years to construct, once permits to build it are in hand.

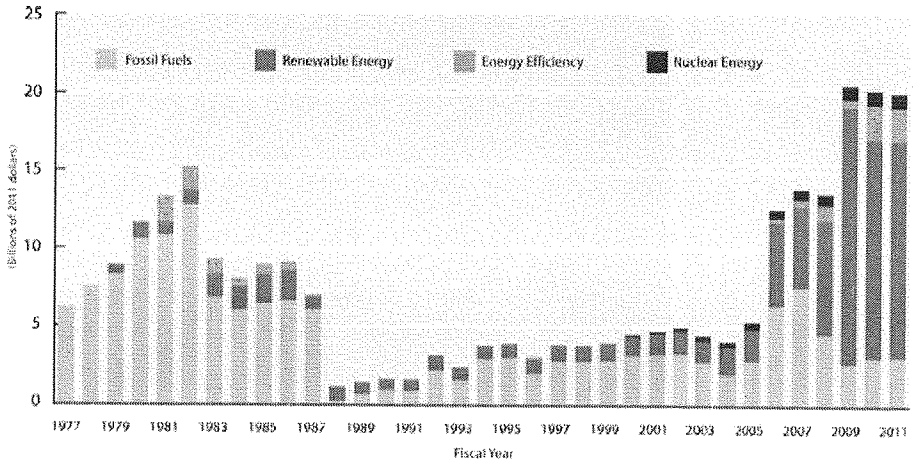
Yet another factor is the increasingly stringent environmental regulation that coal plants are facing. On April 13, 2012, EPA proposed New Source Performance Standards under Section 111 of the Clean Air Act that would limit all new fossil fuel plants to 1,000 lbs of carbon dioxide per megawatt-hour. Under this limitation, new coal-fired power plants essentially would be required to invest in carbon capture and storage or some other method of carbon disposal. Though the proposed rule is not yet final, it

signals EPA's intent to limit the construction of coal fired plants or, at minimum, to add substantially to their cost.

Subsidies

Energy subsidies have existed for decades and apply to virtually all forms of production. The amounts of subsidy for fossil fuels have decreased in recent years, but still reduce their costs to consumers relative to a subsidy-free environment. At the same time, subsidies for renewable fuels other than hydropower have grown very substantially. Until now the costs of these fuels have rendered them uneconomic except in unique circumstances; they likely could not have entered the power generation fuel mix beyond minimal amounts without such subsidies. Figure 8 below, taken from a Congressional Budget Office report, displays energy tax preferences for a range of fuels between 1977 and 2010. The figure shows that tax preferences given fossil fuels have been falling relative to their levels of the 1970s and 1980s while those for renewable fuels jumped significantly around 2006 and have accounted for the bulk of such preferences since 2008.

Figure 8. Energy-Related Tax Preferences, by Type of Fuel or Technology[14]



Source: Congressional Budget Office based on data from Molly F. Sherlock, *Energy Tax Policy: Historical Perspectives on and Current Status of Energy Tax Expenditures*, CRS Report for Congress R41227 (Congressional Research Service, May 2, 2011), p. 26; Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 2011–2015*, JCS-1-12 (January 17, 2012), pp. 33–35; and Office of Management and Budget, *Budget of the U.S. Government, Fiscal Year 2013: Appendix* (February 2012), p. 1068.

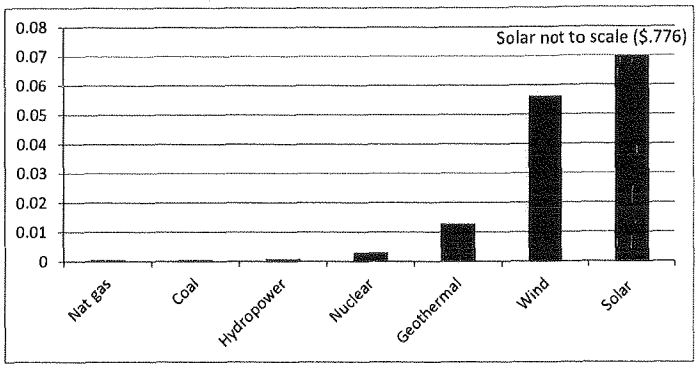
Notes: The estimates do not account for any potential interactions among preferences and do not include tax provisions estimated to cost less than $50 million.

Estimates do not reflect the amount of revenues that would be raised if those provisions of the tax code were eliminated and taxpayers adjusted their activities in response to those changes.

The figure does not include tax preferences that could not be allocated to a particular fuel or technology.

For subsidies to influence the power generation fuel mix, they must affect behavior at the margin of power production, i.e., they must lower the cost per unit of production in such a way as to cause a power supplier to choose the subsidized form of energy over another. Figure 9, taken from a recent AEI paper,[15] provides data on the per unit of output impact of energy subsidies.

Figure 9. Federal Electric Subsidies per Unit of Fuel Production
(2010 cents per kilowatt hour)



According to the figure, wind and solar received substantial subsidies per unit of production in 2010, much higher than those for conventional fuels such as coal and gas or for nuclear, all of which were well under a penny per kWh. In that year, wind subsidies were 5.6 cents per kWh and solar subsidies 77.6 cents per kWh. Subsidies at these levels very likely are a chief reason why renewable sources have increased their share of the U.S. power-generation mix as they have.

Projections

Where is the U.S. power generation market fuel mix headed? The answer revolves around two separate factors—economics and policy. We here focus mainly on economic factors, but acknowledge that policy may play as much a role, if not a bigger one, in deciding that question.

Future Relative Prices of Fuels

As shown in Table 2, the relative price of natural gas has declined dramatically in recent years, as new supplies enabled by technological developments in gas extraction have come to the market. For the time being, these relatively low prices are likely to continue, but there has been recent movement away from gas drilling and towards oil drilling and this trend may result in some alteration in the relative prices of those two fuels.

Advocates for renewable sources argue that further engineering improvements plus greater production economies of scale will continue to reduce their costs. In addition, both wind and solar can provide power at times when demand is high, reducing the need for expensive peaking plants. However, their generation sites often are not located near where power is demanded. Further, because they supply power intermittently, there remain challenges of backing them with conventional power sources and otherwise integrating them into the grid. Advances in energy storage technology and in power management and possible interconnection of local or regional grids to

incorporate more sources may help to overcome these challenges, but the costs of raw materials for producing solar energy and the costs of siting windmills, transmitting their power to where it is demanded, and integrating their variable output into the grid remain formidable issues.

In recent years, the U.S. Department of Energy has been projecting the Levelized Cost of Energy of producing power from various sources. These levelized costs include capital costs and all variable costs, including fuel and maintenance, with an assumed rate of plant utilization. The levelized cost is the cost that must be covered by a brand new plant entering service as of the time stipulated. DOE's latest projection is for levelized costs 5 years in the future, in 2017. The Department makes a 3% addition to the cost of capital for coal plants on grounds that they will have to deal with carbon emissions. According to the DOE analysis, such a 3% capital cost is roughly equivalent to a carbon tax of $15 per metric ton. DOE also excludes all subsidies from its projected levelized cost numbers. Table 3 below shows DOE's projected levelized cost per megawatt of power from several sources, expressed in $2010.

Table 3. DOE-Projections of Levelized Costs of Power in 2017

Power Source	Levelized Cost ($/Megawatt)
Conventional Coal	99.6
Advanced coal – with carbon sequestration and storage	140.7
Natural gas – advanced combined cycle	65.5
Natural gas – with carbon sequestration and storage	92.8
Advanced nuclear	112.7
Geothermal	99.6
Hydro	89.9
Wind (onshore)	96.8
Solar PV (utility scale)	156.9

From this table, natural gas clearly is projected to remain the least-cost form of power production over the next 5 years. Most of the rest of the sources are roughly comparable in levelized costs, with the exception of coal with carbon sequestration and utility scale solar PV. However, subsidies given various of these fuels, not counted by DOE, will play an important role in power generation choice. We saw from Figure 9 that in 2010 these were very large for wind and solar, less so for geothermal and nuclear. Not all of these subsidies go to utilities or others who build power plants (some, for example, are aimed at homeowners), but the implications are clear: more

solar PV and more wind likely will be added than their relative costs would imply, while relatively little coal-fired power will be added if such plants are required to bear the costs of carbon capture and storage.

Future Technological Change

Just as technological improvements in natural gas extraction have brought down the relative cost of that fuel source, so might future changes in technology improve the prospects for other sources. For example, investment in power from geothermal energy presently is limited to areas where conventional geothermal resources are located, specifically copious quantities of underground heat, porous rock and water. However, advanced geothermal technology could extend the locations where power from this source can be obtained.[16]

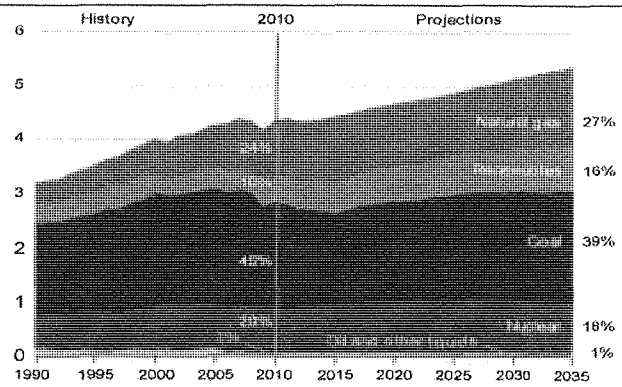
Advances in technologies for the production of solar, wind, ocean thermal, space solar and other forms of renewable energy plausibly will occur. Just as plausibly, though, technological advance will continue in the extraction, processing and distribution of more conventional fuels.

Projection of technological change is inherently very difficult. Suffice it to say that DOE's levelized cost of energy projections likely will be off the mark because of improved technologies, but it is hard to say which of the technologies analyzed will most benefit, or whether some technology not even considered may enter the picture.

Projected U.S. Power Generation Fuel Mix

Though it is difficult to project the U.S. power generation mix with any certainty, the U.S. Department of Energy does offer such projections in its Annual Energy Outlook. Figure 10 below shows the latest such projection. The figure indicates that, compared to 2010, the relative shares of natural gas and renewable sources will increase while those of coal and nuclear will decline. Because hydropower is not increasing either in share or absolutely, all of the projected increase in the share of renewable energy is from non-hydro sources.

Figure 10. Projections of Electricity Generated by Fuel: 2010 – 2035 (trillion kWh per year)



Interestingly, the relative share of coal is shown to decline steadily through 2015, but then to begin rising again. Since under EPA's recently proposed new source performance standards, new coal plants will not be able to be built without carbon capture and storage, and since existing coal plants are coming under increasingly stringent environmental regulation, the presumption appears to be either that the cost of carbon capture and storage will fall dramatically, or that some form of tradable carbon permit scheme will evolve via which a new coal-fired power plant could purchase sufficient annual permits to offset its CO_2 emissions.[17] In either case, the implication is that coal-fired power plants will become far less carbon intensive, perhaps meriting a value of zero in the carbon intensity index presented above.

What would this mean for the carbon intensity of U.S. power production? If we assume that by 2035 fully half of all U.S. coal-fired power generation no longer emits CO_2, then the carbon intensity of power production in that year would be $3^*.195 + 2.5^*.01+1.7^*.27 = 1.07$. Given that it stood at 1.78 as recently as 2010, such a reduction would equate to 40% reduction in a period of 25 years.

Present Policy

U.S. policy clearly is to encourage the production of non-fossil fuel sources of power through mandates or subsidies of one sort or another. The drivers are a desire for environmental improvement and the notion of an emerging "clean energy" economy, in which thousands of new jobs and associated incomes are generated. The subsidies are particularly large for wind and for solar power, but are substantial for nuclear power as well. In addition, many states have chosen to mandate that their utilities include a certain percentage of non-fossil fuel sources in their fuel mix, generally with targets that rise through time.

The Obama Administration has made it clear that it will not encourage the use of coal in new power plants unless that can be done with minimal emissions of CO_2 into the atmosphere. In this, it is implementing a 2007 decision by the U.S. Supreme Court that greenhouse gas emissions are a pollutant under the Clean Air Act and that EPA therefore has a responsibility to regulate them.[18]

Federal and state policy on the use of natural gas in power production has been mixed. The Administration has chosen to restrict oil and gas drilling to a select set of onshore and offshore areas and has slowed the issuing of offshore permits since the BP Macombo oil well spill. It is studying the practice of hydraulic fracturing by natural gas drillers, but has not sought to impede it. Some states have issued regulations under which this type of fracturing can be done while others, such as New York, have effectively banned the practice. On balance, federal and state policies have not much encouraged natural gas activity, but with some exceptions have not sought to prevent it either.

Costs of Subsidies and Mandates

Subsidies and fuel mandates have clear-cut costs for taxpayers and consumers, and divert resources from the production of consumable goods and services to rent seeking, which has no social product. Subsidies, for example, have direct costs in terms of the monies raised either through taxation or through borrowing. According to DOE, subsidies to all forms of energy were $37 billion in 2010, an increase of 108% over their level in 2007. In view of the historically very large budget deficits presently being incurred by the United States,[19] one may question whether this $37 billion is money well spent.

Mandates impose costs on utility rate payers because they require suppliers to offer a power mix that is higher in cost than what they otherwise would choose. Further, because such mandates usually contain schedules under which renewable sources must be included, they also may require premature retirement of conventional power generation assets that otherwise would not occur. Unless costs of these assets have been fully depreciated, such premature retirements are likely to result in higher prices to ratepayers.[20]

The imposition of renewable portfolio standards provides hidden subsidies to producers of the sources that are mandated, subsidies that take the form of payments they otherwise would not receive. Ratepayers ultimately pay for these subsidies through higher electricity rates than they otherwise would face.

A recent economic analysis of the Kansas RPS by the Kansas Policy Institute illustrates the point.[21] According to this analysis, the Kansas RPS, enacted in 2009, will raise the cost of electricity in that state over what otherwise would have occurred by 45% by 2020 and will cost Kansas consumers an estimated $644 million through that year.[22]

The notion that legislators can efficiently set targets and schedules for production of power from renewable energy sources seems unlikely on its face. Even experts in the field have little idea when currently non-economic forms of power will become competitive, and can only offer guesstimates. Legislators are even less likely to understand the economic future of these technologies and instead are more likely to react to political forces which are largely unconcerned with costs.

Recent experience with renewable fuel mandates helps to illustrate the point. In 2005 and then again in 2007, the U.S. Congress mandated that the nation's annual fuel supply must include ever-increasing quantities of ethanol, produced first from corn and later from both corn and advanced cellulosic biofuel technologies.[23] Costs and manufacturing difficulties associated with the cellulosic technologies have made it impossible to supply the mandated quantities, and EPA has greatly reduced the annual requirements as a result.

One way of thinking about the costs of subsidies or mandates is in terms of what otherwise could have been produced with the monies. If the government subsidizes an activity, then whether the funding method is immediate taxation or borrowing and

deferred taxation, monies are diverted from other purposes. If instead the government mandates an activity, private parties must divert resources to implementation. In either case, the foregone products from activities that the resources otherwise would have paid for are a direct cost of the policy.

Mandates and subsidies impose costs as well through the political process because they induce companies to spend large sums lobbying for their continuation and expansion, and to protect them from cuts. These expenditures are rarely calculated, but in concept could, through competitive lobbying, equal the entire amounts of rents being earned. There seems little doubt that some of America's most talented individuals are drawn into lobbying for (or against) these subsidies, an activity in which they compete with one another endlessly. The cost can be measured in the dollars paid these individuals, but also can be thought of as the alternative goods and services they could have supplied the economy had they not been so engaged.

A further cost of government-granted energy subsidies and mandates is that they confront taxpayers with the appearance that 'insiders' with access to politicians are benefiting at their expense. When companies benefitting from the subsidies are revealed to be managed by important campaign contributors, that impression is only reinforced.[24]

This cost takes at least two forms. For one, citizens lose confidence in the political process. The appearance is that the Federal government is being managed for the benefit of a small number of individuals and companies, not for the public at large. And for another, citizens lose confidence in the U.S. market system. The guiding principle of economic activity appears to be political connection, not what products companies offer consumers in an openly competitive environment. It is difficult to measure this kind of cost, but ultimately citizen perceptions of malfunctioning U.S. political and economic systems are likely to reduce incentives to participate in either and to divert talent and capital elsewhere, to other countries.

Fallacy of Subsidizing the Creation of a Clean Energy Economy

The notion that government subsidization of certain energy technologies will result in substantial economic benefits is fallacious on several counts. First, though government-led job creation may be politically desirable, the quality of such jobs and offsetting job losses must be counted in the mix. Jobs created as a consequence of federal largesse or mandate by definition do not meet a market test and hence their economic value is suspect. Further, if the government subsidizes some technologies at the expense of others, jobs and incomes will be lost in the competing non-favored industries. In contrast to the jobs created by government subsidization or mandate, these jobs would have met a market test. Also, as pointed out earlier, monies used by the government to fund favored technologies must come from somewhere, resulting in lost output and jobs from where it is extracted. And finally, government-led job creation provides ample opportunity for political favoritism and corruption, implying that resources are diverted to uses not highly valued in markets and imposing costs on the American political process and citizen regard for government.

Policy Implications

Information contained in earlier figures and tables suggests that over both the long term and the short term, the U.S. power generation fuel mix has been trending towards lower carbon content, and that this trend recently has accelerated. Further, DOE projects that the trend likely will continue, while EPA efforts to constrain CO_2 emissions from new power plants will reinforce it. In view of this, it is questionable whether policy to subsidize or mandate such reduction through, say, renewable portfolio standards or very large subsidies to renewable sources are necessary or wise. If anything, a relaxation of the mandates and reduction in the subsidies would make more sense. Indeed, with the exception of basic scientific research that is unlikely to be undertaken by market participants, it is hard to see much value in the many energy subsidies currently granted, so that movement towards subsidy-free energy markets appears desirable.

Conclusions

The U.S. power generation fuel mix has been evolving for decades towards one that is less carbon intensive, and this evolution has only quickened over the past 15 years and even more over the past year and a half. In part this was induced by changes in the relative prices of fuels spurred by improvements in technology, and in part by policy measures, among them very large per unit of energy subsidies for renewable sources. This pattern of fuel substitution raises question whether mandatory measures such as renewable portfolio standards are either necessary or advisable. It also raises question whether subsidies, which amount to tens of billions of dollars annually among all forms of energy, need to persist.

RPS requirements will impose higher costs of supplying electricity on providers, and therefore higher prices to consumers. They also impose schedules which may require premature retirement of still productive assets, resulting in yet additional costs.

Energy subsidies are a component of the federal budget and contribute a share to the deficits that the U.S. currently is incurring. Some energy-related subsidy in the form of basic scientific research probably can be justified, since private parties cannot easily capture the benefits of the knowledge produced. However, massive grants, loans or loan guarantees to specific energy technologies and companies have little or no economic justification and should be greatly reduced. Though there may be political reward from granting such subsidies, an adverse result is that citizens come to view federal support as the goal of their activity rather than the provision of real goods and services. It also leads to cynicism regarding both the American political and economic systems, cynicism that has real though subtle costs.

The principal implication of our analysis is that little justification presently exists for pursuing RPS standards, whether at the state or federal level. Markets already are responding to price signals in such a way as to yield a less carbon intensive power mix,

and projections indicate this is likely to continue. Another implication is that yet greater subsidies for non-fossil sources of energy cannot be justified, and if anything, should be reduced as a means to curb deficit spending. In other words, markets are moving in the direction desired and there is little or no justification for further policy action.

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1. "The Blueprint for a Secure Energy Future: Progress Report," The White House, March 2012.
2. "Blueprint" cited in Note 1, p. 10.
3. S.2146 proposes a schedule of annual minimums. Only 5 year increments are shown in Table 1.
4. Steven F. Hayward, "Energy Fact of the Week: Solar Subsidies Are Off the Charts," American Enterprise Institute (AEI), September 28, 2011.
5. The White House Blueprint for a Secure Energy Future states, for example, that DOE clean energy project loan programs will stimulate more than 60,000 new American jobs.
6. See for example, Jesse H. Ausubel, "Decarbonization: The Next 100 Years," 50th Anniversary Symposium of the Geology Foundation, Austin, TX, 25 April 2003.
7. N.M. Victor, "Program for the Human Environment," The Rockefeller University, 2003.
8. Data from *BP Statistical Review of World Energy*, June 2012, p.33.
9. See http://www.eia.gov/tools/faqs/faq.cfm?id=74&t=11.
10. As we showed in Figure 1, oil has lost market share at least since 1970. In part this was due to increasing demand for transportation fuels plus improvements to refinery technology that enabled refiners to convert residual fuel, a low-value product sold mainly to power generators, into gasoline and diesel, relatively high value products.
11. Robert L. Bradley, Jr. "Renewable Energy: Not Cheap, Not Green," Cato Institute, August 1997.
12. "Tracking the Sun IV: An Historical Summary of the Installed Cost of Photovoltaics from 1998 to 2010," Lawrence Berkeley National Laboratory, September 2011.
13. This assumes a year-round average of 3 hours per day of power generation at a cost saving of 10 cents per kWh. Even then, it would take over 9 years to return the initial cost.
14. Source: Congressional Budget Office, "Federal Financial Support for the Development and Production of Fuels and Energy Technologies," March 6, 2012.

15. Source: see note 4. The numbers in Figure 9 are converted from dollars per MWh in the original.
16. Advanced geothermal refers to technologies that would enable these resources to be tapped where there are lower heat gradients or less porous rock, and also to techniques to make use of the underground heat even in the absence of a readily available natural source of fluid. As mentioned earlier, under ARRA several hundreds of millions of dollars were allocated to geothermal energy R&D.
17. Under EPA's direct regulatory approach, such a scheme does not seem feasible. Thus, it would have to take the form of a national program such as a cap and trade scheme under which the utilities would have the option of purchasing carbon offsets. Another option would be to replace EPA's New Source Performance Standard with a tax on carbon and then allow power generators to choose whatever fuel mix they prefer.
18. Massachusetts v. EPA, 127 Supreme Court 1438.
19. The Office of Management and Budget recently estimated that the Fiscal Year 2012 budget deficit will be about $1.2 trillion.
20. Even if they have been fully depreciated, their replacement by higher cost sources will impose costs on ratepayers. The point is that utilities forced to retire plants with remaining book value likely will be allowed to recapture that value through higher rates.
21. David G. Tuerck, Paul Bachman and Michael Head, "The Economic Impact of the Kansas Renewable Portfolio Standard," The Kansas Policy Institute, July 2012.
22. These results are for the "average" case analyzed by the Institute. In its "low" case the cost to consumers is $192 million, whereas in the "high" case it is $1.042 billion.
23. The Energy Policy Act of 2005 first established ethanol mandates and the Energy Independence and Security Act of 2007 (EISA) much expanded them. The EPA administers regulations under EISA.
24. This is one reason why the bankruptcy of Solyndra after DOE had granted it a $535 million loan guarantee, of which $527 million had been disbursed, was of major political importance. News reports indicated that one of Solyndra's top executives, a financial backer of the Administration, had frequent access to the White House.

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October 2012

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Greg

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Ellen

My understanding is that Dec 13th will be her first day back in the office, so OK to schedule a call mid-morning or later on the 13th.

Unfortunately, I will be out Dec 13 -17, but that will be not be a problem because Ou and I will communicate before the call.

Let me know any questions - Greg

From: Belk.Ellen@epamail.epa.gov [mailto:Belk.Ellen@epamail.epa.gov]
Sent: Wednesday, December 05, 2012 1:23 PM
To: Greg Yarwood
Subject: RE: Rescheduled: TX RH: Conference Call with Environ 866-299-3188; Code: 214-665-2164 (Dec 12 09:00 AM CST in Call in number: 866-299-3188; Code: 214-665-2164)

No, I just received a message that she would return to the office on December 12th.
Should I reschedule for the 13th?

Ellen

From: Greg Yarwood <gyarwood@environcorp.com>
To: Ellen Belk/R6/USEPA/US@EPA

Date: 12/05/2012 02:58 PM
Subject: RE: Rescheduled: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Dec 12 09:00 AM CST in Call in number: Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy

Ellen – did Ou indicate that she can make this time?

Greg

-----Original Appointment-----
From: Ellen Belk/R6/USEPA/US [mailto:Belk.Ellen@epamail.epa.gov]
Sent: Wednesday, December 05, 2012 12:42 PM
To: Erik Snyder/R6/USEPA/US; Greg Yarwood; Michael Feldman/R6/USEPA/US; snw@rti.org; Uarporn Nopmongcol; Pine Tree - 06.O15/R6 – 06th Floor
Cc: Joe Kordzi/R6/USEPA/US; Jolynn Collins/RTP/USEPA/US; Lynde Schoellkopf/R6/USEPA/US
Subject: Rescheduled: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Dec 12 09:00 AM CST in Call in number Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy
When: Wednesday, December 12, 2012 7:00 AM-8:00 AM (UTC-08:00) Pacific Time (US & Canada).
Where: Call in number Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy

---

<< File: Description.htm >> << File: Comments.htm >>

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To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Michael Feldman/OU=R6/O=USEPA/C=US
Sent: Wed 12/5/2012 9:46:21 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: Uarporn Nopmongcol
Sent: Thur 12/6/2012 12:42:44 AM
Subject: RE: Rescheduled: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy (Dec 12 09:00 AM CST in Call in number: Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy

Ellen,

I am still on vacation and won't be back in the office until December 13. Could we have a call on Dec 13 or after?

Thank you.
Ou

From: Ellen Belk/R6/USEPA/US [Belk.Ellen@epamail.epa.gov]
Sent: Wednesday, December 05, 2012 12:41 PM
To: Erik Snyder/R6/USEPA/US; Greg Yarwood; Michael Feldman/R6/USEPA/US; snw@rti.org; Uarporn Nopmongcol; Pine Tree - 06.O15/R6 – 06th Floor
Cc: Joe Kordzi/R6/USEPA/US; Jolynn Collins/RTP/USEPA/US; Lynde Schoellkopf/R6/USEPA/US
Subject: Rescheduled: TX RH: Conference Call with Environ ec 12 09:00 AM CST in Call in number:
When: Wednesday, December 12, 2012 7:00 AM-8:00 AM.
Where: Call in number:

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To: CN=Ellen Belk/OU=R6/O=USEPA/C=US[]
Cc: []
From: CN=Brown Pelican - 09.O02/O=R6 - 09th Floor
Sent: Thur 12/6/2012 1:27:45 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy
Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Thur 12/6/2012 1:37:43 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US
Sent: Thur 12/6/2012 1:41:43 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US
Sent: Thur 12/6/2012 1:42:59 PM
Subject: Accepted: TX RH: EPA/RTI Conference Call Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Uarporn Nopmongcol"
Sent: Thur 12/6/2012 2:15:29 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Michael Feldman/OU=R6/O=USEPA/C=US
Sent: Thur 12/6/2012 3:21:14 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Wolf, Susan N."
Sent: Thur 12/6/2012 4:37:59 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy
Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US[]
Cc: []
From: Houston Toad - 09.B02/R6 - 09th Floor
Sent: Tue 12/11/2012 4:50:50 PM
Subject: Declined: TX RH: EPA/RTI Conference Call Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US
Sent: Tue 12/11/2012 4:53:42 PM
Subject: Tentative: TX RH: EPA/RTI Conference Call Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US
Sent: Thur 12/13/2012 8:58:35 PM
Subject: Accepted: TX RH: EPA/RTI Conference Call Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Wolf, Susan N."
Sent: Thur 12/13/2012 9:22:25 PM
Subject: rescheduled 1-11 call with Environ and RTI
snw@rti.org
http://www.rti.org/

Hi,

We can do the following times (provided in CST): 12:30-2pm on Monday or 11am-3:30pm on Tuesday. Do any of those times work for you? If so, please send out a meeting invite. Thanks.

-Susan

Susan N. Wolf
RTI International

Global Climate Change and Environmental Sciences Unit

Environment, Health, and Economics Division

Risk Assessment Program
(919) 541-6799
snw@rti.org

RTI International is an independent nonprofit research institute dedicated to

improving the human condition by turning knowledge into practice.
Learn more at http://www.rti.org/

To: Ellen Belk/R6/USEPA/US@EPA[]
From: Uarporn Nopmongcol
Sent: Thur 12/13/2012 9:35:05 PM
Subject: RE: Rescheduled: TX RH: Conference Call with Environ 866-299-3188; Code: 214-665-2164 (Dec 12 09:00 AM CST in Call in number: Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy
unopmongcol@environcorp.com
snw@rti.org
email@environcorp.com

Ellen,

I'm sorry for keeping everyone waiting today. After 4 weeks of being away my car's battery died. I hope we can all discuss about the project soon (Susan mentioned either Monday or Tuesday).

Ou

From: Belk.Ellen@epamail.epa.gov [mailto:Belk.Ellen@epamail.epa.gov]
Sent: Thursday, December 06, 2012 5:33 AM
To: Uarporn Nopmongcol
Subject: RE: Rescheduled: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy (Dec 12 09:00 AM CST in Call in number: Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy

Ou,
Thank you for your message.
Sure, that will be fine. I have rescheduled for the afternoon of the 13th.
Hope you have a wonderful vacation.
Ellen

From: Uarporn Nopmongcol <unopmongcol@environcorp.com>
To: Ellen Belk/R6/USEPA/US@EPA
Date: 12/05/2012 06:43 PM
Subject: RE: Rescheduled: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy (Dec 12 09:00 AM CST in Call in number: Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy

Ellen,

I am still on vacation and won't be back in the office until December 13. Could we have a call on Dec 13 or after?

Thank you.
Ou

From: Ellen Belk/R6/USEPA/US [Belk.Ellen@epamail.epa.gov]
Sent: Wednesday, December 05, 2012 12:41 PM
To: Erik Snyder/R6/USEPA/US; Greg Yarwood; Michael Feldman/R6/USEPA/US; snw@rti.org; Uarporn Nopmongcol; Pine Tree - 06.O15/R6 – 06th Floor
Cc: Joe Kordzi/R6/USEPA/US; Jolynn Collins/RTP/USEPA/US; Lynde Schoellkopf/R6/USEPA/US
Subject: Rescheduled: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy (Dec 12 09:00 AM CST in Call in number: Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy
When: Wednesday, December 12, 2012 7:00 AM-8:00 AM.
Where: Call in number: Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy

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To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Michael Feldman/OU=R6/O=USEPA/C=US
Sent: Fri 12/14/2012 5:19:39 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US[]
Cc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Fri 12/14/2012 6:39:46 PM
Subject: Accepted:TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Uarporn Nopmongcol"
Sent: Fri 12/14/2012 8:49:48 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: snw@rti.org[]
Cc: Jolynn Collins/RTP/USEPA/US@EPA;Lynde Schoellkopf/R6/USEPA/US@EPA[]; ynde Schoellkopf/R6/USEPA/US@EPA[]
From: Ellen Belk/R6/USEPA/US@EPA
Sent: Tue 12/11/2012 4:50:42 PM
Subject: Rescheduled: TX RH: EPA/RTI Conference Call Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy (Dec 11 01:30 PM CST in Houston Toad - 09.B02/R6 - 09th Floor@EPA)
c105030.ics
(embedded image)

[IMAGE]

[IMAGE]
Rescheduled: TX RH: EPA/RTI Conference Call 8
[IMAGE]
12/11/2012 - [IMAGE]
[IMAGE]

[IMAGE]
Chair: [IMAGE]
Ellen Belk/R6/USEPA/US
[IMAGE]
Sent By: [IMAGE]
Belk.Ellen@epamail.epa.gov

[IMAGE]
Location: [IMAGE]
Call in number: Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy
Call in number: Code:
Call in number: Code: [IMAGE]
Rooms: [IMAGE]

Houston Toad - 09.B02/R6 - 09th Floor@EPA

[IMAGE]
Belk.Ellen@epamail.epa.gov [IMAGE]

Ellen Belk has rescheduled this meeting. You have not yet responded.

[IMAGE] [IMAGE]

[IMAGE]
Required: [IMAGE]
snw@rti.org

[IMAGE]
[IMAGE]

[IMAGE]
Optional: [IMAGE]
Jolynn Collins/RTP/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA

Description

19501105T020000

X-LOTUS-CHARSET
UTF-8

Version
2.0

PRODID
-//Lotus Development Corporation//NONSGML Notes 8.5.2//EN_C

METHOD
REQUEST

TZID
Central

Start Date/Time
19501105T020000

TZOFFSETFROM
-0500

TZOFFSETTO
-0600

Recurrence Rule
FREQ=YEARLY;BYMINUTE=0;BYHOUR=2;BYDAY=1SU;BYMONTH=11

19500312T020000

Start Date/Time
19500312T020000

TZOFFSETFROM
-0600

TZOFFSETTO
-0500

Recurrence Rule
FREQ=YEARLY;BYMINUTE=0;BYHOUR=2;BYDAY=2SU;BYMONTH=3

TX RH: EPA/RTI Conference Call Ex. 6 - Personal Privacy Code : Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

Call in number: Ex. 6 - Personal Privacy **Code :** Ex. 6 - Personal Privacy

Call in number: **Code :**

Call in number: **Code: 2**

Ex. 6 - Personal Privacy

Start Date/Time
20121211T133000

End Date/Time
20121211T140000

Time Transparency
OPAQUE

DTSTAMP
20121211T165030Z

Sequence Number
1

Attendee **mailto:Belk.Ellen@epamail.epa.gov**
Role CHAIR
RSVP FALSE

Attendee **mailto:snw@rti.org**
Role REQ-PARTICIPANT
RSVP TRUE

Attendee **mailto:Collins.Jolynn@epamail.epa.gov**
Role OPT-PARTICIPANT
RSVP TRUE

Attendee **mailto:Schoellkopf.Lynde@epamail.epa.gov**
Role OPT-PARTICIPANT
RSVP TRUE

Attendee **mailto:http :/region6.epa.gov/intranet/6md/facilities/09floor.htm**
Role REQ-PARTICIPANT
RSVP TRUE

Categories
PUBLIC

Description
<FFFF__=09BBF042DFCF05498f9e8a93df938690918c09B@>":_ _____

_____

_____ n

_____

Summary

TX RH: EPA/RTI Conference Call Ex. 6 - Personal Privacy Code : Ex. 6 - Personal Privacy

Location

Call in number: Ex. 6 - Personal Privacy Code : Ex. 6 - Personal Privacy
Call in number: Ex. 6 - Personal Privacy Code :
Call in number: Code: Ex. 6 - Personal Privacy

ORGANIZER (CN="Ellen Belk/R6/USEPA/US")

mailto:Belk.Ellen@epamail.epa.gov

UID

47505AFE766EF28586257ACB007057E2-Lotus_Notes_Generated

X-LOTUS-BROADCAST

FALSE

X-LOTUS-UPDATE-SEQ

1

X-LOTUS-UPDATE-WISL

$S:1;$L:1;$B:1;$R:1;$E:1;$M:1;$W:1;$O:1;RequiredAttendees:1;INetRequiredNames:1;AltRequiredNames:1;StorageRequiredNames:1;OptionalAttendees:1;INetOptionalNames:1;AltOptionalNames:1;StorageOptionalNames:1

X-LOTUS-NOTESVERSION

2

X-LOTUS-NOTICETYPE

U

X-LOTUS-APPTTYPE

3

X-LOTUS-CHILD-UID

4230303785BFD50A86257AD1005C83D9

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Wolf, Susan N."
Sent: Mon 12/17/2012 2:45:31 AM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US
Sent: Mon 12/17/2012 2:36:28 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Michael Feldman/OU=R6/O=USEPA/C=US
Sent: Mon 12/17/2012 5:28:31 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US
Sent: Mon 12/17/2012 5:44:34 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy
Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Wolf, Susan N."
Sent: Mon 12/17/2012 6:06:49 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy
Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Uarporn Nopmongcol"
Sent: Mon 12/17/2012 6:09:35 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US
Sent: Mon 12/17/2012 6:47:02 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US
Sent: Mon 12/17/2012 6:49:30 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Mon 12/17/2012 7:08:47 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Tue 12/18/2012 12:17:24 AM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US
Sent: Wed 1/2/2013 4:14:56 PM
Subject: EP-W-11-029 (RTI) WA 1-11 Invoice Review Requested
WAM Checklist for Invoice Review-fillable.doc
WA 1-11 Sep 2012 Invoice.pdf
WA 1-11 Aug 2012 Invoice.pdf
WA 1-11 Dec 2012 Invoice.pdf
WA 1-11 Jul 2012 Invoice.pdf
WA 1-11 Jun 2012 Invoice.pdf
WA 1-11 May 2012 Invoice.pdf
WA 1-11 Nov 2012 Invoice.pdf
WA 1-11 Oct 2012 Invoice.pdf

Hi Ellen,

I am playing catch up with my invoice reviews, and need your help. I am attaching invoices dating back to the first one for this performance period. Please review each invoice and prepare an Invoice Review Checklist (also attached) for each of the invoices and return to me by COB Friday, January 25. You may scan and return to me by email or send me hard copies, whichever works best for you. Please let me know right away if you see a problem with or have questions about any of these invoices.

Now that my work load has leveled out, my goal is to get these out to you monthly the way I once did, and the way it should be done.

If you have already completed a checklist for any of these invoices, please disregard this note. And, as always, let me know if you have questions.

JoLynn
x5671

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US
Sent: Wed 1/2/2013 6:48:25 PM
Subject: Re: EP-W-11-029 (RTI) WA 1-11 Invoice Review Requested

Happy New Year, Ellen! That's great! Thanks!

JoLynn

From: Ellen Belk/R6/USEPA/US
To: Jolynn Collins/RTP/USEPA/US@EPA
Date: 01/02/2013 01:32 PM
Subject: Re: EP-W-11-029 (RTI) WA 1-11 Invoice Review Requested

Hi JoLynn,
Happy New Year!
I have received your message, and plan to meet the deadline of Jan. 25th for review and response.
Thank you,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

From: Jolynn Collins/RTP/USEPA/US
To: Ellen Belk/R6/USEPA/US@EPA
Date: 01/02/2013 10:15 AM
Subject: EP-W-11-029 (RTI) WA 1-11 Invoice Review Requested

Hi Ellen,

I am playing catch up with my invoice reviews, and need your help. I am attaching invoices dating back to the first one for this performance period. Please review each invoice and prepare an Invoice Review Checklist (also attached) for each of the invoices and return to me by COB Friday, January 25. You may scan and return to me by email or send me hard copies, whichever works best for you. Please let me know right away if you see a problem with or have questions about any of these invoices.

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If you have already completed a checklist for any of these invoices, please disregard this note. And, as always, let me know if you have questions.

JoLynn
x5671

[attachment "WAM Checklist for Invoice Review-fillable.doc" deleted by Ellen Belk/R6/USEPA/US] [attachment "WA 1-11 Sep 2012 Invoice.pdf" deleted by Ellen Belk/R6/USEPA/US] [attachment "WA 1-11 Aug 2012 Invoice.pdf" deleted by Ellen Belk/R6/USEPA/US] [attachment "WA 1-11 Dec 2012 Invoice.pdf" deleted by Ellen Belk/R6/USEPA/US] [attachment "WA 1-11 Jul 2012 Invoice.pdf" deleted by Ellen Belk/R6/USEPA/US] [attachment "WA 1-11 Jun 2012 Invoice.pdf" deleted by Ellen Belk/R6/USEPA/US] [attachment "WA 1-11 May 2012 Invoice.pdf" deleted by Ellen Belk/R6/USEPA/US] [attachment "WA 1-11 Nov 2012 Invoice.pdf" deleted by Ellen Belk/R6/USEPA/US] [attachment "WA 1-11 Oct 2012 Invoice.pdf" deleted by Ellen Belk/R6/USEPA/US]

To: CN=Amanda CurryBrown/OU=RTP/O=USEPA/C=US@EPA;CN=Larry
Sorrels/OU=RTP/O=USEPA/C=US@EPA;CN=Brian
Heninger/OU=DC/O=USEPA/C=US@EPA;CN=Elineth
Torres/OU=RTP/O=USEPA/C=US@EPA;CN=Neal
Fann/OU=RTP/O=USEPA/C=US@EPA;CN=Justin
Spenillo/OU=R10/O=USEPA/C=US@EPA;CN=Tom
Walton/OU=RTP/O=USEPA/C=US@EPA;CN=Robin
Langdon/OU=RTP/O=USEPA/C=US@EPA;CN=Lillian
Bradley/OU=RTP/O=USEPA/C=US@EPA;CN=Ellen
Belk/OU=R6/O=USEPA/C=US@EPA;CN=Valentine
Anoma/OU=DC/O=USEPA/C=US@EPA;CN=Robert
Devlin/OU=RTP/O=USEPA/C=US@EPA;CN=Linda
Lassiter/OU=RTP/O=USEPA/C=US@EPA;CN=Christine
Davis/OU=RTP/O=USEPA/C=US@EPA;CN=Randy
Waite/OU=RTP/O=USEPA/C=US@EPA;CN=John
Powers/OU=DC/O=USEPA/C=US@EPA;CN=Susan
Thorneloe/OU=RTP/O=USEPA/C=US@EPA;CN=Debbie
Kline/OU=R10/O=USEPA/C=US@EPA;CN=Chris
Dockins/OU=DC/O=USEPA/C=US@EPA;CN=Brian
Littleton/OU=DC/O=USEPA/C=US@EPA;CN=Lourdes
Morales/OU=RTP/O=USEPA/C=US@EPA;CN=Gurbakhash
Bhander/OU=RTP/O=USEPA/C=US@EPA[]; N=Larry
Sorrels/OU=RTP/O=USEPA/C=US@EPA;CN=Brian
Heninger/OU=DC/O=USEPA/C=US@EPA;CN=Elineth
Torres/OU=RTP/O=USEPA/C=US@EPA;CN=Neal
Fann/OU=RTP/O=USEPA/C=US@EPA;CN=Justin
Spenillo/OU=R10/O=USEPA/C=US@EPA;CN=Tom
Walton/OU=RTP/O=USEPA/C=US@EPA;CN=Robin
Langdon/OU=RTP/O=USEPA/C=US@EPA;CN=Lillian
Bradley/OU=RTP/O=USEPA/C=US@EPA;CN=Ellen
Belk/OU=R6/O=USEPA/C=US@EPA;CN=Valentine
Anoma/OU=DC/O=USEPA/C=US@EPA;CN=Robert
Devlin/OU=RTP/O=USEPA/C=US@EPA;CN=Linda
Lassiter/OU=RTP/O=USEPA/C=US@EPA;CN=Christine
Davis/OU=RTP/O=USEPA/C=US@EPA;CN=Randy
Waite/OU=RTP/O=USEPA/C=US@EPA;CN=John
Powers/OU=DC/O=USEPA/C=US@EPA;CN=Susan
Thorneloe/OU=RTP/O=USEPA/C=US@EPA;CN=Debbie
Kline/OU=R10/O=USEPA/C=US@EPA;CN=Chris
Dockins/OU=DC/O=USEPA/C=US@EPA;CN=Brian
Littleton/OU=DC/O=USEPA/C=US@EPA;CN=Lourdes
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Heninger/OU=DC/O=USEPA/C=US@EPA;CN=Elineth
Torres/OU=RTP/O=USEPA/C=US@EPA;CN=Neal
Fann/OU=RTP/O=USEPA/C=US@EPA;CN=Justin
Spenillo/OU=R10/O=USEPA/C=US@EPA;CN=Tom
Walton/OU=RTP/O=USEPA/C=US@EPA;CN=Robin
Langdon/OU=RTP/O=USEPA/C=US@EPA;CN=Lillian
Bradley/OU=RTP/O=USEPA/C=US@EPA;CN=Ellen
Belk/OU=R6/O=USEPA/C=US@EPA;CN=Valentine
Anoma/OU=DC/O=USEPA/C=US@EPA;CN=Robert
Devlin/OU=RTP/O=USEPA/C=US@EPA;CN=Linda
Lassiter/OU=RTP/O=USEPA/C=US@EPA;CN=Christine
Davis/OU=RTP/O=USEPA/C=US@EPA;CN=Randy
Waite/OU=RTP/O=USEPA/C=US@EPA;CN=John

Powers/OU=DC/O=USEPA/C=US@EPA;CN=Susan
Thorneloe/OU=RTP/O=USEPA/C=US@EPA;CN=Debbie
Kline/OU=R10/O=USEPA/C=US@EPA;CN=Chris
Dockins/OU=DC/O=USEPA/C=US@EPA;CN=Brian
Littleton/OU=DC/O=USEPA/C=US@EPA;CN=Lourdes
Morales/OU=RTP/O=USEPA/C=US@EPA;CN=Gurbakhash
Bhander/OU=RTP/O=USEPA/C=US@EPA[]; N=Elineth
Torres/OU=RTP/O=USEPA/C=US@EPA;CN=Neal
Fann/OU=RTP/O=USEPA/C=US@EPA;CN=Justin
Spenillo/OU=R10/O=USEPA/C=US@EPA;CN=Tom
Walton/OU=RTP/O=USEPA/C=US@EPA;CN=Robin
Langdon/OU=RTP/O=USEPA/C=US@EPA;CN=Lillian
Bradley/OU=RTP/O=USEPA/C=US@EPA;CN=Ellen
Belk/OU=R6/O=USEPA/C=US@EPA;CN=Valentine
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Powers/OU=DC/O=USEPA/C=US@EPA;CN=Susan
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Kline/OU=R10/O=USEPA/C=US@EPA;CN=Chris
Dockins/OU=DC/O=USEPA/C=US@EPA;CN=Brian
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Morales/OU=RTP/O=USEPA/C=US@EPA;CN=Gurbakhash
Bhander/OU=RTP/O=USEPA/C=US@EPA[]; N=Neal
Fann/OU=RTP/O=USEPA/C=US@EPA;CN=Justin
Spenillo/OU=R10/O=USEPA/C=US@EPA;CN=Tom
Walton/OU=RTP/O=USEPA/C=US@EPA;CN=Robin
Langdon/OU=RTP/O=USEPA/C=US@EPA;CN=Lillian
Bradley/OU=RTP/O=USEPA/C=US@EPA;CN=Ellen
Belk/OU=R6/O=USEPA/C=US@EPA;CN=Valentine
Anoma/OU=DC/O=USEPA/C=US@EPA;CN=Robert
Devlin/OU=RTP/O=USEPA/C=US@EPA;CN=Linda
Lassiter/OU=RTP/O=USEPA/C=US@EPA;CN=Christine
Davis/OU=RTP/O=USEPA/C=US@EPA;CN=Randy
Waite/OU=RTP/O=USEPA/C=US@EPA;CN=John
Powers/OU=DC/O=USEPA/C=US@EPA;CN=Susan
Thorneloe/OU=RTP/O=USEPA/C=US@EPA;CN=Debbie
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Morales/OU=RTP/O=USEPA/C=US@EPA;CN=Gurbakhash
Bhander/OU=RTP/O=USEPA/C=US@EPA[]; N=Justin
Spenillo/OU=R10/O=USEPA/C=US@EPA;CN=Tom
Walton/OU=RTP/O=USEPA/C=US@EPA;CN=Robin
Langdon/OU=RTP/O=USEPA/C=US@EPA;CN=Lillian
Bradley/OU=RTP/O=USEPA/C=US@EPA;CN=Ellen
Belk/OU=R6/O=USEPA/C=US@EPA;CN=Valentine
Anoma/OU=DC/O=USEPA/C=US@EPA;CN=Robert
Devlin/OU=RTP/O=USEPA/C=US@EPA;CN=Linda
Lassiter/OU=RTP/O=USEPA/C=US@EPA;CN=Christine
Davis/OU=RTP/O=USEPA/C=US@EPA;CN=Randy
Waite/OU=RTP/O=USEPA/C=US@EPA;CN=John
Powers/OU=DC/O=USEPA/C=US@EPA;CN=Susan
Thorneloe/OU=RTP/O=USEPA/C=US@EPA;CN=Debbie

Kline/OU=R10/O=USEPA/C=US@EPA;CN=Chris
Dockins/OU=DC/O=USEPA/C=US@EPA;CN=Brian
Littleton/OU=DC/O=USEPA/C=US@EPA;CN=Lourdes
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Bhander/OU=RTP/O=USEPA/C=US@EPA[]; N=Tom
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Langdon/OU=RTP/O=USEPA/C=US@EPA;CN=Lillian
Bradley/OU=RTP/O=USEPA/C=US@EPA;CN=Ellen
Belk/OU=R6/O=USEPA/C=US@EPA;CN=Valentine
Anoma/OU=DC/O=USEPA/C=US@EPA;CN=Robert
Devlin/OU=RTP/O=USEPA/C=US@EPA;CN=Linda
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Waite/OU=RTP/O=USEPA/C=US@EPA;CN=John
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Anoma/OU=DC/O=USEPA/C=US@EPA;CN=Robert
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Waite/OU=RTP/O=USEPA/C=US@EPA;CN=John
Powers/OU=DC/O=USEPA/C=US@EPA;CN=Susan
Thorneloe/OU=RTP/O=USEPA/C=US@EPA;CN=Debbie
Kline/OU=R10/O=USEPA/C=US@EPA;CN=Chris
Dockins/OU=DC/O=USEPA/C=US@EPA;CN=Brian
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Kline/OU=R10/O=USEPA/C=US@EPA;CN=Chris
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Bhander/OU=RTP/O=USEPA/C=US@EPA[]; N=Lourdes
Morales/OU=RTP/O=USEPA/C=US@EPA;CN=Gurbakhash
Bhander/OU=RTP/O=USEPA/C=US@EPA[]; N=Gurbakhash
Bhander/OU=RTP/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US
Sent: Tue 1/8/2013 6:26:23 PM
Subject: EP-W-11-029 (RTI) Nov 15 2012 Progress Report
EP-W-11-029(Opt1)_Oct2012_Technical_Client_Report.pdf
EP-W-11-029(Opt1)_Oct2012_Inv.007.pdf

Hi Everyone,

Please find attached the November progress report. Some of us did not get it. If you did get it, please disregard this note.

Thanks.

JoLynn
----- Forwarded by Jolynn Collins/RTP/USEPA/US on 01/08/2013 01:09 PM -----

From: "Tyndall, Susan G." <sgt@rti.org>
To: Jolynn Collins/RTP/USEPA/US@EPA
Date: 01/08/2013 12:06 PM
Subject: EP-W-11-029 Oct 2012 Progress Report

Ms. Collins,

Thank you for bringing it to my attention that you did not receive the electronic version of the October 2012 monthly reports.
Attached is the October 2012 progress report, financial and technical for the above referenced contract, "Economic Analyses and Control Strategy Development for Air Pollution Control."

Please let me know if I can be of further assistance.

Suzi Tyndall
Associate Project Management Specialist
Global Climate Change & Environmental Sciences (GCCES)
RTI International
(Bldg O-9, Rm 457D)
3040 Cornwallis Rd
Research Triangle Park, NC 27709
Fax: 919-541-7155
Phone: 919-541-7462

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Uarporn Nopmongcol"
Sent: Tue 1/8/2013 9:26:48 PM
Subject: Accepted: Accepted: Invitation: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy
Code: Ex. 6 - Personal Privacy (Jan 10 01:00 PM CST in Oklahoma City - 07.O15/R6 - 07th Floor@EPA)

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Wolf, Susan N."
Sent: Tue 1/8/2013 9:33:48 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US
Sent: Tue 1/8/2013 9:36:37 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Michael Feldman/OU=R6/O=USEPA/C=US
Sent: Tue 1/8/2013 9:38:34 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy
Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Wed 1/9/2013 3:01:21 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Wed 1/9/2013 3:02:28 PM
Subject: Declined: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US
Sent: Thur 1/10/2013 1:08:10 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US
Sent: Thur 1/10/2013 6:35:10 PM
Subject: Fw: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Code: Ex. 6 - Personal Privacy
Hotspot
Hotspot
Hotspot
Hotspot
Hotspot
Hotspot

Hi Ellen,

Am I an essential player in this meeting? I am asking because I accepted this meeting, but didn't realize that I have a conflict at 2:30.

JoLynn
----- Forwarded by Jolynn Collins/RTP/USEPA/US on 01/10/2013 01:31 PM -----

TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Thu 01/10/2013 2:00 PM - 3:00 PM

Jolynn Collins

Chair: Ellen Belk/R6/USEPA/US

Location: Call in number: Ex. 6 - Personal Privacy
Call in number: Ex. 6 - Personal Privacy Rooms: Oklahoma City - 07.O15/R6 - 07th Floor@EPA

This entry has an alarm. The alarm will go off before the entry starts.

Erik Snyder/R6/USEPA/US@EPA, gyarwood@environcorp.com, Michael Feldman/R6/USEPA/US@EPA, snw@rti.org, unopmongcol@environcorp.com
Optional: Joe Kordzi/R6/USEPA/US@EPA, Jolynn Collins/RTP/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA
Time zones: This entry was created in a different time zone. The time in that time zone is: Thu 01/10/2013 1:00 PM CST2:00 PM CST

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Thur 1/10/2013 7:44:12 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Greg Yarwood"
Sent: Thur 1/10/2013 7:52:34 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy
Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Uarporn Nopmongcol"
Sent: Thur 1/10/2013 7:54:08 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US[]
Cc: []
From: CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US
Sent: Thur 1/10/2013 9:00:16 PM
Subject: Accepted:TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Wolf, Susan N."
Sent: Fri 1/11/2013 4:21:50 AM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy
Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Michael Feldman/OU=R6/O=USEPA/C=US
Sent: Tue 1/22/2013 3:02:56 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 1/22/2013 4:26:44 PM
Subject: Accepted: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Wolf, Susan N."
Sent: Thur 1/24/2013 7:10:58 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Greg Yarwood"
Sent: Thur 1/24/2013 7:21:45 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Uarporn Nopmongcol"
Sent: Thur 1/24/2013 7:22:02 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US[]
Cc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Thur 1/24/2013 7:23:56 PM
Subject: Accepted:TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US[]
Cc: []
From: CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US
Sent: Thur 1/24/2013 7:24:18 PM
Subject: Accepted:TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Uarporn Nopmongcol"
Sent: Wed 1/30/2013 11:43:15 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US[]
Cc: []
From: CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US
Sent: Thur 1/31/2013 4:45:07 AM
Subject: Accepted:TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Thur 1/31/2013 12:59:36 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Thur 1/31/2013 1:36:54 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Michael Feldman/OU=R6/O=USEPA/C=US
Sent: Thur 1/31/2013 2:49:13 PM
Subject: Accepted: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Wolf, Susan N."
Sent: Thur 1/31/2013 4:05:38 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Wolf, Susan N."
Sent: Tue 2/5/2013 7:28:33 PM
Subject: Accepted: TX RH: Conference Call with Environ

Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Uarporn Nopmongcol"
Sent: Tue 2/5/2013 7:33:15 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Michael Feldman/OU=R6/O=USEPA/C=US
Sent: Tue 2/5/2013 7:41:24 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US
Sent: Tue 2/5/2013 8:13:45 PM
Subject: Accepted: TX RH: Conference Call with Environ

Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Tue 2/12/2013 3:01:22 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Patrick Garbart/OU=R6/O=USEPA/C=US
Sent: Tue 2/12/2013 3:16:07 PM
Subject: Re: Fw: TX RH: Conference Call with Environ Cancelled Today and Rescheduled for Next Week

Ellen,

I'm scheduling you in for Tuesday, February 19th, 1-2pm, Cypress Tree room. You should see the new reservation posted tomorrow morning.

From: Ellen Belk/R6/USEPA/US
To: Patrick Garbart/R6/USEPA/US@EPA
Date: 02/12/2013 09:01 AM
Subject: Re: Fw: TX RH: Conference Call with Environ Cancelled Today and Rescheduled for Next Week

Oh! Tues Feb 19th! Thanks!

From: Patrick Garbart/R6/USEPA/US
To: Ellen Belk/R6/USEPA/US@EPA
Date: 02/12/2013 08:56 AM
Subject: Re: Fw: TX RH: Conference Call with Environ Cancelled Today and Rescheduled for Next Week

Ellen,

When you say "next Tuesday", do you mean Tuesday, February 19th or Wednesday, February 20th?

From: Ellen Belk/R6/USEPA/US
To: Patrick Garbart/R6/USEPA/US@EPA
Date: 02/12/2013 08:48 AM
Subject: Fw: TX RH: Conference Call with Environ Cancelled Today and Rescheduled for Next Week

Patrick,

I have cancelled our meeting today at 1 pm in the Pine Tree.

Please reserve a room for us on the 6th floor (preference in this order, Pine Tree, Cypress Tree, Pecan Tree) for us next Tues February 20 form 1 - 2 pm.

Thank you,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

----- Forwarded by Ellen Belk/R6/USEPA/US on 02/12/2013 08:46 AM -----

From: Belk.Ellen@epamail.epa.gov
To: Snyder.Erik@epamail.epa.gov, gyarwood@environcorp.com, Feldman.Michael@epamail.epa.gov, snw@rti.org, unopmongcol@environcorp.com
Cc: Kordzi.Joe@epamail.epa.gov, Schoellkopf.Lynde@epamail.epa.gov
Date: 02/12/2013 08:43 AM
Subject: TX RH: Conference Call with Environ Cancelled Today and Rescheduled for Next Week

Good morning,
I just spoke with Erik, and he requested that this meeting be cancelled for today, and rescheduled for next week at the same time.
I will send out a schedule change notification in a few minutes.
Best regards,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US[]
Cc: []
From: CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US
Sent: Tue 2/12/2013 3:24:10 PM
Subject: Accepted:TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Wolf, Susan N."
Sent: Tue 2/12/2013 3:37:05 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: Ellen Belk/R6/USEPA/US@EPA[]
From: "Uarporn Nopmongcol"
Sent: Tue 2/12/2013 6:05:21 PM
Subject: Accepted: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy

Ex. 6 - Personal Privacy

To: []
Cc: []
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 4:02:36 PM
Subject: TX RH: Meeting with Environ Followed By Meeting with RTI

From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 3:16:07 PM
Subject: TX RH: Meeting with Environ and then with RTI

From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 3:21:21 PM
Subject: TX RH: Meeting with Environ

From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 4:00:18 PM
Subject: TX RH: Meeting with Environ

From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Fri 8/24/2012 2:37:53 PM
Subject: TX RH: CSAPR Ruling and implications for the RTI contract

From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Mon 10/1/2012 7:52:54 PM
Subject: RTI Contract: Discussion of Work Assignment for Texas

Discussion:

- Recent evaluation provided for Oklahoma work assignment
  (is an evaluations needed for any other work assignments?)

- Workplan Amendment from RTI 9/25/2012

From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 10/2/2012 2:37:19 PM
Subject: TX RH: Meeting with Environ

From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 10/2/2012 3:59:14 PM
Subject: TX RH: EPA - RTI Meeting

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;gyarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; yarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; nw@rti.org;unopmongcol@environcorp.com[]; nopmongcol@environcorp.com[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Wed 10/3/2012 4:52:01 PM
Subject: TX RH: Conference Call with Environ

Ex. 6 - Personal Privacy

From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Thur 10/18/2012 3:07:17 PM
Subject: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Wed 12/5/2012 8:28:46 PM
Subject: TX RH: EPA/RTI Conference Call Ex. 6 - Personal Privacy

From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Wed 12/5/2012 8:23:04 PM
Subject: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Fri 12/14/2012 2:06:55 PM
Subject: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 1/8/2013 9:25:54 PM
Subject: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Thur 1/10/2013 7:46:16 PM
Subject: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Thur 1/24/2013 7:06:05 PM
Subject: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 2/5/2013 7:25:59 PM
Subject: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

To: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA[]
Cc: []
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 7/17/2012 5:05:09 PM
Subject: Fw: Changes/adjustments to RTI WA - draft email to RTI

Hi JoLynn,
Does the draft message to Susan below look alright to you?
Thanks,
Ellen

Redacted

----- Forwarded by Ellen Belk/R6/USEPA/US on 07/17/2012 12:04 PM -----

From: Ellen Belk/R6/USEPA/US
To: Erik Snyder/R6/USEPA/US@EPA, Michael Feldman/R6/USEPA/US@EPA
Cc: Joe Kordzi/R6/USEPA/US@EPA
Date: 07/16/2012 08:49 AM
Subject: Changes/adjustments to RTI WA - draft email to RTI

Erik / Michael,
We have processed approval of the workplan with a change in title, and would like to provide technical direction for the following updates.
Are there any edits or additional items to include?
Thanks,
Ellen

****

Dear Susan,
We would like to provide the following technical direction on the WA for the Texas Regional Haze Evaluation:

Ex. 4 - CBI

Thank you very much.
Sincerely,
Ellen Belk

To: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA[]
Cc: CN=Georgia Okstel/OU=R6/O=USEPA/C=US@EPA;CN=Clovis Steib/OU=R6/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]; N=Clovis Steib/OU=R6/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]; N=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 7/17/2012 8:42:09 PM
Subject: RTI Contract No. EP-W-11-029; Texas Regional Haze Evaluation

JoLynn,
I think we are in good shape with respect to this contract.

As we have discussed, Georgia Okstel will be my backup for contracting. She will be away some of the same days I will be, but she will be in the office July 30 - August 6.

If there is something urgent during the time Georgia is out, please contact Clovis Steib, or my supervisor, Guy Donaldson.
I will be back August 7.

Best regards,
Ellen
Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

To: "Wolf, Susan N." [snw@rti.org]
Cc: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;Greg Yarwood [gyarwood@environcorp.com]; reg Yarwood [gyarwood@environcorp.com]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;Uarporn Nopmongcol [unopmongcol@environcorp.com]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;Uarporn Nopmongcol [unopmongcol@environcorp.com]; arporn Nopmongcol [unopmongcol@environcorp.com]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]; N=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 7/17/2012 10:24:57 PM
Subject: Texas Regional Haze Evaluation

Susan,
Thanks very much for the discussion during the call today. As a bit of a change from what we discussed, JoLynn Collins, the Project Officer had already put together an amendment to the Work Plan with the changes, so that should be coming through the system to you soon.

Also, I understand from Erik that a good time for discussion is Thursday at noon (central time?).

Best regards,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

To: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Thur 8/16/2012 3:46:02 PM
Subject: RTI/Environ

Joe -- our first technical discussion with Environ was Tuesday June 19th.

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

To: "Wolf, Susan N." [snw@rti.org]
Cc: "Greg Yarwood" [gyarwood@environcorp.com]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; Uarporn Nopmongcol" [unopmongcol@environcorp.com]; N=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]; N=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]; N=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 8/28/2012 8:11:20 PM
Subject: Fw: INSIDE EPA: Appeals Court Vacates EPA Air Transport Rule For Exceeding Agency Authority
Court's Opinion
Court's Order

Susan,
Thank you for the discussion.
As I mentioned, we have been considering the recent court order regarding the Air Transport Rule and its implications for the Texas Regional Haze Evaluation work assignment (Contract No. EP-W-11-029).
We will keep you aprised of further developments.
Thank you very much,
Ellen

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Appeals Court Vacates EPA Air Transport Rule For Exceeding Agency Authority
Posted: August 21, 2012
Court's Opinion
http://insideepa.com/iwpfile.html?file=aug2012%2Fepa2012_1568a.pdf
Court's Order
http://insideepa.com/iwpfile.html?file=aug2012%2Fepa2012_1568b.pdf

We vacate the Transport Rule and the Transport Rule FIPs and remand this proceeding to EPA. EPA must continue administering CAIR pending the promulgation of a valid replacement.
So ordered.
+ Dissenting opinion

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA[]
Cc: "Wolf, Susan N." [snw@rti.org]; Greg Yarwood" [gyarwood@environcorp.com]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; Uarporn Nopmongcol" [unopmongcol@environcorp.com]
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 8/28/2012 8:19:39 PM
Subject: Re: WA1-11 - 8/28 call?
feldman.michael@epa.gov

Thanks Erik. And yes, apologies for the confusion. I thought I had sent a message to everyone yesterday, but realize now that because I sent it through Lotus Notes it did not go out to everyone as I had intended.

I will send an email by COB Monday the next time we plan to hold a Tuesday meeting.

Thank you.
Ellen

From: Erik Snyder/R6/USEPA/US
To: "Wolf, Susan N." <snw@rti.org>
Cc: Ellen Belk/R6/USEPA/US@EPA, "Greg Yarwood" <gyarwood@environcorp.com>, Joe Kordzi/R6/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA, Michael Feldman/R6/USEPA/US@EPA, "Uarporn Nopmongcol" <unopmongcol@environcorp.com>
Date: 08/28/2012 01:30 PM
Subject: Re: WA1-11 - 8/28 call?

Apologies. I thought Ellen sent an email to everyone canceling the call. It must have been just a cancelation on our Lotus Notes calendar that did not get circulated to you all. Sorry for the confusion. We are trying to determine internally how to move forward on Texas with the recent CSAPR modeling.

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

From: "Wolf, Susan N." <snw@rti.org>

To: Michael Feldman/R6/USEPA/US@EPA
Cc: Ellen Belk/R6/USEPA/US@EPA, Erik Snyder/R6/USEPA/US@EPA, "Greg Yarwood" <gyarwood@environcorp.com>, Joe Kordzi/R6/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA, "Uarporn Nopmongcol" <unopmongcol@environcorp.com>
Date: 08/28/2012 01:25 PM
Subject: WA1-11 - 8/28 call?

Hi all,
Has today's call been cancelled? Please let us know. Thanks.
-Susan

From: Michael Feldman [mailto:Feldman.Michael@epamail.epa.gov]
Sent: Tuesday, August 21, 2012 10:28 AM
To: Uarporn Nopmongcol
Cc: Ellen Belk; Erik Snyder; Greg Yarwood; Joe Kordzi; Wolf, Susan N.; Lynde Schoellkopf
Subject: Call with Environ 8/21

I suggest that we cancel today's call. A number of people are out of the office today or tied up with other things. We can reschedule for later this week or wait until next week. Please let me know if there are any objections or issues that need to be discussed today.

Thank you,

Michael Feldman
Environmental Engineer
Air Planning Section
U.S. EPA Region 6, 6PD-L
Phone: 214-665-9793
feldman.michael@epa.gov

To: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]; N=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]
Cc: CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA[]; N=Erik Snyder/OU=R6/O=USEPA/C=US@EPA[]
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Thur 9/6/2012 8:39:05 PM
Subject: TX RH Evaluation WA: RTI Update

Ellen Belk
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EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

To: CN=Georgia Okstel/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Fri 9/14/2012 2:26:22 PM
Subject: Re: Fw: EAS Document Notification: For your reference: Award: NEW AWARD - RTI - ECONOMIC ANALYSIS AND CONTROL STRATEGY (EP-W-11-029/1-11)

fyi -- I left a message for JoLynn (who is out today) asking about this amendment -- not sure from what I read in EAS what the changes are -- I'll keep you posted

From: Georgia Okstel/R6/USEPA/US
To: Ellen Belk/R6/USEPA/US@EPA
Date: 09/12/2012 02:58 PM
Subject: Fw: EAS Document Notification: For your reference: Award: NEW AWARD - RTI - ECONOMIC ANALYSIS AND CONTROL STRATEGY (EP-W-11-029/1-11)

FYI

Best Regards,

Georgia
Georgia L. Okstel
Air, State and Tribal Operations Section, 6PD
Multimedia Planning and Permitting Division
U.S. Environmental Protection Agency
Office: 214-665-6699
okstel.georgia@epa.gov

----- Forwarded by Georgia Okstel/R6/USEPA/US on 09/12/2012 02:57 PM -----

From: EAS.System@EPA
To: Georgia Okstel/R6/USEPA/US@EPA
Date: 09/12/2012 09:06 AM
Subject: EAS Document Notification: For your reference: Award: NEW AWARD - RTI - ECONOMIC ANALYSIS AND CONTROL STRATEGY (EP-W-11-029/1-11)

Award: EP-W-11-029/1-11 has been approved by Natalia Fisher-Jackson in EAS.
Project Title: NEW AWARD - RTI - ECONOMIC ANALYSIS AND CONTROL STRATEGY
Modification: 000002
Description: E. Belk - Work Plan Modifications
Owner: Jolynn Collins
Requisitioner: Barbara Bess
Contract Specialist: Natalia Fisher-Jackson
Contracting Officer: Natalia Fisher-Jackson
Project Officer: Jolynn Collins
Site: OAR/OAQPS
Contracting Office: RTPPOD

To: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA[]
Cc: []
Bcc: CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Wed 9/19/2012 8:08:14 PM
Subject: Re: EP-W-11-029 (RTI) -- Past Performance Evaluation for April 1, 2011 - March 31, 2012
Past Performance WA 0-15 ehb.docx

Hi JoLynn,

Attached is the Past Performance Evaluation for RTI/Dr. Fox for WA 0-15.

Please let me know if there is anything else you need.

Best regards,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

From: Jolynn Collins/RTP/USEPA/US
To: Larry Sorrels/RTP/USEPA/US@EPA, bradley.lillian@epa.gov, Elineth Torres/RTP/USEPA/US@EPA, Linda Lassiter/RTP/USEPA/US@EPA, Tom Walton/RTP/USEPA/US@EPA, Justin Spenillo/R10/USEPA/US@EPA, John Powers/DC/USEPA/US@EPA, davis.christine@epa.gov, bradley.lillian@epa.gov, Ginger Tennant/RTP/USEPA/US@EPA, carraway.candace@epa.gov, Amanda CurryBrown/RTP/USEPA/US@EPA, Ellen Belk/R6/USEPA/US@EPA, Chris Dockins/DC/USEPA/US@EPA, Robin Langdon/RTP/USEPA/US@EPA, Gail Fallon/R8/USEPA/US@EPA, Randy Waite/RTP/USEPA/US@EPA, fann.neal@epa.gov, Devlin.Robert@epa.gov
Date: 09/12/2012 01:44 PM
Subject: EP-W-11-029 (RTI) -- Past Performance Evaluation for April 1, 2011 - March 31, 2012

Hi Everyone,

Ex. 4 - CBI

Ex. 4 - CBI

Thanks much!

[attachment "Past Performance Questionnaire Form 2-17-12.docx" deleted by Ellen Belk/R6/USEPA/US]

JoLynn Collins
Environmental Protection Specialist/Project Officer
U.S. Environmental Protection Agency
Office of Air Quality Planning and Standards
Central Operations and Resources
Research Triangle Park, NC 27711
(919) 541-5671

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* *

To: "Wolf, Susan N." [snw@rti.org]; reg Yarwood [gyarwood@environcorp.com]; arporn Nopmongcol [unopmongcol@environcorp.com]
Cc: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]; N=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Wed 9/26/2012 1:06:52 PM
Subject: Fw: TX RH: Meeting with Environ Followed By Meeting with RTI
(embedded image)

Hello,

We would like to resume our weekly meetings to discuss the "Texas Regional Haze (RH) Evaluation Task 2: Control Strategy Analysis, Including Modeling Support", beginning next Tuesday October 2 at 1:00 pm Central Time.

We look forward to our discussion next Tuesday. Please let me know if there are any conflicts.

Thank you,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

----- Forwarded by Ellen Belk/R6/USEPA/US on 09/26/2012 07:56 AM -----

Calendar Entry

Type: Meeting

Subject: TX RH: Meeting with Environ Followed By Meeting with RTI

When:
Starts: Tue 10/02/2012 01:00 PM Local time

Ends: Tue 10/02/2012 02:30 PM Local time 1 hr 30 mins

Who:
Required: Erik Snyder/R6/USEPA/US@EPA, gyarwood@environcorp.com, Michael Feldman/R6/USEPA/US@EPA, snw@rti.org, unopmongcol@environcorp.com
Optional: Joe Kordzi/R6/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA
FYI: Guy Donaldson/R6/USEPA/US@EPA

Where:
Location: Call in number: **Ex. 6 - Personal Privacy**

Rooms: Houston Toad - 09.B02/R6 - 09th Floor@EPA

To: "Wolf, Susan N." [snw@rti.org]
Cc: []
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Wed 9/26/2012 5:00:18 PM
Subject: RE: TX RH: Meeting with Environ Followed By Meeting with RTI
belk.ellen@epa.gov
gyarwood@environcorp.com
snw@rti.org
unopmongcol@environcorp.com
(embedded image)

Thanks Susan.
Looking forward to talking with you next week,
Ellen

From: "Wolf, Susan N." <snw@rti.org>
To: Ellen Belk/R6/USEPA/US@EPA
Date: 09/26/2012 10:13 AM
Subject: RE: TX RH: Meeting with Environ Followed By Meeting with RTI

I will be "there" – talk with you soon.
-Susan

From: Ellen Belk [mailto:Belk.Ellen@epamail.epa.gov]
Sent: Wednesday, September 26, 2012 9:07 AM
To: Wolf, Susan N.; Greg Yarwood; Uarporn Nopmongcol
Cc: Erik Snyder; Michael Feldman; Joe Kordzi; Lynde Schoellkopf; Guy Donaldson
Subject: Fw: TX RH: Meeting with Environ Followed By Meeting with RTI

Hello,

We would like to resume our weekly meetings to discuss the "Texas Regional Haze (RH) Evaluation Task 2: Control Strategy Analysis, Including Modeling Support", beginning next Tuesday October 2 at 1:00 pm Central Time.

We look forward to our discussion next Tuesday. Please let me know if there are any conflicts.

Thank you,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

----- Forwarded by Ellen Belk/R6/USEPA/US on 09/26/2012 07:56 AM -----

Calendar Entry

Type: Meeting

Subject: TX RH: Meeting with Environ Followed By Meeting with RTI

When:

Starts: Tue 10/02/2012 01:00 PM Local time

Ends: Tue 10/02/2012 02:30 PM Local time 1 hr 30 mins

Who:

Required: Erik Snyder/R6/USEPA/US@EPA, gyarwood@environcorp.com, Michael Feldman/R6/USEPA/US@EPA, snw@rti.org, unopmongcol@environcorp.com
Optional: Joe Kordzi/R6/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA
FYI: Guy Donaldson/R6/USEPA/US@EPA

Where:

Location: Call in number: 866-299-3188; Code: 214-665-2164

Rooms: Houston Toad - 09.B02/R6 - 09th Floor@EPA

To: Phyllis Fox Ex. 6 - Personal Privacy
Cc: []
Bcc: CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Wed 10/3/2012 3:57:49 PM
Subject: Re: Fwd: Expiring Contract: Seeking Phyllis Fox's Services - Redacted

Ex. 6 - Personal Privacy

Phyllis,

This message is from a private company. It is NOT an official email from the government.

Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

From: Phyllis Fox <phyllisfox@gmail.com>
To: Ellen Belk/R6/USEPA/US@EPA
Date: 10/02/2012 02:29 PM
Subject: Fwd: Expiring Contract: Seeking Phyllis Fox's Services - Call 888.801.8495

Is this a scam?

---------- Forwarded message ----------
From: <KimberlyWilson@fedbizaccess.com>
Date: Tue, Oct 2, 2012 at 6:38 AM
Subject: Expiring Contract: Seeking Phyllis Fox's Services - Call 888.801.8495
To: phyllisfox@gmail.com

View our online version or view mobile version

The contents of this email are intended for the following recipient only:
To: Phyllis Fox with Phyllis Fox
Re: Expiring Contract Notification - NAICS: Federal NAICS Match - Yes
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EXPIRING CONTRACT SOLICITATION NOTIFICATION
Solicitation Based On Phyllis Fox's Federal Profile
Phyllis Fox, you've received this notification due to Phyllis Fox's federal contracting profile matching the prerequisites (CCR, DUNS, & Matching NAICS*) for registering as an interested vendor to directly bid on several upcoming Expiring Contracts available for re-compete that match Phyllis Fox's capabilities. We would like to speak with you regarding these government contract opportunities.
We have contract opportunities with Federal, Military, State, and Local entities for the next 5 years, as well as current teaming & subcontracting partnerships with Prime Vendors. To have an FBA Contracting Specialist review the contract opportunities that match Phyllis Fox's profile and have the opportunity to speak to a GRL Advisor, please call 1-888-801-8495 from 9am to 5pm EST.
Company Name: Phyllis Fox
Industry NAICS*: Federal NAICS Match - Yes
Government Point of Contact: Phyllis Fox
Government Contact Type: Pri
Phone: Ex. 6 - Personal Privacy
Cage Code: Ex. 6 - Personal Privacy
If the NAICS on this solicitation does not apply to your registered profile, please update your registration or call 888-801-8495 between 9am and 5pm EST to speak with a contracting specialist to update your FBA profile.

Call 1-888-801-8495 between 9am and 5pm EST to speak with a Contracting Specialist and review current contract opportunities that match Phyllis Fox's profile.
Interested Vendor cage code for Phyllis Fox is Ex. 6 - Personal Privacy

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Information Included in Free Gov Biz Plan:
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Which Agencies Buy Your Products & Services
Who Received The Contracts & Total Earned
Current Contract Opportunities
Federal, Military, State, & Local Data
GSA Contractors In Your Industry
Contract Awards By Zip Code
Expiring Contracts Next 5 Fiscal Years
Call 1-888-801-8495 From 9am to 5pm EST
CAGE Code: 6BV90

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To: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 10/9/2012 6:33:45 PM
Subject: Fw: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy
Hotspot
Hotspot
Hotspot
Hotspot
Hotspot

Are we ready to move forward with "Task 3 Control Cost and performance Capability Support" with Dr. Fox?

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

----- Forwarded by Ellen Belk/R6/USEPA/US on 10/09/2012 01:32 PM -----

TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

Tue 10/09/2012 1:00 PM - 2:00 PM

Ellen Belk

Chair: Erik Snyder/R6/USEPA/US

Rooms: Cypress Tree - 06.O02/R6 – 06th Floor@EPA

This entry has an alarm. The alarm will go off before the entry starts.

Ellen Belk/R6/USEPA/US@EPA, gyarwood@environcorp.com, Michael Feldman/R6/USEPA/US@EPA, snw@rti.org, unopmongcol@environcorp.com
Optional: Joe Kordzi/R6/USEPA/US@EPA, Jolynn Collins/RTP/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA

To: "Wolf, Susan N." [snw@rti.org]; reg Yarwood [gyarwood@environcorp.com]; arporn Nopmongcol [unopmongcol@environcorp.com]
Cc: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
Bcc: CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Thur 10/18/2012 3:05:27 PM
Subject: TX RH: Meeting with Environ Followed By Meeting with RTI

Rather than meeting next Tuesday, we would like to schedule our next meeting for Tuesday October 30th at 1 pm Central Time to discuss the "Texas Regional Haze (RH) Evaluation Task 2: Control Strategy Analysis, Including Modeling Support". I will send a meeting invitation through the calendar system as well.

Erik is working on making hard drive copies of the CENRAP modeling files.

We look forward to our discussion. Please let me know if there are any conflicts.

Thank you,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

To: "Wolf, Susan N." [snw@rti.org]
Cc: phyllisfox@gmail.com;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]
Bcc: CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Thur 11/8/2012 5:56:42 PM
Subject: TX RH: Control Cost Evaluation

Susan,
Thank you for the discussion earlier this week.

As we had discussed at the end of the call, I wanted to get back to you regarding our schedule for being able to provide the necessary data. Since our meeting, Joe has made significant progress, and now expects to be able to provide the additional information within a relatively short timeframe.

Thank you very much,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

To: Phyllis Fox Ex. 6 - Personal Privacy
Cc: []
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 11/20/2012 7:45:12 PM
Subject: Re: Fwd: C Redacted Expiring Contract: Seeking Phyllis Fox's Services

Ex. 6 - Personal Privacy

Yes, safe to ignore.

Hope you have a marvelous Thanksgiving!

From: Phyllis Fox Ex. 6 - Personal Privacy
To: Ellen Belk/R6/USEPA/US@EPA
Date: 11/20/2012 12:26 PM
Subject: Fwd: Call Redacted Expiring Contract: Seeking Phyllis Fox's Services

I assume this is spam?

---------- Forwarded message ----------
From: <KimberlyWilson@fedbizaccess.com>
Date: Tue, Nov 20, 2012 at 1:10 PM
Subject: Call Redacted - Expiring Contract: Seeking Phyllis Fox's Services
To: Ex. 6 - Personal Privacy

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EXPIRING CONTRACT SOLICITATION NOTIFICATION
Solicitation Based On Phyllis Fox's Federal Profile
Phyllis Fox, you've received this notification due to Phyllis Fox's federal contracting profile matching the prerequisites for registering as an interested vendor to directly bid on several upcoming Expiring Contracts available for re-compete that match Phyllis Fox's capabilities. We would like to speak with you regarding these government contract opportunities.
We have contract opportunities with Federal, Military, State, and Local entities for the next 5 years, as well as current teaming & subcontracting partnerships with Prime Vendors. To have an FBA Contracting Specialist review the contract opportunities that match Phyllis Fox's profile and have the opportunity to speak to a GRL Advisor, please call 1-888-801-8495 from 8:30am to 5:30pm EST.
Company Name: Phyllis Fox
Industry NAICS*: Federal NAICS Match - Yes
Government Point of Contact: Phyllis Fox
Government Contact Type: Pri
Phone: Redacted
Cage Code: Ex. 6 - Personal Privacy
If the NAICS on this solicitation does not apply to your registered profile, please update your registration or call 888-801-8495 between 8:30am to 5:30pm EST to speak with a contracting specialist to update your FBA profile.

Call 1-888-801-8495 between 8:30am to 5:30pm EST to speak with a Contracting Specialist and review current contract opportunities that match Phyllis Fox's profile.
Vendor cage code for Phyllis Fox is Ex. 6 - Personal Privacy

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Which Agencies Buy Your Products & Services
Who Received The Contracts & Total Earned
Current Contract Opportunities
Federal, Military, State, & Local Data
GSA Contractors In Your Industry
Contract Awards By Zip Code
Expiring Contracts Next 5 Fiscal Years
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To: Greg Yarwood [gyarwood@environcorp.com]
Cc: []
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Wed 12/5/2012 9:23:04 PM
Subject: RE: Rescheduled: TX RH: Conference Call with Environ Redacted
Redacted Dec 12 09:00 AM CST in Call in number: Ex. 6 - Personal Privacy
mailto:Belk.Ellen@epamail.epa.gov

No, I just received a message that she would return to the office on December 12th.
Should I reschedule for the 13th?

Ellen

From: Greg Yarwood <gyarwood@environcorp.com>
To: Ellen Belk/R6/USEPA/US@EPA
Date: 12/05/2012 02:58 PM
Subject: RE: Rescheduled: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy
(Dec 12 09:00 AM CST in Call in number: Ex. 6 - Personal Privacy

Ellen – did Ou indicate that she can make this time?

Greg

-----Original Appointment-----
From: Ellen Belk/R6/USEPA/US [mailto:Belk.Ellen@epamail.epa.gov]
Sent: Wednesday, December 05, 2012 12:42 PM
To: Erik Snyder/R6/USEPA/US; Greg Yarwood; Michael Feldman/R6/USEPA/US; snw@rti.org; Uarporn Nopmongcol; Pine Tree - 06.O15/R6 – 06th Floor
Cc: Joe Kordzi/R6/USEPA/US; Jolynn Collins/RTP/USEPA/US; Lynde Schoellkopf/R6/USEPA/US
Subject: Rescheduled: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy (Dec 12 09:00 AM CST in Call in number: Ex. 6 - Personal Privacy
When: Wednesday, December 12, 2012 7:00 AM-8:00 AM (UTC-08:00) Pacific Time (US & Canada).
Where: Call in number: Ex. 6 - Personal Privacy

<< File: Description.htm >> << File: Comments.htm >>

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To: Uarporn Nopmongcol [unopmongcol@environcorp.com]
Cc: []
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Thur 12/6/2012 1:32:25 PM
Subject: RE: Rescheduled: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy 665-2164 (Dec 12 09:00 AM CST in Call in number: Ex. 6 - Personal Privacy

Ou,
Thank you for your message.
Sure, that will be fine. I have rescheduled for the afternoon of the 13th.
Hope you have a wonderful vacation.
Ellen

From: Uarporn Nopmongcol <unopmongcol@environcorp.com>
To: Ellen Belk/R6/USEPA/US@EPA
Date: 12/05/2012 06:43 PM
Subject: RE: Rescheduled: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy (Dec 12 09:00 AM CST in Call in number: Ex. 6 - Personal Privacy

Ellen,

I am still on vacation and won't be back in the office until December 13. Could we have a call on Dec 13 or after?

Thank you.
Ou

From: Ellen Belk/R6/USEPA/US [Belk.Ellen@epamail.epa.gov]
Sent: Wednesday, December 05, 2012 12:41 PM
To: Erik Snyder/R6/USEPA/US; Greg Yarwood; Michael Feldman/R6/USEPA/US; snw@rti.org; Uarporn Nopmongcol; Pine Tree - 06.O15/R6 – 06th Floor
Cc: Joe Kordzi/R6/USEPA/US; Jolynn Collins/RTP/USEPA/US; Lynde Schoellkopf/R6/USEPA/US
Subject: Rescheduled: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Dec 12 09:00 AM CST in Call in number: Ex. 6 - Personal Privacy
When: Wednesday, December 12, 2012 7:00 AM-8:00 AM.
Where: Call in number: Ex. 6 - Personal Privacy

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To: Greg Yarwood [gyarwood@environcorp.com]
Cc: []
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Thur 12/6/2012 1:43:36 PM
Subject: RE: Rescheduled: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy
Ex. 6 - Personal Privacy (Dec 12 09:00 AM CST in Call in number: Ex. 6 - Personal Privacy
gyarwood@environcorp.com
mailto:Belk.Ellen@epamail.epa.gov
email@environcorp.com

Greg,
I appreciate your letting me know.
Thanks,
Ellen

From: Greg Yarwood <gyarwood@environcorp.com>
To: Ellen Belk/R6/USEPA/US@EPA
Date: 12/05/2012 03:38 PM
Subject: RE: Rescheduled: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy
(Dec 12 09:00 AM CST in Call in number: Ex. 6 - Personal Privacy

Ellen

Redacted

My understanding is that Dec 13th will be her first day back in the office, so OK to schedule a call mid-morning or later on the 13th.

Unfortunately, I will be out Dec 13 -17, but that will be not be a problem because Ou and I will communicate before the call.

Let me know any questions - Greg

From: Belk.Ellen@epamail.epa.gov [mailto:Belk.Ellen@epamail.epa.gov]
Sent: Wednesday, December 05, 2012 1:23 PM
To: Greg Yarwood
Subject: RE: Rescheduled: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy Dec 12 09:00 AM CST in Call in number: Ex. 6 - Personal Privacy

No, I just received a message that she would return to the office on December 12th.
Should I reschedule for the 13th?

Ellen

From: Greg Yarwood <gyarwood@environcorp.com>

To: Ellen Belk/R6/USEPA/US@EPA
Date: 12/05/2012 02:58 PM
Subject: RE: Rescheduled: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy (Dec 12 09:00 AM CST in Call in number: Ex. 6 - Personal Privacy

Ellen – did Ou indicate that she can make this time?

Greg

-----Original Appointment-----
From: Ellen Belk/R6/USEPA/US [mailto:Belk.Ellen@epamail.epa.gov]
Sent: Wednesday, December 05, 2012 12:42 PM
To: Erik Snyder/R6/USEPA/US; Greg Yarwood; Michael Feldman/R6/USEPA/US; snw@rti.org; Uarporn Nopmongcol; Pine Tree - 06.O15/R6 – 06th Floor
Cc: Joe Kordzi/R6/USEPA/US; Jolynn Collins/RTP/USEPA/US; Lynde Schoellkopf/R6/USEPA/US
Subject: Rescheduled: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy (Dec 12 09:00 AM CST in Call in number: Ex. 6 - Personal Privacy
When: Wednesday, December 12, 2012 7:00 AM-8:00 AM (UTC-08:00) Pacific Time (US & Canada).
Where: Call in number Ex. 6 - Personal Privacy

<< File: Description.htm >> << File: Comments.htm >>

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To: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]
Cc: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;"Phyllis Fox" Ex. 6 - Personal Privacy N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;"Phyllis Fox" Ex. 6 - Personal Privacy Phyllis Fox" Ex. 6 - Personal Privacy Wolf, Susan N." [snw@rti.org]
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 12/11/2012 4:55:48 PM
Subject: RE: Invitation: TX RH: Conference Call Ex. 6 - Personal Privacy (Dec 11 1 PM Jacuarundi Conference Room)
Belk.Ellen@epamail.epa.gov

sure

note the change in Conference Room: Jacquarundi

From: Joe Kordzi/R6/USEPA/US
To: "Wolf, Susan N." <snw@rti.org>
Cc: Ellen Belk/R6/USEPA/US@EPA, Jolynn Collins/RTP/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA, "Phyllis Fox" Ex. 6 - Personal Privacy
Date: 12/11/2012 10:15 AM
Subject: RE: Invitation: TX RH: Conference Call Ex. 6 - Personal Privacy (Dec 11 02:00 PM CST in Houston Toad - 09.B02/R6 - 09th Floor@EPA)

fine w/ me - Ellen?

Regards,

Joe

" ... and miles to go before I sleep."
-- Robert Frost

-----"Wolf, Susan N." <snw@rti.org> wrote: -----
To: "Phyllis Fox" < Ex. 6 - Personal Privacy , Ellen Belk/R6/USEPA/US@EPA
From: "Wolf, Susan N." <snw@rti.org>
Date: 12/11/2012 09:54AM
Cc: Joe Kordzi/R6/USEPA/US@EPA, Jolynn Collins/RTP/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA
Subject: RE: Invitation: TX RH: Conference Call Ex. 6 - Personal Privacy Dec 11 02:00 PM CST in Houston Toad - 09.B02/R6 - 09th Floor@EPA)

Hi,
I am fine with a change in time – is that ok with EPA folks?
-Susan

From: Phyllis Fox [mailto: Ex. 6 - Personal Privacy
Sent: Monday, December 10, 2012 1:46 AM
To: Belk.Ellen@epamail.epa.gov
Cc: Kordzi.Joe@epamail.epa.gov; Wolf, Susan N.; Collins.Jolynn@epamail.epa.gov; Schoellkopf.Lynde@epamail.epa.gov
Subject: Re: Invitation: TX RH: Conference Call Ex. 6 - Personal Privacy (Dec 11 02:00 PM CST in Houston Toad - 09.B02/R6 - 09th Floor@EPA)

Would it be possible to move this call back to 11 or 11:30 PST?

I have discovered that I have another conference call at the same time that cannot be moved.
2012/12/5 <Belk.Ellen@epamail.epa.gov>

To: Ex. 6 - Personal Privacy
Cc: []
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Fri 12/14/2012 10:48:06 PM
Subject: CSAPR Memo
CSAPR Memo to Regions 11-19-2012.pdf

Dr. Fox,
Here is the memo I mentioned during our discussion earlier this week.

Best regards,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

November 19, 2012

OFFICE OF
AIR AND RADIATION

MEMORANDUM

SUBJECT: Next Steps for Pending Redesignation Requests and State Implementation Plan Actions Affected by the Recent Court Decision Vacating the 2011 Cross-State Air Pollution Rule

FROM: Gina McCarthy
Assistant Administrator

TO: Air Division Directors, Regions 1 – 10

The purpose of this memorandum is to communicate to Environmental Protection Agency (EPA) Regional Offices about our intent with regard to a range of actions potentially affected by the August 21, 2012, decision by the U.S. Court of Appeals to vacate the 2011 Cross-State Air Pollution Rule (CSAPR). (EME Homer City Generation, L.P. v. EPA, No. 11-1302. (D.C. Cir. 2012)). As you know, we have filed a petition for rehearing of the Court's decision. Until a decision is made, CSAPR is stayed and the 2005 Clean Air Interstate Rule (CAIR) remains in effect. In the meantime, we have work to do. Statutory deadlines and other circumstances will require us to take various actions during this period and it is important that we all understand how best to take into account the Court's decision.

Certain state submittals awaiting approval by the EPA, such as pending redesignation requests for the 1997 ozone National Ambient Air Quality Standards (NAAQS) and the 1997 and 2006 $PM_{2.5}$ NAAQS, and pending submittals of certain ozone, $PM_{2.5}$, and regional haze State Implementation Plans (SIPs), may be partly dependent on the assurance of ongoing regional NO_x and SO_2 emission reductions. In many cases, state and local air agencies made these submittals with the expectation that CSAPR, which was designed to limit emissions of NO_x and SO_2 from power plants, would be fully implemented, thus ensuring such reductions would take place.

At the time of the Court's decision, the EPA was considering whether to approve a number of attainment SIPs, redesignation requests, and associated maintenance SIPs that relied on CSAPR in part to provide the necessary regional emission reductions for attaining the ozone and $PM_{2.5}$ NAAQS and maintaining the standards for the relevant future time period. With the Court's

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August 2012 decision to vacate CSAPR, the ability of states to ensure that the necessary reductions would be achieved and maintained was brought into question. However, on page 60 of its August 2012 decision, the Court also ordered the EPA to "continue administering CAIR pending the promulgation of a valid replacement." While we have filed a petition for rehearing of the Court's decision on CSAPR, based on this direction from the Court, we believe that it will be appropriate to rely on CAIR emission reductions as permanent and enforceable for certain actions in certain circumstances. Specifically, we believe it will be appropriate to rely on those reductions either until that petition and any further proceedings in the CSAPR case are resolved or, if the decision vacating CSAPR is not changed, until a valid replacement rule is developed and implementation plans complying with any new rule are submitted by the states and acted upon by the EPA. Thus, action on those pending requests and SIPs may go forward.

With respect to regional haze, there is one pending action that has yet to be finalized for a state plan that relies on the use of CAIR to satisfy the requirements of the regional haze program for its electric generating units. Given the need to act on this plan, we believe that it will be appropriate to approve the submitted state plan that relies on CAIR emission reductions, for the reasons explained above. You may also receive questions about two other categories of regional haze actions taken prior to the CSAPR decision: (1) determinations that certain haze plans did not meet the requirements of the Clean Air Act because of the plans' reliance on CAIR, and (2) actions relying on the CSAPR trading programs to satisfy Best Available Retrofit Technology (BART) for power plants. For these actions, we believe it is the best use of our own, the states', and the courts' resources to await the decision on our petition for rehearing before deciding whether we need to revisit these final actions.

I have directed OAR staff to work closely with EPA Regional Offices to identify, prioritize, and act promptly on any pending redesignation requests and SIP submittals that involve CSAPR reductions. While noting that each EPA action on a pending state request will need to address the specifics of the state's submittal, it is my expectation that Regional Offices, working with national program staff, can move forward to draft and process these notices expeditiously.

I would also like to note that the recent CSAPR decision made certain holdings regarding the requirement for states to submit SIPs addressing the provisions of Clean Air Act section 110(a)(2)(D)(i)(I), the good neighbor provision that addresses upwind emissions linked to NAAQS attainment problems in downwind states. The decision states that a SIP cannot be deemed deficient for failing to meet the good neighbor obligation before the EPA quantifies that obligation. Although we have filed a petition for rehearing of the Court's decision, including this element of the decision, and although the mandate for that decision has not yet been issued, we intend to act in accordance with the decision during the pendency of the appeal. Therefore, at this time the EPA does not intend to make findings that states failed to submit SIPs to comply with section 110(a)(2)(D)(i)(I). To the extent states may inquire about their obligations to submit SIPs

addressing this provision, we believe it would be appropriate to convey that at this time we do not intend to make such findings with respect to section 110(a)(2)(D)(i)(I).

I trust that this information will be helpful to you in responding to questions about pending state actions, and I encourage you to distribute this memo to state and local air agencies in your Region. We will continue to assist Regional Offices on an individual basis to ensure that pending and new actions are being processed as expeditiously as possible in accordance with the recent CSAPR court decision.

To: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA[]
Cc: []
Bcc: CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Wed 1/2/2013 6:32:22 PM
Subject: Re: EP-W-11-029 (RTI) WA 1-11 Invoice Review Requested

Hi JoLynn,
Happy New Year!
I have received your message, and plan to meet the deadline of Jan. 25th for review and response.
Thank you,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

From: Jolynn Collins/RTP/USEPA/US
To: Ellen Belk/R6/USEPA/US@EPA
Date: 01/02/2013 10:15 AM
Subject: EP-W-11-029 (RTI) WA 1-11 Invoice Review Requested

Hi Ellen,

I am playing catch up with my invoice reviews, and need your help. I am attaching invoices dating back to the first one for this performance period. Please review each invoice and prepare an Invoice Review Checklist (also attached) for each of the invoices and return to me by COB Friday, January 25. You may scan and return to me by email or send me hard copies, whichever works best for you. Please let me know right away if you see a problem with or have questions about any of these invoices.

Now that my work load has leveled out, my goal is to get these out to you monthly the way I once did, and the way it should be done.

If you have already completed a checklist for any of these invoices, please disregard this note. And, as always, let me know if you have questions.

JoLynn
x5671

[attachment "WAM Checklist for Invoice Review-fillable.doc" deleted by Ellen Belk/R6/USEPA/US] [attachment "WA 1-11 Sep 2012 Invoice.pdf" deleted by Ellen Belk/R6/USEPA/US] [attachment "WA 1-11 Aug 2012 Invoice.pdf" deleted by Ellen Belk/R6/USEPA/US] [attachment "WA 1-11 Dec 2012 Invoice.pdf" deleted by Ellen Belk/R6/USEPA/US] [attachment "WA 1-11 Jul 2012 Invoice.pdf" deleted by Ellen Belk/R6/USEPA/US] [attachment "WA 1-11 Jun 2012 Invoice.pdf" deleted by Ellen Belk/R6/USEPA/US] [attachment "WA 1-11 May 2012 Invoice.pdf" deleted by Ellen Belk/R6/USEPA/US] [attachment "WA 1-11

Nov 2012 Invoice.pdf" deleted by Ellen Belk/R6/USEPA/US] [attachment "WA 1-11 Oct 2012 Invoice.pdf" deleted by Ellen Belk/R6/USEPA/US]

To: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA[]
Cc: []
Bcc: CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Wed 1/23/2013 9:51:27 PM
Subject: Re: EP-W-11-029 (RTI) WA 1-11 Invoice Review Requested

Hi JoLynn,
Could you please re-send the invoice for September 2012?
The file for that month is a duplicate of October.
Thanks!
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

From: Jolynn Collins/RTP/USEPA/US
To: Ellen Belk/R6/USEPA/US@EPA
Date: 01/02/2013 10:15 AM
Subject: EP-W-11-029 (RTI) WA 1-11 Invoice Review Requested

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Nov 2012 Invoice.pdf" deleted by Ellen Belk/R6/USEPA/US] [attachment "WA 1-11 Oct 2012 Invoice.pdf" deleted by Ellen Belk/R6/USEPA/US]

To: CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA[]
Cc: []
Bcc: CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Fri 1/25/2013 11:06:09 PM
Subject: Re: EP-W-11-029 (RTI) WA 1-11 Invoice Review Requested
WA 1-11 Aug 2012 Invoice Review.pdf
WA 1-11 Dec 2012 Invoice Review.pdf
WA 1-11 Jun 2012 Invoice Review.pdf
WA 1-11 May 2012 Invoice Review.pdf
WA 1-11 Nov 2012 Invoice Review.pdf
WA 1-11 Oct 2012 Invoice Review.pdf
WA 1-11 Jul 2012 Invoice Review.pdf

Hi JoLynn.

Here are invoice reviews for WA 1-11.

For the September invoice (covering the month of August 2012), I need that re-sent for review,

I look forward to talking with you next week.

Thanks,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
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Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

From: Jolynn Collins/RTP/USEPA/US
To: Ellen Belk/R6/USEPA/US@EPA
Date: 01/02/2013 10:15 AM
Subject: EP-W-11-029 (RTI) WA 1-11 Invoice Review Requested

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JoLynn
x5671

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To: Uarporn Nopmongcol [unopmongcol@environcorp.com]
Cc: []
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Mon 2/4/2013 1:39:14 PM
Subject: Re: TX RH: 2002 CAMx results

Hi Ou,
Thank you very much for the 2002 CAMx results. Yes, we will include this in our discussion tomorrow.
Have a good day,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

From: Uarporn Nopmongcol <unopmongcol@environcorp.com>
To: Ellen Belk/R6/USEPA/US@EPA, "Wolf, Susan N." <snw@rti.org>, Erik Snyder/R6/USEPA/US@EPA, Michael Feldman/R6/USEPA/US@EPA, Joe Kordzi/R6/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA
Date: 02/01/2013 06:59 PM
Subject: TX RH: 2002 CAMx results

Hi all,
Attached are 2002 CAMx results. I'm starting to draft a technical memorandum at this point.
We can discuss about the results on Tuesday.
Have a good weekend,
Ou

This message contains information that may be confidential, privileged or otherwise protected by law from disclosure. It is intended for the exclusive use of the Addressee(s). Unless you are the addressee or authorized agent of the addressee, you may not review, copy, distribute or disclose to anyone the message or any information contained within. If you have received this message in error, please contact the sender by electronic reply to email@environcorp.com and immediately delete all copies of the message. [attachment "txhaze.2002plots.docx" deleted by Ellen Belk/R6/USEPA/US]

To: Snyder.Erik@epamail.epa.gov;gyarwood@environcorp.com;Feldman.Michael@epamail.epa.gov;snw@rti.org;unopmongcol@environcorp.com[]; yarwood@environcorp.com;Feldman.Michael@epamail.epa.gov;snw@rti.org;unopmongcol@environcorp.com[]; eldman.Michael@epamail.epa.gov;snw@rti.org;unopmongcol@environcorp.com[]; nw@rti.org;unopmongcol@environcorp.com[]; nopmongcol@environcorp.com[]
Cc: Kordzi.Joe@epamail.epa.gov;Schoellkopf.Lynde@epamail.epa.gov[]; choellkopf.Lynde@epamail.epa.gov[]
Bcc: Donaldson.Guy@epamail.epa.gov;Collins.Jolynn@epamail.epa.gov[]; ollins.Jolynn@epamail.epa.gov[]
From: Belk.Ellen@epamail.epa.gov
Sent: Tue 2/12/2013 2:43:07 PM
Subject: TX RH: Conference Call with Environ Cancelled Today and Rescheduled for Next Week

Good morning,
I just spoke with Erik, and he requested that this meeting be cancelled for today, and rescheduled for next week at the same time.
I will send out a schedule change notification in a few minutes.
Best regards,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

To: CN=Patrick Garbart/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
Bcc: CN=Guy Donaldson/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 2/12/2013 2:48:12 PM
Subject: Fw: TX RH: Conference Call with Environ Cancelled Today and Rescheduled for Next Week

Patrick,

I have cancelled our meeting today at 1 pm in the Pine Tree.

Please reserve a room for us on the 6th floor (preference in this order, Pine Tree, Cypress Tree, Pecan Tree) for us next Tues February 20 form 1 - 2 pm.

Thank you,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

----- Forwarded by Ellen Belk/R6/USEPA/US on 02/12/2013 08:46 AM -----

From: Belk.Ellen@epamail.epa.gov
To: Snyder.Erik@epamail.epa.gov, gyarwood@environcorp.com, Feldman.Michael@epamail.epa.gov, snw@rti.org, unopmongcol@environcorp.com
Cc: Kordzi.Joe@epamail.epa.gov, Schoellkopf.Lynde@epamail.epa.gov
Date: 02/12/2013 08:43 AM
Subject: TX RH: Conference Call with Environ Cancelled Today and Rescheduled for Next Week

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belk.ellen@epa.gov
(214) 665-2164

To: CN=Patrick Garbart/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 2/12/2013 3:01:20 PM
Subject: Re: Fw: TX RH: Conference Call with Environ Cancelled Today and Rescheduled for Next Week

Oh! Tues Feb 19th! Thanks!

From: Patrick Garbart/R6/USEPA/US
To: Ellen Belk/R6/USEPA/US@EPA
Date: 02/12/2013 08:56 AM
Subject: Re: Fw: TX RH: Conference Call with Environ Cancelled Today and Rescheduled for Next Week

Ellen,

When you say "next Tuesday", do you mean Tuesday, February 19th or Wednesday, February 20th?

From: Ellen Belk/R6/USEPA/US
To: Patrick Garbart/R6/USEPA/US@EPA
Date: 02/12/2013 08:48 AM
Subject: Fw: TX RH: Conference Call with Environ Cancelled Today and Rescheduled for Next Week

Patrick,

I have cancelled our meeting today at 1 pm in the Pine Tree.

Please reserve a room for us on the 6th floor (preference in this order, Pine Tree, Cypress Tree, Pecan Tree) for us next Tues February 20 form 1 - 2 pm.

Thank you,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

----- Forwarded by Ellen Belk/R6/USEPA/US on 02/12/2013 08:46 AM -----

From: Belk.Ellen@epamail.epa.gov
To: Snyder.Erik@epamail.epa.gov, gyarwood@environcorp.com, Feldman.Michael@epamail.epa.gov, snw@rti.org, unopmongcol@environcorp.com
Cc: Kordzi.Joe@epamail.epa.gov, Schoellkopf.Lynde@epamail.epa.gov
Date: 02/12/2013 08:43 AM
Subject: TX RH: Conference Call with Environ Cancelled Today and Rescheduled for Next Week

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Ellen

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1445 Ross Avenue, Suite 1200
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(214) 665-2164

To: CN=Patrick Garbart/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
Bcc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 2/12/2013 3:21:49 PM
Subject: Re: Fw: TX RH: Conference Call with Environ Cancelled Today and Rescheduled for Next Week

Thanks

From: Patrick Garbart/R6/USEPA/US
To: Ellen Belk/R6/USEPA/US@EPA
Date: 02/12/2013 09:16 AM
Subject: Re: Fw: TX RH: Conference Call with Environ Cancelled Today and Rescheduled for Next Week

Ellen,

I'm scheduling you in for Tuesday, February 19th, 1-2pm, Cypress Tree room. You should see the new reservation posted tomorrow morning.

From: Ellen Belk/R6/USEPA/US
To: Patrick Garbart/R6/USEPA/US@EPA
Date: 02/12/2013 09:01 AM
Subject: Re: Fw: TX RH: Conference Call with Environ Cancelled Today and Rescheduled for Next Week

Oh! Tues Feb 19th! Thanks!

From: Patrick Garbart/R6/USEPA/US
To: Ellen Belk/R6/USEPA/US@EPA
Date: 02/12/2013 08:56 AM
Subject: Re: Fw: TX RH: Conference Call with Environ Cancelled Today and Rescheduled for Next Week

Ellen,

When you say "next Tuesday", do you mean Tuesday, February 19th or Wednesday, February 20th?

From: Ellen Belk/R6/USEPA/US
To: Patrick Garbart/R6/USEPA/US@EPA
Date: 02/12/2013 08:48 AM
Subject: Fw: TX RH: Conference Call with Environ Cancelled Today and Rescheduled for Next Week

Patrick,

I have cancelled our meeting today at 1 pm in the Pine Tree.

Please reserve a room for us on the 6th floor (preference in this order, Pine Tree, Cypress Tree, Pecan Tree) for us next Tues February 20 form 1 - 2 pm.

Thank you,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

----- Forwarded by Ellen Belk/R6/USEPA/US on 02/12/2013 08:46 AM -----

From: Belk.Ellen@epamail.epa.gov
To: Snyder.Erik@epamail.epa.gov, gyarwood@environcorp.com, Feldman.Michael@epamail.epa.gov, snw@rti.org, unopmongcol@environcorp.com
Cc: Kordzi.Joe@epamail.epa.gov, Schoellkopf.Lynde@epamail.epa.gov
Date: 02/12/2013 08:43 AM
Subject: TX RH: Conference Call with Environ Cancelled Today and Rescheduled for Next Week

Good morning,
I just spoke with Erik, and he requested that this meeting be cancelled for today, and rescheduled for next week at the same time.
I will send out a schedule change notification in a few minutes.
Best regards,
Ellen

Ellen Belk
Air Planning Section
EPA Region 6, 6PD-L
1445 Ross Avenue, Suite 1200
Dallas TX 75202-2733
belk.ellen@epa.gov
(214) 665-2164

To: Erik Snyder/R6/USEPA/US@EPA[]
From: Greg Yarwood
Sent: Tue 7/17/2012 7:53:26 PM
Subject: RE: Agenda: next conference call 7/17
snyder.erik@epa.gov

Works for Greg

From: Erik Snyder [mailto:Snyder.Erik@epamail.epa.gov]
Sent: Tuesday, July 17, 2012 12:24 PM
To: Uarporn Nopmongcol; Greg Yarwood
Cc: Ellen Belk; Joe Kordzi; Michael Feldman; snw@rti.org; Lynde Schoellkopf
Subject: Re: Agenda: next conference call 7/17

HI,

Sorry about missing the call today. Ellen passed along potential follow-up call times. Thursday at noon works for me. Let me know if that works and I will set things up. We can use the same teleconference numbers.

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

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To: Erik Snyder/R6/USEPA/US@EPA[]
From: Uarporn Nopmongcol
Sent: Tue 7/17/2012 9:15:07 PM
Subject: RE: Agenda: next conference call 7/17

Erik,

Thursday works for me. So it's 10 am Pacific?

Ou

From: Erik Snyder [mailto:Snyder.Erik@epamail.epa.gov]
Sent: Tuesday, July 17, 2012 12:24 PM
To: Uarporn Nopmongcol; Greg Yarwood
Cc: Ellen Belk; Joe Kordzi; Michael Feldman; snw@rti.org; Lynde Schoellkopf
Subject: Re: Agenda: next conference call 7/17

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To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Joe Kordzi/OU=R6/O=USEPA/C=US
Sent: Tue 8/14/2012 1:03:39 PM
Subject: Re: Environ call today

fine w/ me

Regards,

Joe

" ... and miles to go before I sleep."
-- Robert Frost

From: Erik Snyder/R6/USEPA/US
To: Ellen Belk/R6/USEPA/US@EPA
Cc: Michael Feldman/R6/USEPA/US@EPA, Joe Kordzi/R6/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA
Date: 08/14/2012 07:35 AM
Subject: Environ call today

Hi,

I've been busy with the ozone issues and other things and have not gotten far compared to last week, so I was thinking of canceling today's call with Environ/RTI. Any objections or issues that people need to cover today? We still don't have a CSAPR ruling.

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US
Sent: Tue 8/14/2012 2:10:25 PM
Subject: Re: Environ call today

me too! fine with me!
Lynde Jones Schoellkopf
United States Environmental Protection Agency
Office of Regional Counsel - Region 6
1445 Ross Ave. (6-RC-M)
Dallas, TX 75202
(214) 665-7359

Confidentiality Warning:
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From: Erik Snyder/R6/USEPA/US
To: Ellen Belk/R6/USEPA/US@EPA
Cc: Michael Feldman/R6/USEPA/US@EPA, Joe Kordzi/R6/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA
Date: 08/14/2012 07:35 AM
Subject: Environ call today

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-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

To: Erik Snyder/R6/USEPA/US@EPA[]
Cc: Greg Yarwood [gyarwood@environcorp.com]
From: Uarporn Nopmongcol
Sent: Tue 10/9/2012 7:17:52 PM
Subject: RE: WA1-11 - CENRAP Meterorology

Erik,

Ex. 4 - CBI

We may as well get the full-year of data to be on a safe side. A full-year MM5 data for the 36km domain should fit on 1 GB drive.

It's important to note that there are two versions of CENRAP MM5. The more recent one was done by EPA, IEPA, and MDNR and that's what we need.

Ou

From: Erik Snyder [mailto:Snyder.Erik@epamail.epa.gov]
Sent: Tuesday, October 09, 2012 10:07 AM
To: Uarporn Nopmongcol
Cc: Ellen Belk; Greg Yarwood; Joe Kordzi; Lynde Schoellkopf; Michael Feldman; Wolf, Susan N.
Subject: Re: WA1-11 - CENRAP Meterorology

Ex. 4 - CBI

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

From: Uarporn Nopmongcol <unopmongcol@environcorp.com>
To: Erik Snyder/R6/USEPA/US@EPA, Michael Feldman/R6/USEPA/US@EPA, Ellen Belk/R6/USEPA/US@EPA, Joe Kordzi/R6/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA
Cc: Greg Yarwood <gyarwood@environcorp.com>, "Wolf, Susan N." <snw@rti.org>
Date: 10/04/2012 04:25 PM
Subject: WA1-11 - CENRAP Meterorology

All,

Ex. 4 - CBI

Please let me know your thoughts on this. If okay, we will obtain the MM5 data as soon as we can.

Ou

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To: Erik Snyder/R6/USEPA/US@EPA[]
From: Uarporn Nopmongcol
Sent: Thur 1/10/2013 7:42:19 PM
Subject: ENVIRON shipping address

Erik,

Here is our shipping address:

Attn: Uarporn Nopmongcol

773 San Marin Drive
Suite 2115
Novato, CA 94998

Tel: +1 415-8990700

Fax: +1 415-8990707

Ou

This message contains information that may be confidential, privileged or otherwise protected by law from disclosure. It is intended for the exclusive use of the Addressee(s). Unless you are the addressee or authorized agent of the addressee, you may not review, copy, distribute or disclose to anyone the message or any information contained within. If you have received this message in error, please contact the sender by electronic reply to email@environcorp.com and immediately delete all copies of the message.

To: Erik Snyder/R6/USEPA/US@EPA[]
From: Uarporn Nopmongcol
Sent: Tue 1/15/2013 9:39:56 PM
Subject: RE: ENVIRON shipping address
snyder.erik@epa.gov
unopmongcol@environcorp.com
email@environcorp.com

We just received the drive. Thanks, Erik.

Ou

From: Snyder.Erik@epamail.epa.gov [mailto:Snyder.Erik@epamail.epa.gov]
Sent: Tuesday, January 15, 2013 6:08 AM
To: Uarporn Nopmongcol
Subject: Re: ENVIRON shipping address

I shipped the drive and it should be delivered today. Fed Ex tracking # is 8022 9534 9466.

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

From: Uarporn Nopmongcol <unopmongcol@environcorp.com>
To: Erik Snyder/R6/USEPA/US@EPA
Date: 01/10/2013 01:42 PM
Subject: ENVIRON shipping address

Erik,

Here is our shipping address:

Attn: Uarporn Nopmongcol
773 San Marin Drive
Suite 2115
Novato, CA 94998

Tel: +1 415-8990700
Fax: +1 415-8990707

Ou

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To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;gyarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; yarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; nw@rti.org;unopmongcol@environcorp.com[]; nopmongcol@environcorp.com[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 2/5/2013 7:25:57 PM
Subject: Invitation: TX RH: Conference Call with Environ Ex. 6 - Personal Privacy
Ex. 6 - Personal Privacy Feb 12 01:00 PM CST in R6-ConfRm-PineTree-06O15/R6 – 06th Floor@EPA)

To: Erik Snyder/R6/USEPA/US@EPA[]
From: Uarporn Nopmongcol
Sent: Thur 2/14/2013 6:34:24 PM
Subject: Address
[IMAGE]

Erik,

We have made a copy of the 2002 CAMx simulation results. What is the address we should use to ship a hard drive to you?

Ou

[IMAGE]

Uarporn Nopmongcol | Manager

ENVIRON International Corporation
773 San Marin Drive | Suite 2115

Novato, CA 94998
T: +1 415 899 0700 | F: +1 415 899 0707

unopmongcol@environcorp.com

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********** ATTACHMENT NOT DELIVERED **********

This Email message contained an attachment named
image001.jpg
which may be a computer program. This attached computer program could contain a computer virus which could cause harm to EPA's computers, network, and data. The attachment has been deleted.

This was done to limit the distribution of computer viruses introduced into the EPA network. EPA is deleting all computer program attachments sent from the Internet into the agency via Email.

If the message sender is known and the attachment was legitimate, you should contact the sender and request that they rename the file name

extension and resend the Email with the renamed attachment. After receiving the revised Email, containing the renamed attachment, you can rename the file extension to its correct name.

For further information, please contact the EPA Call Center at (866) 411-4EPA (4372). The TDD number is (866) 489-4900.

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********** ATTACHMENT NOT DELIVERED **********

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 4:02:36 PM
Subject: TX RH: Meeting with Environ Followed By Meeting with RTI

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]
Cc: []
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 3:16:07 PM
Subject: TX RH: Meeting with Environ and then with RTI

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 3:21:21 PM
Subject: TX RH: Meeting with Environ

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 7/10/2012 4:00:18 PM
Subject: TX RH: Meeting with Environ

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;gyarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; yarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; nw@rti.org;unopmongcol@environcorp.com[]; nopmongcol@environcorp.com[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Wed 9/26/2012 12:56:03 PM
Subject: TX RH: Meeting with Environ

From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Wed 10/3/2012 4:52:03 PM
Subject: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;gyarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; yarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; nw@rti.org;unopmongcol@environcorp.com[]; nopmongcol@environcorp.com[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Thur 10/18/2012 3:07:15 PM
Subject: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;gyarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; yarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; nw@rti.org;unopmongcol@environcorp.com[]; nopmongcol@environcorp.com[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Thur 12/6/2012 1:27:13 PM
Subject: Rescheduled: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy** (Dec 13 02:00 PM CST in Brown Pelican - 09.O02/R6 - 09th Floor@EPA)

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;gyarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; yarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; nw@rti.org;unopmongcol@environcorp.com[]; nopmongcol@environcorp.com[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Tue 1/8/2013 9:25:53 PM
Subject: Invitation: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy** Ex. 6 - Personal Privacy (Jan 10 01:00 PM CST in Oklahoma City - 07.O15/R6 - 07th Floor@EPA)

To: CN=Erik Snyder/OU=R6/O=USEPA/C=US@EPA;gyarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; yarwood@environcorp.com;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;unopmongcol@environcorp.com[]; nw@rti.org;unopmongcol@environcorp.com[]; nopmongcol@environcorp.com[]
Cc: CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
From: CN=Ellen Belk/OU=R6/O=USEPA/C=US
Sent: Thur 1/10/2013 7:43:12 PM
Subject: TX RH: Conference Call with Environ **Ex. 6 - Personal Privacy**

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: gyarwood@environcorp.com;unopmongcol@environcorp.com;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; nopmongcol@environcorp.com;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA[]
Bcc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 7/17/2012 1:50:54 PM
Subject: Environ call

Hi,

Apologize for the late notice. After a meeting yesterday afternoon, I am having to go to a meeting with representatives of Wise county today and will probably not be back for the call at 1. Michael is out sick,

Ex. 4 - CBI

Thanks,
Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

To: Uarporn Nopmongcol [unopmongcol@environcorp.com]; yarwood@environcorp.com[]
Cc: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"snw@rti.org" [snw@rti.org]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"snw@rti.org" [snw@rti.org]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"snw@rti.org" [snw@rti.org]; snw@rti.org" [snw@rti.org]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
Bcc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 7/17/2012 7:24:15 PM
Subject: Re: Agenda: next conference call 7/17

HI,

Sorry about missing the call today. Ellen passed along potential follow-up call times. Thursday at noon works for me. Let me know if that works and I will set things up. We can use the same teleconference numbers.

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

To: Uarporn Nopmongcol [unopmongcol@environcorp.com]
Cc: []
Bcc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Thur 7/19/2012 4:45:16 PM
Subject: RE: Agenda: next conference call 7/17

Yes. Sorry for the delay. Thought I sent something the other day but my system locked up soon after I sent the email.

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

From: Uarporn Nopmongcol <unopmongcol@environcorp.com>
To: Erik Snyder/R6/USEPA/US@EPA
Date: 07/17/2012 04:15 PM
Subject: RE: Agenda: next conference call 7/17

Erik,

Thursday works for me. So it's 10 am Pacific?
Ou

From: Erik Snyder [mailto:Snyder.Erik@epamail.epa.gov]
Sent: Tuesday, July 17, 2012 12:24 PM
To: Uarporn Nopmongcol; Greg Yarwood
Cc: Ellen Belk; Joe Kordzi; Michael Feldman; snw@rti.org; Lynde Schoellkopf
Subject: Re: Agenda: next conference call 7/17

HI,

Sorry about missing the call today. Ellen passed along potential follow-up call times. Thursday at noon works for me. Let me know if that works and I will set things up. We can use the same teleconference numbers.

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

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To: gyarwood@environcorp.com[]
Cc: unopmongcol@environcorp.com;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;"Wolf, Susan N. (snw@rti.org)" [snw@rti.org]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;"Wolf, Susan N. (snw@rti.org)" [snw@rti.org]; Wolf, Susan N. (snw@rti.org)" [snw@rti.org]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
Bcc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 7/24/2012 1:37:20 PM
Subject: meeting today

Hi,

I wanted to touch base about today's meeting. We are still working on things here and don't have a lot of updates at this point. Michael is out on travel for a couple of days, so it would be a small crew here. I think we should cancel the call today and we should have a number of things wrapped up by the scheduled call time next Tuesday.

Thanks,
Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

To: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA[]
Cc: CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
Bcc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 8/14/2012 12:35:51 PM
Subject: Environ call today

Hi,

I've been busy with the ozone issues and other things and have not gotten far compared to last week, so I was thinking of canceling today's call with Environ/RTI. Any objections or issues that people need to cover today? We still don't have a CSAPR ruling.

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

To: gyarwood@environcorp.com;unopmongcol@environcorp.com;"snw@rti.org"[]; nopmongcol@environcorp.com;"snw@rti.org"[]; snw@rti.org"[]
Cc: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA[]
Bcc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 8/14/2012 2:23:10 PM
Subject: Cancel call today

Hi,

We have been busy on other projects and have not made much progress on our tasks, so wanted to cancel the technical call today. I believe Ellen may still want to talk some contract issues with RTI, but we can have the next technical call on Tuesday next week.

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

To: "Wolf, Susan N." [snw@rti.org]
Cc: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;"Greg Yarwood" [gyarwood@environcorp.com]; Greg Yarwood" [gyarwood@environcorp.com]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Uarporn Nopmongcol" [unopmongcol@environcorp.com]; Uarporn Nopmongcol" [unopmongcol@environcorp.com]
Bcc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 8/28/2012 6:30:14 PM
Subject: Re: WA1-11 - 8/28 call?
feldman.michael@epa.gov

Apologies. I thought Ellen sent an email to everyone canceling the call. It must have been just a cancelation on our Lotus Notes calendar that did not get circulated to you all. Sorry for the confusion. We are trying to determine internally how to move forward on Texas with the recent CSAPR modeling.

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

From: "Wolf, Susan N." <snw@rti.org>
To: Michael Feldman/R6/USEPA/US@EPA
Cc: Ellen Belk/R6/USEPA/US@EPA, Erik Snyder/R6/USEPA/US@EPA, "Greg Yarwood" <gyarwood@environcorp.com>, Joe Kordzi/R6/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA, "Uarporn Nopmongcol" <unopmongcol@environcorp.com>
Date: 08/28/2012 01:25 PM
Subject: WA1-11 - 8/28 call?

Hi all,
Has today's call been cancelled? Please let us know. Thanks.
-Susan

From: Michael Feldman [mailto:Feldman.Michael@epamail.epa.gov]
Sent: Tuesday, August 21, 2012 10:28 AM
To: Uarporn Nopmongcol
Cc: Ellen Belk; Erik Snyder; Greg Yarwood; Joe Kordzi; Wolf, Susan N.; Lynde Schoellkopf
Subject: Call with Environ 8/21

I suggest that we cancel today's call. A number of people are out of the office today or tied up with other

things. We can reschedule for later this week or wait until next week. Please let me know if there are any objections or issues that need to be discussed today.

Thank you,

Michael Feldman
Environmental Engineer
Air Planning Section
U.S. EPA Region 6, 6PD-L
Phone: 214-665-9793
feldman.michael@epa.gov

To: Uarporn Nopmongcol [unopmongcol@environcorp.com]
Cc: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;Greg Yarwood [gyarwood@environcorp.com]; reg Yarwood [gyarwood@environcorp.com]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Wolf, Susan N." [snw@rti.org]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Wolf, Susan N." [snw@rti.org]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Wolf, Susan N." [snw@rti.org]; Wolf, Susan N." [snw@rti.org]
Bcc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 10/9/2012 5:06:34 PM
Subject: Re: WA1-11 - CENRAP Meterorology

We can talk on the call, but I am working on getting the data. It may take a week or more to get to you, but I should have it by the end of the week. **Ex. 4 - CBI**

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

From: Uarporn Nopmongcol <unopmongcol@environcorp.com>
To: Erik Snyder/R6/USEPA/US@EPA, Michael Feldman/R6/USEPA/US@EPA, Ellen Belk/R6/USEPA/US@EPA, Joe Kordzi/R6/USEPA/US@EPA, Lynde Schoellkopf/R6/USEPA/US@EPA
Cc: Greg Yarwood <gyarwood@environcorp.com>, "Wolf, Susan N." <snw@rti.org>
Date: 10/04/2012 04:25 PM
Subject: WA1-11 - CENRAP Meterorology

All,

Ex. 4 - CBI

Ou

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To: Uarporn Nopmongcol [unopmongcol@environcorp.com]
Cc: CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;Greg Yarwood [gyarwood@environcorp.com]; reg Yarwood [gyarwood@environcorp.com]; N=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;"Wolf, Susan N." [snw@rti.org]; Wolf, Susan N." [snw@rti.org]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA[]
Bcc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 10/9/2012 5:17:07 PM
Subject: Re: NORTH TEXAS CEMENT CO.
Table 9-3.pdf
TRV - 1 Ash Grove Texas LP (amendment).doc
CND - 1 Ash Grove Texas LP (amendment).doc
Hotspot

Ex. 4 - CBI

Let me know if you have further questions or need anything else.

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

From: Uarporn Nopmongcol <unopmongcol@environcorp.com>
To: Erik Snyder/R6/USEPA/US@EPA, Michael Feldman/R6/USEPA/US@EPA
Cc: Greg Yarwood <gyarwood@environcorp.com>, "Wolf, Susan N." <snw@rti.org>, Ellen Belk/R6/USEPA/US@EPA
Date: 07/31/2012 02:10 PM
Subject: NORTH TEXAS CEMENT CO.

Erik, Michael,

I attached a file containing toxic records for North Texas Cement Plant (listed as ASHGROVE) from the MATS2016 inventory.
Original Filename: ptinv_ptnonipm_2016cr_hap2005v2_revised_06oct2010_v0_orl.txt
The toxic emissions are quite small but they are there in the inventory.

Ex. 4 - CBI

Ex. 4 - CBI

Hope this helps.
Ou

Uarporn Nopmongcol | Manager
ENVIRON International Corporation
773 San Marin Drive | Suite 2115
Novato, CA 94998
T: +1 415 899 0700 | F: +1 415 899 0707
unopmongcol@environcorp.com

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********** ATTACHMENT NOT DELIVERED **********

This Email message contained an attachment named
image001.jpg
which may be a computer program. This attached computer program could contain a computer virus which could cause harm to EPA's computers, network, and data. The attachment has been deleted.

This was done to limit the distribution of computer viruses introduced into the EPA network. EPA is deleting all computer program attachments sent from the Internet into the agency via Email.

If the message sender is known and the attachment was legitimate, you should contact the sender and request that they rename the file name extension and resend the Email with the renamed attachment. After receiving the revised Email, containing the renamed attachment, you can rename the file extension to its correct name.

For further information, please contact the EPA Call Center at (866) 411-4EPA (4372). The TDD number is (866) 489-4900.

********** ATTACHMENT NOT DELIVERED **********

[attachment "ashgrove.txt" deleted by Erik Snyder/R6/USEPA/US]

Permit Amendment
Source Analysis & Technical Review

Company	**Ash Grove Texas, L.P.**	Permit Number	**1**
City	**Midlothian**	Project Number	**173601**
County	**Ellis**	Account Number	**ED-0034-O**
Project Type	**Amend**	Regulated Entity Number	**RN100225978**
Project Reviewer	**Mr. Tan Nguyen, P.E.**	Customer Reference Number	**CN600132161**
Site Name	**Cement Manufacturing Facility**		

Project Overview

Ash Grove Texas, L.P. (Ash Grove) owns and operates a portland cement manufacturing plant in Midlothian, Texas. Ash Grove submitted a permit amendment application on January 17, 2012. The amendment proposes to decommission Kilns 1 and 2 and reconstruct Kiln 3 from a 1,080 ton per day (tpd) clinker wet process kiln to a preheater/precalciner kiln system with an average production rate of 2,600 tpd clinker. With the project, the plant-wide maximum annual clinker production will drop from 1,182,600 tons per year (tpy) to 949,000 tpy. Other new sources to be constructed include a clinker cooler, a clinker cooler discharge belt, two solid fuel mill feed belts, a solid fuel mill, two pulverized fuel bins and an emergency generator. Additionally, various permits by rule (PBRs), standard exemptions (SEs), and standard permits (SPs) are being incorporated by consolidation or reference.

Emission Summary

Air Contaminant	Current Allowable Emission Rates (tpy)	Proposed Allowable Emission Rates (tpy)	Change in Allowable Emission Rates (tpy)
PM	805.24	301.64	-503.60
PM_{10}	682.56	279.86	-402.70
$PM_{2.5}$	1.21[a]	169.35	168.14
VOC	122.4	69.52	-52.88
NO_X	9528	721.39	-8806.61
CO	1314	587.59	-726.41
SO_2	9198	190.04	-9007.96
H_2SO_4	--[b]	38.22	38.22
Pb	--[b]	0.04	0.04
Hg	--[b]	0.01	0.01
NH_3	--	78.03[c]	78.03

(a) $PM_{2.5}$ was not speciated for almost all EPNs in the previously issued MAERT because it was not required at the time those sources were permitted. This project is expected to result in a decrease in $PM_{2.5}$ since PM is decreasing.
(b) These emissions are not in the current permit but they are inherent in the process and have always existed at the plant site. These emissions are expected to decrease as a result of this project.
(c) SNCR was authorized under SP Registration No. 80048; this registration is being incorporated by consolidation into the NSR permit.

Compliance History Evaluation - 30 TAC Chapter 60 Rules

A compliance history report was reviewed on:	**05/16/2012**
Compliance period:	**01/17/2007 - 01/17/2012**
Site rating & classification:	**1.63 - average**
Company rating & classification:	**2.39 - average**
If the rating is 40<RATING<45, what was the outcome, if any, based on the findings in the formal report:	**n/a**
Has the permit changed on the basis of the compliance history or rating?	**No**

Public Notice Information - 30 TAC Chapter 39 Rules

Rule Citation	Requirement	
39.403	Is Public Notice Required?	**No**

Permit Amendment
Source Analysis & Technical Review

Regulated Entity No. RN100225978

If no, give reason:	**This project will not result in a net emissions increase for any pollutants.**

Construction Permit & Amendment Requirements - 30 TAC Chapter 116 Rules

Rule Citation	Requirement	
116.111(a)(2)(G)	Is the facility expected to perform as represented in the application?	**Yes**
116.111(a)(2)(A)(i)	Are emissions from this facility expected to comply with all TCEQ air quality Rules & Regulations, and the intent of the Texas Clean Air Act?	**Yes**
116.111(a)(2)(B)	Emissions will be measured using the following method:	**Existing kilns: NOx, CO, and SO2 CEMS; Reconstructed kiln: NOx, CO, SO2, PM, THC, and Hg CEMS.**
	Comments on emission verification:	
116.111(a)(2)(D)	Subject to NSPS?	**Yes**
	Subparts **A, F, Y, OOO, and IIII**	
116.111(a)(2)(E)	Subject to NESHAP?	**No**
	Subparts	
116.111(a)(2)(F)	Subject to NESHAP (MACT) for source categories?	**Yes**
	Subparts **A, LLL, and ZZZZ**	
116.111(a)(2)(H)	Is nonattainment review required?	**No**
	Is the site located in a nonattainment area?	**Yes**
	Is the site a federal major source for a nonattainment pollutant?	**Yes**
	Is the project a federal major source for a nonattainment pollutant by itself?	**No**
	Is the project a federal major modification for a nonattainment pollutant?	**No**
	Did the project emission increases for nonattainment pollutant minus the two-year average actual emissions trigger netting?	**Yes**
	Is the contemporaneous increase significant?	**No**
	If the contemporaneous increase is significant a nonattainment review is required.	
116.111(a)(2)(I)	Is PSD applicable?	**No**
	Is the site a federal major source (100/250 tons/yr)?	**Yes**
	Is the project a federal major source by itself?	**No**
	Is the project a federal major modification?	**No**
	Did project emission increases, without decreases, for pollutant of concern, minus the two-year average actual emissions trigger netting?	**Yes**
	Was the contemporaneous increase significant?	**No**
	If yes, explain:	
	Is the change excluded by 40 CFR 52.21(b)(2)(iii)?	**No**
	If yes, explain:	
116.111(a)(2)(L)	Is Mass Emissions Cap and Trade applicable to the new or modified facilities?	**No**
	If yes, did the proposed facility, group of facilities, or account obtain allowances to operate:	**n/a**
116.140 - 141	Permit Fee: $ **75,000** Fee certification:	**Yes**

Title V Applicability - 30 TAC Chapter 122 Rules

Rule Citation	Requirement	
122.10(13)(A)	Is the site a major source under FCAA Section 112(b)?	**No**
	Does the site emit 10 tons or more of any single HAP?	**No**
	Does the site emit 25 tons or more of a combination?	**No**
122.10(13)(C)	Does the site emit 100 tons or more of any air pollutant?	**Yes**
122.10(13)(D)	Is the site a non-attainment major source?	**Yes**
122.602	**Periodic Monitoring (PM) applicability:**	

Permit Amendment
Source Analysis & Technical Review

	PM is applicable since the site is subject to 30 TAC Chapter 122 and currently holds Title V Permit No. O1054. The NSR permit specifies the following Periodic Monitoring requirements to demonstrate compliance: weekly visible emission/opacity observations for applicable EPNs, quarterly property line visible emission observations, monthly sorbent or stain tube testing for ammonia or alternately use an ammonia CEMS for the kilns, and annual fuel sulfur analysis or recordkeeping of vendor fuel specifications for the emergency diesel generator.
122.604	**Compliance Assurance Monitoring (CAM) applicability:** CAM is potentially applicable since the site is subject to 30 TAC Chapter 122. The existing kilns use ESPs and SNCR and the reconstructed kiln will use a baghouse and SNCR to control PM and NOx emissions, respectively. Also, the kilns each have a pre-control potential-to-emit (PTE) for PM and NOx emissions greater than the associated major source thresholds; therefore, CAM is applicable to these emission sources and the specific pollutants. The NSR permit requires PM and NOx CEMS to demonstrate compliance. The permit also requires CEMS for other pollutants, however, these are not specific to CAM. EPNs 3, 7, 5, 9, 10, 11, and 5-2A for the clinker coolers, finish mills, cement silos, and silo No. 3 each have the pre-control PTE for PM emissions greater than the major source threshold and are equipped with baghouses to control PM emissions. Therefore, CAM is applicable and the NSR permit requires daily visible emission/opacity observations to demonstrate compliance.

Request for Comments

Received From	Program/Area Name	Reviewed By	Comments
Region:	**4**	**Luke Jones/Sam Madison**	**The regional office had comments on recordkeeping and sampling requirements.**
City:	**Midlothian**		**n/a**
County:	**Ellis**		**n/a**
Toxicology:			**n/a**
Compliance:			**n/a**
Legal:			**n/a**
Comment resolution and/or unresolved issues:	**The draft permit was revised to add recordkeeping requirements and revise/clarify sampling requirements as requested by the regional office.**		

Process/Project Description

The Ash Grove Midlothian plant currently has three existing wet kilns. For a wet kiln, raw materials are mixed with water, and the resulting slurry is fed directly to the kiln. Ash Grove is proposing to decommission Kilns 1 and 2 and reconstruct Kiln 3 from a 1,080 tpd clinker wet process kiln to a preheater/precalciner kiln system with an average production rate of 2,600 tpd clinker. The reconstruction primarily involves reducing the existing Kiln 3 length by half and adding a preheater/precalciner tower.

Ash Grove will continue to create raw material slurry using the existing equipment. However, rather than feeding the slurry directly to the reconstructed kiln, the slurry will be fed into a new dryer/crusher where the slurry will be flash dried by hot kiln and precalciner gases. The flash dried material will be crushed and preheated as it passes through the dryer/crusher and into a preheater cyclone. The preheater cyclone will separate the preheated kiln feed from the gas that will exhaust through a new baghouse and stack. The preheated material will then enter the precalciner to be calcined. The hot gases leaving the kiln as well as gases generated from fuel combustion in the precalciner will provide the heat to the precalciner. A cyclone will separate the calcined kiln feed from the hot kiln and precalciner gases and send the kiln feed to the kiln. The kiln and precalciner gases will then be routed to the dryer/crusher to provide the heat source for the flash drying of the slurry. The "kiln system" refers to the entire pyroprocess comprised of the kiln, preheater, precalciner, and dryer/crusher. According to Ash Grove, there is only one other kiln system in the country that is configured similar to the new kiln system that Ash Grove is proposing - the kiln system at the Buzzi Unicem plant in Greencastle, Indiana. The reconstructed kiln will be capable of burning the same fuels that the existing wet kilns are capable of burning, including coal, petroleum coke, natural gas, fuel oil, used oil, tire derived fuel (TDF), and woodchips.

While the majority of the kiln gas will be routed directly to the precalciner, some gas will be diverted to a new bypass baghouse. Dust removed from the bypass baghouse will be transferred to the existing cement kiln dust (CKD) handling system. The exhaust from the bypass dust collector will rejoin the kiln exhaust entering the dryer/crusher.

The precalciner will have the ability to combust coal, petroleum coke, natural gas, TDF, and woodchips. Further, the precalciner can be fueled by tires, where the tires will be combusted in a "hot disk reactor". The combustion of fuel in the precalciner will generate significant heat that together with the heat in the kiln gas will serve to calcine the kiln feed coming from the preheater cyclone. The heat that remains in the kiln and precalciner gases is used to flash dry the slurry in the dryer/crusher, and further preheat the kiln feed that has been flash dried.

In addition to the main baghouse for particulate matter (PM) control, other emission reduction measures have been designed into the reconstructed kiln system. Dry low-NOx burners (DLN) and Selective Noncatalytic Reduction (SNCR) will be used to reduce NOx emissions from the kiln, and activated carbon injection (ACI) or other sorbent may be used to reduce mercury emissions from the kiln. Further, the dryer/crusher is being designed to be in-line with the reconstructed kiln. Constructing the kiln and dryer/crusher as an in-line system allows the kiln exhaust to pass through the dryer/crusher to provide a heat source to flash dry the slurry (in addition to heat generated from combustion in the precalciner). This heat recovery mechanism reduces the kiln system's fuel requirements, thus, lowers combustion emissions. Further, it allows any sulfur compounds or acid gases in the kiln exhaust to be absorbed by the kiln feed.

Clinker produced in the reconstructed kiln will be transferred to a new clinker cooler where it will be cooled using ambient air. Clinker leaving the new clinker cooler will be handled by a new conveyor belt (FIN 3-4H) that will transport the material to existing material handling equipment. When the solid fuel mill is operating, the hot (ambient) air from the clinker cooler will pass through a new cyclone that will capture any coarse clinker material entrained in the air and combine it with the product from the clinker cooler. The hot air will then route to a new indirect fired solid fuel mill, where the heat in the air will dry the coal (and other applicable solid fuels) in the mill. When the solid fuel mill is not operating, the cooler exhaust will pass through a process dust collector and heat exchanger (existing) and be recirculated back to the clinker cooler. The material collected in the process dust collector will be combined with the product from the clinker cooler. Some recirculation of the clinker cooler exhaust through the process dust collector and heat exchanger may also occur when the solid fuel mill is operating, although at a significantly lower rate.

The pulverized fuel from the mill will be transferred with the exhaust from the solid fuel mill to a new baghouse. The baghouse will separate the pulverized coal (and other applicable solid fuels) from the exhaust air and the pulverized solid fuel will be routed to the two new pulverized fuel bins. Each bin has a vent with a small dedusting filter. Pulverized solid fuel from the new bins will be conveyed to the kiln and the precalciner burner pipes. As Ash Grove is uncertain on the VOC emission rate from the solid fuel mill, Ash Grove will install a regenerative thermal oxidizer (RTO) on the solid fuel mill to maintain VOC emissions from the project to less than the calculated potential emissions.

In order to ensure adequate drying of the solid fuel, a natural gas fired hot gas generator (15 MMBtu/hr) will be used to make hot gas that can supplement the heat in the clinker cooler air on an as needed basis or that can be used as the sole heat source for the solid fuel drying if the kiln and clinker cooler are not operating at adequate temperature to dry the solid fuel. Any clinker cooler gas that cannot be sent to the solid fuel mill will be diverted back to the clinker cooler heat exchanger, cooled and used to cool the hot clinker. Due to the design of the clinker cooling system, there will not be a dedicated clinker cooler exhaust stack emission point.

After the new clinker cooler belt, FIN 3-4H, the clinker produced in the reconstructed kiln will be handled using existing equipment. Since both raw materials and product will be handled using existing equipment, the changes to the plant are limited to construction of the converted preheater/precalciner kiln system, a clinker cooler (and associated conveyor belt), and a solid fuel mill. Two new belt conveyors will be installed to transfer coal and other applicable solid fuels from the existing Solid Fuel Day Tank (FIN 6-9) to the new solid fuel mill. Both of the conveyors will utilize baghouses for dust control. For emergency situations, a 400 kW output (473 kW input, 635 hp input, 536 hp output) emergency generator will be installed. It will only operate during critical times, such as power outages, to run the auxiliary kiln drive, burner pipe emergency fan, and other sensitive equipment and will replace old units currently in use at the plant.

A summary of the new emission sources to be added (or reconstructed in the case of Kiln 3) as a result of the Kiln 3 reconstruction project is as follows:

- Kiln 3 (part of kiln system) – FIN 431.KL100, EPN 331.SK410
- Dryer/Crusher (part of kiln system) – FIN 411.DC100, EPN 331.SK410
- Precalciner (part of kiln system) – FIN 421.CI400, EPN 331.SK410
- Preheater Cyclone (part of kiln system) – FIN 421.CN010, EPN 331.SK410
- Precalciner Cyclone (part of kiln system) – FIN 421.CN110, EPN 331.SK410
- Clinker Cooler – FIN 441.CC100, EPN 461.SK405

- Solid Fuel Mill – FIN 461.RM100, EPN 461.SK405
- Hot Gas Generator – FIN 461.HG700, EPN 461.SK405
- Clinker Cooler Belt – FIN 3-4H, EPN F-MB2
- Solid Fuel Transfer Solid Fuel Day Tank to BC050 – FIN 6-15A/B/C, EPN 6-15
- Solid Fuel Transfer BC050 to BC080 – FIN 461.BC050, EPN 461.BF020
- Solid Fuel Transfer BC080 to Solid Fuel Mill – FIN 461.BC080, EPN 461.BF040
- Pulverized Fuel Bin A – FIN 461.BI550A, EPN 461.BF560A
- Pulverized Fuel Bin B – FIN 461.BI550B, EPN 461.BF560B
- Emergency Diesel Generator – FIN EG1, EPN EG1.SK1

A summary of existing equipment associated with the Kiln 3 reconstruction project is as follows:

- Slag/Mill Scale Silo 3 Weigh Belt – FIN 1-16A, EPA 1-16A1 and 1-16A2

The existing weigh belt listed above is the conveyor that currently sends raw materials, such as slag, to the existing Kiln 3. Following the Kiln 3 reconstruction project, the conveyor will continue to handle raw material or product, but the amount handled could be greater than it is now.

A summary of equipment to be decommissioned as a result of the Kiln 3 reconstruction project is as follows:

- Kiln 1 and the associated electrostatic precipitator (ESP) (FIN 2-1, EPN 2)
- Kiln 2 and the associated ESP (FIN 2-2, EPN 6)
- Kiln 3 ESP (EPN 12)
- Kiln 1 Clinker Cooler (FIN 3-1, EPN 3)
- Kiln 2 Clinker Cooler (FIN 3-2, EPN 7)
- Kiln 3 Clinker Cooler (FIN 3-3, EPN 131)
- Kiln 1 Clinker Cooler Belt (FIN 3-4A, EPN F-MB22)
- Kiln 2 Clinker Cooler Belt (FIN 3-4B, EPN F-MB23)
- Kiln 3 Clinker Cooler Belt (FIN 3-4C, EPN F-MB24)
- Solid Fuel Mills 1, 2, and 3 (FIN 6-10A/B/C, EPN 6-10)
- Slag/Mill Scale Silo 1 (FIN 1-14, EPN 1-125)
- Slag/Mill Scale Silo 1 Weigh belt (FIN 1-14A, EPN 1-14A1, EPN 1-14A2)
- Slag/Mill Scale Silo 2 (FIN 1-15, EPN 1-126)
- Slag/Mill Scale Silo 2 Weigh Belt (FIN 1-15A, EPN 1-15A1, EPN 1-5A2)
- Kiln 1 Auxiliary Drive Engine (FIN 1-43, EPN 1-43)
- Kiln 2 Auxiliary Drive Engine (FIN 1-44, EPN 1-44)
- Kiln 3 Auxiliary Drive Engine (FIN 1-45, EPN 1-45)

Additionally, various permits by rule (PBRs), standard exemptions (SEs), and standard permits (SPs) are being incorporated by consolidation. They are as follows: (See BACT below for additional information.)

- PBR Registration No. 82608 (EPNs F-RM2, 1-29, 1-30, 1-31, 3-19 and F-RM4)
- PBR Registration No. 90808 (EPNs 6-11, 6-13, 6-14, and 6-12)
- PBR Registration No. 76379 (EPNs 6-1, 6-2, 6-3, 23, and 6-4D)
- PBR Registration No. 74145 (EPNs 3-15, F-RM1, F-RM2, 1-29, 1-30, and 1-31)
- SE 91 Registration No. 34329 (EPNs 10 and 11)
- SE 106 (APD-CERT 03/11/2005) (EPN 6-4C)
- SP Registration No. 74149 (EPN 3-15)
- SP Registration No. 80048 (EPNs 7-1-1, 7-1-3, 7-4, 7-5, 7-6, and 7-7)

PBR Registration No. 71845 (CKD Silo 3 and Pug Mill) is being incorporated by reference per the applicant's request since the authorized sources do not directly impact any permitted facilities.

Pollution Prevention, Sources, Controls and BACT- [30 TAC 116.111(a)(2)(C)]

Reconstructed No. 3 Cement Kiln (*kiln, dryer/crusher, precalciner, and preheater*), EPN 331.SK410

NOx
NSPS Subpart F limits emissions of NOx for new and reconstructed kilns to less than 1.5 lb/ton clinker, based on a 30-day rolling average. Ash Grove will comply with the NOx limit by using DLN (staged combustion) in combination with SNCR. SNCR is the most efficient NOx reduction technology demonstrated on U.S. cement kilns. A NOx limit of 1.5 lb/ton clinker (30-day rolling average), as required by NSPS Subpart F, is lower than the NOx BACT determinations made for other recently permitted kilns. Thus, using DLN in combination with SNCR to meet a limit of 1.5 lb/ton clinker (30-day rolling average) for NOx is BACT for the kiln system.

CO and VOC
CO and VOC emissions are generated as products of incomplete combustion and as a result of the decomposition of organic material in the kiln feed. There are add-on control devices such as oxidizers that can reduce emissions of CO and VOC. However, there are no kilns in the U.S. for which a BACT determination has resulted in the installation of these devices. Recent BACT determinations for CO and VOC have relied on good combustion practices as a means of limiting CO and VOC emissions. Ash Grove evaluated the economic feasibility of an RTO. The methodology specified in the EPA Air Pollution Control Cost Manual - Sixth Edition (EPA 452/B-02-001) was used to calculate the economic feasibility in annual $/ton pollutant removed. The resulting economic cost was $132,318/ton VOC controlled, $11,464/ton CO controlled, or $10,277/ton CO+VOC controlled. None of the costs are economically feasible. Since RTO is not cost effective, and recent BACT determinations have relied on good combustion practice, Ash Grove will use good combustion practices as BACT for CO (1.23 lb/ton clinker, 30-day rolling average) and VOC (0.138 lb/ton clinker, 12-month rolling period) for the kiln system.

$PM/PM_{10}/PM_{2.5}$
The new kiln system will be subject to both NSPS Subpart F and NESHAP Subpart LLL. The NSPS and NESHAP limit emissions of filterable PM for new and reconstructed kilns to 0.01 lb/ton clinker, based on a 30-day rolling average. This is an extremely low PM limit, resulting in potential filterable PM emissions from the new kiln system of less than 5 tpy. A baghouse is the most efficient control device for controlling filterable PM, as well as PM_{10} and $PM_{2.5}$. Ash Grove will install a baghouse to meet a limit of 0.01 lb/ton clinker for filterable $PM/PM_{10}/PM_{2.5}$, based as a 30-day rolling average, to comply with the NSPS and NESHAP limits. This is BACT for the kiln system.

SO_2 and H_2SO_4
NSPS Subpart F limits emissions of SO_2 for new and reconstructed kilns to less than 0.4 lb/ton clinker, based on a 30-day rolling average, or 90% control. This limit is lower than the SO_2 BACT determinations made for other similar kilns in Texas. Ash Grove will comply with the SO_2 limit by operating a dryer/crusher in line with the kiln. The dryer/crusher is part of the "preheat" portion of the overall preheater/precalciner kiln system, with the primary purpose of grinding, flash drying and preheating the wet kiln feed slurry using heat contained in the kiln and precalciner gases. While the primary purpose of the dryer/crusher is to heat, dry and grind the slurry, it also acts as an inherent scrubber for SO_2 and acid gases in the kiln exhaust (similar to the inherent scrubbing experienced in an in-line raw mill). Thus, meeting a limit of 0.4 lb/ton clinker (30-day rolling average) for SO_2 through process inherent scrubbing is BACT for the kiln system. A portion of the SO_2 generated in the process is converted to H_2SO_4. Therefore, limiting SO_2 emissions will also limit H_2SO_4 emissions, which is BACT.

Hg
NESHAP Subpart LLL limits emissions of Hg for new and reconstructed kilns to 21 lb/million tons clinker, based on a 30-day rolling average. This is a very low emission limit, and BACT for Hg has generally not been evaluated for previous similar kilns in Texas. Ash Grove will comply with the NESHAP limit by installing an activated carbon injection system or other sorbent system to control Hg emissions from the kiln. This is BACT.

NH_3
An alternative case specific specification (pursuant to 30 TAC 117.3125) for an ammonia emission limit of 35 ppm for the kilns was approved under a permit alteration issued on June 1, 2010. This is BACT and will apply to the reconstructed kiln.

<u>Clinker Cooler/ Solid Fuel Mill (EPN 461.SK405)/ Pulverized Fuel Bins (EPNs 461.BF560A and 461.BF560B)/ Solid Fuel Transfers (EPNs 461.BF020 and 461.BF040)/ Clinker Cooler Belt (EPN F-MB2)</u>

The new clinker cooler will not have a direct emission point; emissions will be routed to the solid fuel mill.

Emissions from the solid fuel mill stack and the two solid fuel transfer points preceding the solid fuel mill will be routed to baghouses that will control emissions of filterable PM for these sources to 0.01 gr/dscf. This is BACT.

Emissions from the pulverized fuel bins will be routed to dedusting filters that will control emissions of filterable PM for these sources to 0.01 gr/dscf. This is BACT.

Solid fuel from the exiting solid fuel day tank will be transferred to a new belt conveyor. The transfer will occur inside a well-enclosed building. The inherent moisture content of the fuel (> 7%) along with the well-enclosed building will control PM emissions to at least 90%. This is BACT.

Similarly, the new clinker cooler belt conveyor will transfer material to the existing clinker handling system in an enclosure and within a building to obtain at least 90% PM control. This is BACT.

Ash Grove does not have VOC data for the new solid fuel mill. Further, no BACT determinations have ever been made for VOC from solid fuel mills (i.e., coal mills). Ash Grove is estimating that the concentration of VOCs in the exhaust gas, resulting from the hot air drying the coal (and other applicable solid fuels), is 10 percent of the NESHAP standard for THCs for the kiln system. The NESHAP standard is 24 ppmvd at 7% oxygen. The actual predicted conditions for the kiln stack are 5.7% oxygen and 40.4% moisture, resulting in an actual stack THC concentration of 15.6 ppmv. This results in a concentration of 1.56 ppmv VOC for the solid fuel mill. Thus, Ash Grove is expecting to achieve a VOC concentration in the solid fuel mill exhaust of 1.56 ppmv or less. This is much less than the VOC limit that qualifies for an exemption from control requirements in 30 TAC Chapter 115, Subpart B, Division 2. This is BACT.

Hot Gas Generator

The hot gas generator will be fired with natural gas and operated with good combustion practices. NO_x emissions will be limited to 30 ppmvd corrected to 3 percent O_2. This is BACT.

Emergency Generator

The emergency generator will be fired with diesel containing no more than 15 ppm sulfur and will be certified to NSPS Subpart IIII Tier 3 standards. This is BACT.

PBR Sources Incorporated by Consolidation

EPN	Facility	BACT
6-2	Coal Unloading Conveyor Belt	Limited drop distance and high inherent moisture content (> 7%) and low emissions.
6-3	Drop from Coal Stacker to Stockpile	
6-4D	Stacker Pile Movement	
6-12	Reserve Solid Fuel Stockpile	
6-4C	Solid Fuel Unloading - Drop from Front End Loader to Stockpile	
6-11	Reserve Solid Fuel Transfer Point (at Main Stockpile)	
6-13	Reserve Solid Fuel Reclamation Transfer Point (at Reserve Stockpile)	
6-14	Reserve Solid Fuel Reclamation Transfer Point (at Main Stockpile)	
F-RM1	Raw Material Building (Transfer onto Limestone Inside Stockpile)	Building enclosure and limited drop distance and low emissions.
F-RM2	Raw Material Building (Limestone Feed Hopper/Incline Conveyor)	
F-RM4	Clinker Transfer to Inside Pile (RM Building)	
6-1	Railcar Unloading Hopper	
3-19	Clinker Transport Loading (outside pile)	Limited drop distance and low emissions (< 0.01 tpy PM).
3-15	Clinker Reclaim Conveyor No. 6 Baghouse	Emissions routed to fabric filter dust collector with an outlet grain loading of equal to or less than 0.01 gr/dscf.
1-29	Limestone Bin Dust Collector	
1-30	Limestone Transfer onto Finish Mill Collection Belt 1	

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1-31	Limestone Transfer onto Finish Mill Collection Belt 2	
23	Railcar Unloading Baghouse	
32	CKD Tank 1 Baghouse	
10	Cement Silo 1 Baghouse	
11	Cement Silo 2 Baghouse	

Impacts Evaluation - 30 TAC 116.111(a)(2)(J)

Was modeling conducted?	**Yes**	Type of Modeling:	**AERMOD**
Will GLC of any air contaminant cause violation of NAAQS?			**No**
Is this a sensitive location with respect to nuisance?			**No**
[§116.111(a)(2)(A)(ii)] Is the site within 3000 feet of any school?			**No**
Additional site/land use information:			

Summary of Modeling Results

AERMOD modeling was submitted by the applicant. The modeling was audited and approved by the Air Dispersion Modeling Team.

The modeling results indicate that the maximum off-property predicted concentrations for SO_2 (1-hr, 3-hr, 24-hr, and annual averaging periods), PM_{10} (24-hr averaging period), $PM_{2.5}$ (24-hr and annual averaging periods), NO_2 (1-hr and annual averaging periods), and CO (1-hr and 8-hr averaging periods) are below the respective de minimis concentrations and no further analysis is required.

Modeling Results for Minor NSR De Minimis			
Pollutant	**Averaging Time**	**GLCmax (µg/m³)**	**De Minimis (µg/m³)**
SO_2	1-hr	6.9	7.8
SO_2	3-hr	5	25
SO_2	24-hr	1.5	5
SO_2	Annual	0.01	1
PM_{10}	24-hr	2.8	5
$PM_{2.5}$	24-hr	1.18	1.2
$PM_{2.5}$	Annual	0.003	0.3
NO_2	1-hr	6.9	7.5
NO_2	Annual	0.04	1
CO	1-hr	22	2000
CO	8-hr	9	500

Additionally, the modeling results indicate that the state property line regulations for SO_2 (1-hr averaging period) and H_2SO_4 (1-hr and 24-hr averaging periods) are not exceeded.

Project-Related Modeling Results for State Property Line			
Pollutant	**Averaging Time**	**GLCmax (µg/m³)**	**De Minimis (µg/m³)**
SO_2	1-hr	11.2	20.4
H_2SO_4	1-hr	0.05	1
H_2SO_4	24-hr	0.01	0.3

The Modeling and Effects Review Applicability (MERA) analysis was conducted for non-criteria pollutants. All pollutants for the project fell off the MERA at Step 1C (there is no overall net increase in both short-term and annual emissions). Therefore, no further analysis is necessary.

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Based on the above information, the project is not expected to have an adverse effect on human health or the environment.

Permit Concurrence and Related Authorization Actions

Is the applicant in agreement with special conditions?	**Yes**
Company representative(s):	**Scott Nielson**
Contacted Via:	**phone**
Date of contact:	**05/23/2012**
Other permit(s) or permits by rule affected by this action:	**Yes**
List permit and/or PBR number(s) and actions required or taken:	**PBR, SE, and SP Registration Nos. 34329, 74145, 74149, 76379, 80048, 82608, and 90808 have been incorporated by consolidation and will be voided with this permit action.**

Project Reviewer	Date	Team Leader/Section Manager/Backup	Date

Special Conditions

Permit Number 1

Emission Limitations

1. This permit covers only those sources of emissions listed in the attached table, entitled "Emission Sources - Maximum Allowable Emission Rates,", and those sources are limited to the emission limits and other conditions specified in that attached table.

2. The sources shall not exceed the following emission limits (in addition to the limits identified in the maximum allowable emission rates table [MAERT] for the sources): **(5/12)**

   A. Reconstructed No. 3 Cement Kiln [Emission Point Number (EPN) 331.SK410]:
      (1) Nitrogen Oxides (NO_x) - 1.5 pounds per ton (lb/T) clinker, 30-day rolling average;
      (2) Carbon Monoxide (CO) - 1.23 lb/T clinker, 30-day rolling average;
      (3) Sulfur Dioxide (SO_2) - 0.4 lb/T clinker, 30-day rolling average;
      (4) Particulate Matter (PM) filterable ($PM/PM_{10}/PM_{2.5}$) - 0.01 lb/T clinker, 30-day rolling average;
      (5) Total Hydrocarbons (THC) - 24 parts per million by volume dry (ppmvd) corrected to 7 percent oxygen (O_2), 30-day rolling average
      (6) Mercury (Hg) - 21 lb/million tons clinker, 30-day rolling average;
      (7) Dioxins/Furans (D/F) - 0.40 nanogram per dry standard cubic meter (TEQ), corrected to 7 percent O_2; and
      (8) Ammonia (NH_3) - 35 ppmvd corrected to 7 percent O_2, 24-hour rolling average.

   B. Solid Fuel Mill Baghouse Stack (EPN 461.SK405):
      (1) PM and PM_{10} filterable - 0.01 grain per dry standard cubic foot (gr/dscf)
      (2) $PM_{2.5}$ filterable - 0.004 gr/dscf
      (3) NO_x - 30 ppmvd corrected to 3 percent O_2

   C. Solid Fuel Transfer BC050 to BC080 Baghouse (EPN 461.BF020)
      (1) PM and PM_{10} filterable - 0.01 gr/dscf
      (2) $PM_{2.5}$ filterable - 0.004 gr/dscf

   D. Solid Fuel Transfer BC080 to Solid Fuel Mill Baghouse (EPN 461.BF040)
      (1) PM and PM_{10} filterable - 0.01 gr/dscf
      (2) $PM_{2.5}$ filterable - 0.004 gr/dscf

Fuel Specifications

3. Fuel shall be limited as follows:

   A. Fuel fired in Kiln Nos. 1, 2, and 3: **(10/01)**

(1) Coal,
(2) Coke,
(3) New or used oil,
(4) Wood chips,
(5) Tire-derived fuel (TDF), and
(6) Natural gas.

B. Firing of TDF is limited to a maximum of 35 percent of total British thermal units requirements for Kiln Nos. 1, 2, and 3 [Facility Identification Numbers (FINs) 2-1, 2-2, and 2-3].

C. Fuel fired in the Reconstructed No. 3 Cement Kiln (FIN 431.KL100): **(5/12)**
(1) Coal,
(2) Coke,
(3) New or used oil, and
(4) Natural gas.

D. Fuel fired in the Precalciner (FIN 421.CI400): **(5/12)**
(1) Coal,
(2) Coke,
(3) New or used oil,
(4) Wood chips,
(5) TDF, and
(6) Natural gas.

E. Fuel fired in the Hot Gas Generator (FIN 461.HG700): natural gas. **(5/12)**

F. Fuel fired in the Emergency Diesel Generator: diesel containing no more than 15 ppm by weight sulfur. **(5/12)**

4. Upon request by the Executive Director of the Texas Commission on Environmental Quality (TCEQ) or the TCEQ Regional Director or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuels utilized in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

Federal Applicability

5. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources (NSPS) in Title 40 Code of Federal Regulations (40 CFR) Part 60, specifically the following:

A. Subpart A - General Provisions;

B. Subpart F - Portland Cement Plants (applies to facilities listed below); **(5/12)**

Facility	FIN	EPN
Kiln No. 3	2-3	12
No. 3 Clinker Cooler Stack	3-3	13
Reconstructed No. 3 Cement Kiln	431.KL100	331.SK410
Dryer/Crusher	411.DC100	331.SK410
Precalciner	421.CI400	331.SK410
Preheater Cyclone	421.CN010	331.SK410
Precalciner Cyclone	421.CN110	331.SK410
Clinker Cooler Belt	3-4H	F-MB2

C. Subpart Y - Coal Preparation and Processing Plants (applies to facilities listed below); **(5/12)**

Facilities that commenced construction, reconstruction, or modification after October 27, 1974, and on or before April 28, 2008:

Facility	FIN	EPN
Railcar Unloading Hopper	6-1	6-1
Drop from Conveyor to Stack Conveyor	6-2	6-2
Drop from Coal Stacker to Stock Pile	6-3	6-3
East Transfer from Stock Pile to Reclaim Hopper	6-5A	6-5A
West Transfer from Stock Pile to Reclaim Hopper	6-5B	6-5B
East Drop from Reclaim Hopper to Conveyor	6-6-1	6-6A
West Drop from Reclaim Hopper to Conveyor	6-6-2	6-6B
East Drop from Hopper Conveyor to Conveyor Crusher	6-6-1	6-6C
West Drop from Hopper Conveyor to Conveyor Crusher	6-6-2	6-6D
Coal Crusher and Drops	6-6A, 6-7, 6-8	6-6E, 6-7, 6-8
Drop to Day Tank	6-9	6-9
Inside Building Transfer Points	6-10A, 6-10B, 6-10C	6-10

Facilities that commenced construction, reconstruction, or modification after May 27, 2009:

Facility	FIN	EPN
Solid Fuel Transfer Solid Fuel Day Tank Conveyor to BC050	6-15A/B/C	6-15
Clinker Cooler	441.CC100	461.SK405
Solid Fuel Mill	461.RM100	461.SK405
Hot Gas Generator	431.HG700	461.SK405
Pulverized Fuel Bin A	461.BI550A	461.BF560A
Pulverized Fuel Bin B	461.BI550B	461.BF560B
Solid Fuel Transfer BC050 to BC080	461.BC050	461.BF020
Solid Fuel Transfer BC080 to Solid Fuel Mill	461.BC080	461 BF040

D. Subpart OOO - Nonmetallic Mineral Processing Plants (applies to limestone and shale handling/processing facilities); and **(5/04)**

E. Subpart IIII - Stationary Compression Ignition Internal Combustion Engines (applies to the Emergency Diesel Generator). **(5/12)**

6. These facilities shall comply with all applicable requirements of the EPA regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories (NESHAP) in 40 CFR Part 63, specifically the following:

A. Subpart A - General Provisions;

B. Subpart LLL - Portland Cement Manufacturing Industry (applies to facilities listed below); and **(5/12)**

Facility	FIN	EPN
Kiln No. 1	2-1	2
Kiln No. 2	2-2	6
Kiln No. 3	2-3	12
Reconstructed No. 3 Cement Kiln	431.KL100	331.SK410
Dryer/Crusher	411.DC100	331.SK410
Precalciner	421.CI400	331.SK410
Preheater Cyclone	421.CN010	331.SK410
Precalciner Cyclone	421.CN110	331.SK410

C. Subpart ZZZZ - Reciprocating Internal Combustion Engines (applies to the Emergency Diesel Generator) **(5/12)**

7. If any condition of this permit is more stringent than the regulations so incorporated, the permit shall govern and be the standard by which compliance shall be demonstrated. **(5/12)**

Opacity/Visible Emission Limitations

8. Except for those periods described in Title 30 Texas Administrative Code (30 TAC) §§ 101.201 and 101.211, no visible emissions, when adjusted for uncombined water vapor, shall leave the plant property as determined by Method 22 for a three-minute period out of any 30-minute period. If this condition is violated, further controls shall be installed and/or implemented as required to limit visible emissions.

9. Opacity of emissions from the EPNs listed in the table below shall not exceed 5 percent averaged over a six-minute period, and according to EPA Test Method 9 or equivalent. **(5/12)**

EPNs						
1-2A	1-2B	1-2C	1-2F	1-6C	1-6D	1-12
1-18	1-19	1-21	1-23	1-25	1-29	1-30
1-31	3-15	4	5	5-2A	8	9
10	11	23	24	25	27	28
29	30	32	33	35	461.BF560 A	461.BF560 B
461.BF02 0	461.BF04 0					

10. Opacity of emissions from EPNs 331.SK410 (Reconstructed No. 3 Cement Kiln) and 461.SK405 (Solid Fuel Mill Stack) shall not exceed 10 percent averaged over a six-minute period. **(5/12)**

Operational Limitations, Work Practices, And Plant Design

11. The Reconstructed No. 3 Cement Kiln (FIN 431.KL100, EPN 331.SK410) production rate shall not exceed 130 tons per hour of clinker and 949,000 tons per year of clinker on a rolling 12-month basis. **(5/12)**

12. Emissions from the following facilities shall be collected and exhausted through a fabric filter. **(5/12)**

Facility	FIN	Facility	FIN
Transfers to/from Quarry Belt 3	1-2B	Transfers into CKD Tank 1	2-4
Transfers to/from Quarry Belt 4	1-2A	Transfers into CKD Tank 2	2-5
Transfers to/from Quarry Belt 5	1-2C	Transfers into Clinker Silo 1	3-4F, 3-5
Transfers to/from Quarry Belt 6	1-2E	Transfers into Clinker Silo 2	3-4F, 3-5
Transfers to/from Quarry Belt 7	1-2D	Transfers into Clinker Silo 21	3-4G,

			3-6
Transfers from the Slag Elevator	1-12	Transfers into Clinker Silo 22	3-4G, 3-6
Slag Conveyor 2	1-13	Transfers onto Clinker Belt 1	3-7
Transfers into Slag Silo 1	1-14	Transfers onto Clinker Belt 2	3-8
Transfers into Slag Silo 2	1-15	Transfers to/from the Clinker Stacker	3-9
Transfers into Slag Silo 3	1-16	Finish Mill 1	4-1
Transfers to/from Quarry Conveyor 1	1-18	Finish Mill 2	4-2
Transfers into Limestone Day Tank	1-19	Transfers into Gypsum Silo 1 and Transfers from Gypsum Conveyor 1 to Gypsum Conveyor 2	4-3
Transfers to Limestone Belt 2	1-21	Transfers into Gypsum Silo 2	4-4
Transfers to Limestone Belt 3	1-23	Transfers from Gypsum Weigh Conveyor No. 2	4-6
New Crusher	1-25	Cement Loading - Railside	5-3
Transfers to/from Quarry Fixed Conveyor 3	1-26	Cement Loading - Truck	5-4
Limestone Bin	1-29	Cement Loading - Special	5-5
Limestone Transfer onto Finish Mill Collection Belt 1	1-30	Cement Railcar Unloading	5-6
Limestone Transfer onto Finish Mill Collection Belt 2	1-31		

13. Outdoor stockpiles (i.e., gypsum, clinker, coal, sand, and mill scale and the cement kiln dust (CKD) disposal area) shall be sprinkled with water as necessary to control fugitive dust emissions. **(5/04)**

14. Emission Sources (EPNs 1-4A, 1-5A, 1-6A, 2-7A, 2-7B, 6-2, 6-3, 6-4C, 6-4D, 6-11, 6-12, 6-13, and 6-14) shall employ wet material and reduced drop as represented in the permit application to reduce fugitive dust emissions. **(5/12)**

15. Emission Sources (FINs 1-6A, 3-4D, and 3-4E) shall be enclosed as represented in the permit application to reduce fugitive dust emissions. **(5/04)**

16. Transfer of CKD from storage silos to the Pugmill (FIN 2-6) shall be through an enclosed conveyor. Also, the transfer to the Pugmill shall be enclosed. **(5/04)**

17. Emission Sources (FINs 1-6B, 1-7A, 1-7B, 1-7C, 1-7D, 1-7E, 3-4A, 3-4B, 3-4C, 3-7, 3-8, 4-3, 4-4, and 4-5) shall employ partial enclosure as represented in the permit application to reduce fugitive dust emissions. **(3/07)**

18. The following facilities and operations are authorized by the indicated standard exemption (SE) or permit by rule (PBR): **(5/12)**

Facility/Operation	EPN	Authorization
Fuel Oil Truck Unloading	18	SE 51(July 15, 1988)
Waste Oil Fuel Tank Nos. 1 through 4	36	SE 51(October 4, 1995)
Storage Tank Piping	7-1	SE 51(October 4, 1995)
Unloading Piping	7-2	SE 51(October 4, 1995)
Kiln Transfer Piping	7-3	SE 51(October 4, 1995)
Line Heater	15	SE 7 (April 25, 1986)
CKD Silo 3 and Pug Mill	2-9	PBR Registration No. 71845
CKD Silo 3 Truck Spout	2-10	PBR Registration No. 71845
CKD Silo 3 Pug Mill Loadout	2-11	PBR Registration No. 71845

19. Paved plant roads shall be swept or washed and unpaved roads shall be sprinkled with water and/or environmentally sensitive dust suppressant chemicals as necessary to control dust emissions. **(5/04)**

20. All hoods, ducts, and collection systems shall be effective in preventing fugitive emissions. When compliance with this condition is required to be tested, compliance shall be determined by the EPA Reference Method 22 with no visible emissions persisting for more than one six-minute period in a half-hour. **(5/04)**

21. The on-site oil storage tanks that store oil for kiln fuel are authorized to store used oil meeting the requirements of 40 CFR Part 279, Standards for the Management of Used Oil.

22. Each kiln (Kiln Nos. 1, 2, and 3) shall have an individual maximum allowable sulfur dioxide (SO_2) emission rate of 1,131 pounds per hour (lb/hr). Additionally, all three kilns in aggregate shall operate under a total combined SO_2 emission rate of 2,100 lb/hr.

    Records demonstrating compliance with this condition shall be kept accordingly and, upon request, made immediately available to representatives of the TCEQ or any local air pollution program having jurisdiction.

23. Ammonia emissions from each of the kiln stacks, when using Selective Non-Catalytic Reduction, shall not exceed a limit of 35 ppmvd at 7.0 percent O_2, on a 24-hour rolling average basis. **(9/10)**

24. Emission rates are based on and the facilities shall be limited to the following: **(5/12)**

Facility/Operation	Max Hourly Throughput	Max Annual (Tons)

	(Tons)	
Stamler Feeder (FIN1-24)	800	2,500,000
Outdoor Storage Hopper (FIN 1-6)	200	1,001,100
Coal Crusher/Hammer Mill (FIN 6-7)	150	873,600
Kiln Nos. 1, 2, and 3 (FINs 2-1, 2-2, and 2-3)	45 (Clinker, each)	394,200 (Clinker, each)

25. The Emergency Diesel Generator is limited to operating 100 hours per year on a rolling 12-month basis for non-emergency operation. **(5/12)**

Initial Determination of Compliance (5/12)

26. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Reconstructed No. 3 Cement Kiln Stack (EPN 331.SK410), Solid Fuel Mill Stack (EPN 461.SK405), Solid Fuel Transfer BC050 to BC080 Stack (EPN 461.BF020), and Solid Fuel Transfer BC080 to Solid Fuel Mill Stack (EPN 461.BF040). Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after initial startup of the Reconstructed No. 3 Cement Kiln Project. Sampling must be conducted in accordance with the TCEQ Sampling Procedures Manual and in accordance with applicable EPA 40 CFR 60, Appendix A, or other applicable reference method procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling.

    A. Air contaminants emitted from the Reconstructed No. 3 Cement Kiln Stack (EPN 331.SK410) to be tested for include PM_{10}, $PM_{2.5}$, D/F, lead, and methane. Initial determination of compliance for PM, NO_x, CO, SO_2, THC, and Hg shall be performed in accordance with the applicable initial compliance requirements of NSPS Subparts A and F, and NESHAP Subpart LLL. Initial determination of compliance for volatile organic compounds (VOC) shall be performed in accordance with Special Condition No. 32H.

    B. Air contaminants emitted from the Solid Fuel Mill Stack (EPN 461.SK405) to be tested for include filterable PM, VOC, and NO_x, except NO_x testing is not required if there is vendor data for the Hot Gas Generator showing compliance with the NO_x limit in Special Condition No. 2B(3). Testing for VOC shall be performed while the regenerative thermal oxidizer (RTO) is operating and while the RTO is not operating, in order to determine the RTO control efficiency. Compliance with the pounds per hour VOC emission limit in the MAERT for the Solid Fuel Mill Stack is not required while performing initial testing with the RTO not operating. The stack testing data may be used to determine compliance with the limits in Special Condition No. 2 and the MAERT.

C. Air contaminants emitted from the Solid Fuel Transfer BC050 to BC080 Stack (EPN 461.BF020) to be tested for include filterable PM. The stack testing data may be used to determine compliance with the limits in Special Condition No. 2 and the MAERT.

D. Air contaminants emitted from the Solid Fuel Transfer BC080 to Solid Fuel Mill Stack (EPN 461.BF040) to be tested for include filterable PM. The stack testing data may be used to determine compliance with the limits in Special Condition No. 2 and the MAERT.

Demonstration of Continuous Compliance

27. Upon request by the TCEQ Executive Director or the TCEQ Regional Director having jurisdiction, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the cement kilns to demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions and/or otherwise prove satisfactory equipment performance. Sampling must be conducted in accordance with the TCEQ Sampling Procedures Manual or in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director or the appropriate TCEQ Regional Director prior to conducting sampling.

    Air contaminants emitted from the kilns to be tested for include (but are not limited to) PM, NO_x, CO, VOC, and SO_2. **(4/12)**

28. The permit holder shall make visible emissions observations for the fabric filter baghouses or dedusting filters with the EPNs listed in the table below. Visible emissions observations shall be made and recorded once per week. **(5/12)**

EPNs						
1-2A	1-2B	1-2C	1-2F	1-6C	1-6D	1-12
1-18	1-19	1-21	1-23	1-25	1-29	1-30
1-31	3-15	4	8	23	24	25
27	28	29	30	32	33	35
461.BF560A	461.BF560B	461.BF020	461.BF040	461.SK405		

Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as

it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.

Deviation Limit: If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions. If a Test Method 9 is performed, the opacity limit is 5 percent, except the opacity limit for EPN 461.SK405 is 10 percent. If the result of the Test Method 9 is opacity above the applicable limit, the permit holder shall report a deviation.

29. The permit holder shall make visible emissions observations pursuant to Special Condition No. 8 (property line visible emissions observations) on a quarterly basis and maintain records of the observations. Contributions from uncombined water shall not be included in determining compliance with this condition. If visible emissions are observed crossing the property line for more than a cumulative three-minute period out of the 30-minute period, then an evaluation and identification of the source and cause of the visible emissions shall be conducted within 24 hours and documented. Corrective action to eliminate the source of visible emissions shall be taken promptly and documented within one week of first observation of the visible emissions. **(5/12)**

30. The NH_3 concentrations at Kiln Nos. 1, 2, and 3 (EPNs 2, 6, and 12) and the Reconstructed Kiln 3 (EPN 331.SK410) shall be monitored or calculated according to one of the methods listed below and shall be tested or calculated according to the associated frequency listed below. Testing for NH_3 slip is only required when the selective non-catalytic reduction (SNCR) unit is in operation. **(5/12)**

    A. The holder of this permit may install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) to measure and record the concentrations of NH_3. The NH_3 measurements shall be used to determine compliance with the MAERT.

    B. The NH_3 slip may be measured using a sorbent or stain tube device specific for NH_3 measurement in the appropriate range. The frequency of sorbent or stain tube testing shall be monthly.

        (1) If the sorbent or stain tube testing indicates an ammonia (NH_3) slip concentration that exceeds 10 parts per million (ppm) at any time, the permit holder shall begin NH_3 testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or EPA Conditional Test Method (CTM) 27 on a quarterly basis in addition to the monthly sorbent or stain tube testing.

        (2) If the quarterly testing indicates NH_3 slip is 10 ppm or less, the Phenol Nitroprusside Indophenol CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 10 ppm NH_3 slip or greater.

C. The permit holder may install and operate a second NO_x CEMS probe located between the kiln and the SNCR, upstream of the stack NO_x CEMS, which may be used in association with the SNCR efficiency and NH_3 injection rate to estimate NH_3 slip. This condition shall not be construed to set a minimum NO_x reduction efficiency on the SNCR unit.

D. The permit holder may install and operate a dual stream system of NO_x CEMS at the exit of the SNCR. One of the exhaust streams would be routed, in an unconverted state, to one NO_x CEMS, and the other exhaust stream would be routed through a NH_3 converter to convert NH_3 to NO_x and then to a second NO_x CEMS. The NH_3 slip concentration shall be calculated from the delta between the two NO_x CEMS readings (converted and unconverted).

E. Any other method used for measuring NH_3 slip shall require prior approval from the TCEQ Air Permits Division in Austin.

31. The sulfur content of the diesel fuel to be used in the Emergency Diesel Generator shall be demonstrated by an annual representative sample analysis. The fuel sample may be performed by the permit holder, a service contractor, fuel vendor, or any other qualified agency. The permit holder may elect not to monitor the fuel provided that the fuel quality characteristics in a valid purchase contract specify that the fuel meets the requirements of Special Condition No. 3. **(5/12)**

Compliance Assurance Monitoring

32. The holder of this permit shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) to measure and record the opacity of the No. 3 Clinker Cooler Stack (EPN 13) and each kiln stack (EPNs 2, 6, and 12), and a continuous emission monitoring system (CEMS) to measure and record the in-stack concentration of NO_x, CO, SO_2, and oxygen from each kiln (EPNs 2, 6, and 12). The holder of this permit shall install, calibrate, maintain, and operate a CEMS to measure and record the in-stack concentration of NO_x, CO, SO_2, PM, THC, Hg, and oxygen from the Reconstructed No. 3 Cement Kiln (EPN 331.SK410). Additionally, the holder of this permit shall install, calibrate, maintain, and operate a continuous flow rate sensor to measure and record the exhaust flow rate in the stack. **(5/12)**

A. Each CEMS and COMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specifications No. 1 through 4, 8A, or 11 of 40 CFR Part 60, Appendix B, as applicable. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division in Austin for requirements to be met. **(5/12)**

B. The flow rate sensor shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and

reporting requirements specified in Performance Specification No. 6, 40 CFR Part 60, Appendix B. **(12/04)**

C. The SO_2, NO_x, CO, PM, and THC CEMS and the continuous flow rate sensor shall be used as a continuous emission rate monitoring system for SO_2, NO_x, CO, PM, and VOC. **(5/12)**

For EPN 331.SK410, after the initial determination of compliance, the PM CEMS shall be used to determine continuous compliance with the opacity limitations in Special Condition No. 10. Compliance with the PM mass emission limit will be considered to demonstrate compliance with the opacity limit; however, the TCEQ may use EPA Test Method 9 to determine opacity at any time. **(5/12)**

D. Each system shall be zeroed and spanned daily and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span are not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days, unless the monitor is required by a subpart of NSPS or National Emission Standards for Hazardous Air Pollutants, in which case zero and span shall be done daily without exception.

Each monitor shall be quality-assured at least quarterly in accordance with the appropriate audit specified in 40 CFR Part 60, Appendix F, Procedure 1 (gaseous CEMS), Procedure 2 (PM CEMS), or Procedure 5 (Hg CEMS). An equivalent quality assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

Cylinder gas audits of CEMS with exceedances of 15 percent accuracy shall be reported to the TCEQ Regional Director, and necessary corrective action shall be taken. The TCEQ Regional Director shall be notified as soon as possible after the discovery of any CEMS malfunction which is expected to result in more than 24 hours of lost data. At the discretion of the TCEQ Regional Director, the permit holder may be required to take supplemental stack concentration measurements. **(12/04)**

E. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rate in lb/hr at least once every week.

F. All monitoring data and quality-assurance data shall be maintained by the source for a period of five years and shall be made available to the Executive Director of the TCEQ or designated representative upon request. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit. **(5/12)**

G. For NSPS sources subject to Appendix F, the appropriate TCEQ Regional Office shall be notified at least 30 days prior to each annual relative accuracy testing audit in order to provide them the opportunity to observe the testing.

H. The VOC mass emission rate for EPN 331.SK410 shall be calculated from the THC emission rate determined using the THC emission rate monitoring system by multiplying the THC mass emission rate by a Methane Reduction Factor. The following equation shall be used

VOC = THC * Methane Reduction Factor

Where, the Methane Reduction Factor is the methane concentration divided by the THC concentration subtracted from 1 [i.e., methane reduction factor = (1-(methane/THC))].

The methane concentration shall be determined using periodic stack testing for methane. The methane concentrations measured shall be used to determine the Methane Reduction Factor to be used in the subsequent calculations for VOC.

The methane concentration shall be determined by performing stack testing on a quarterly basis for the first four tests, then annually thereafter. Once four stack tests have been performed, the methane concentration used to determine VOC emissions will be the average of the four stack tests. Thereafter, the methane concentration used to determine VOC emissions will be the average of the most recent four stack tests.

33. The permit holder shall make visible emissions observations for the fabric filter baghouses on EPNs 3, 5, 7, 9, 10, 11, and 5-2A. Visible emissions observations shall be made and recorded once per day and in accordance with the requirements specified in 40 CFR § 64.7(c).

Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.
Deviation Limit: If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity, consistent with Test Method 9, as soon as practicable but no later than 24 hours after observing visible emissions. If a Test Method 9 is performed, the opacity limit for EPNs 5, 9, 10, 11, and 5-2A, is 5 percent, and for EPNs 3 and 7 the opacity limit is 30 percent. If the result of Test

Method 9 is opacity above the applicable limit, the permit holder shall report a deviation. **(9/10)**

Sampling Requirements **(4/12)**

34. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at their own expense. Sampling ports and platforms shall be incorporated into the design of the stacks according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities" prior to stack sampling. Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Office with jurisdiction.

35. Sampling shall be conducted in accordance with the TCEQ Sampling Procedures Manual and EPA Test Methods in 40 CFR Part 60, Appendix A, and other applicable reference test method procedures, as follows:

    A. Test Methods 1 through 4, as appropriate, for exhaust flow, diluent, and moisture concentration;

    B. Test Method 5 or 17, modified with a controlled condensate method subject to approval from the TCEQ prior to sampling, for the concentration of total PM;

    C. Test Method 5 or 17 for the filterable concentration of PM (front-half catch);

    D. Test Method 7E, or equivalent methods, for the concentrations of NO_x;

    E. Test Method 10 for the concentration of CO;

    F. Test Method 25A (measuring total carbon as propane) in order to quantify THC and ASTM Method D6348-03 or EPA Method 18, in order to speciate and exclude methane and ethane from THC, for an accurate concentration and representation of VOC;

    G. Test Method 9 for opacity;

    H. Test Method 6, 6A, or 6C for the concentration of SO_2; and

    I. Test Method 201, 201A, or 202 for in stack PM_{10}, or condensable PM, 40 CFR 51, Appendix M.

36. If stack sampling and/or other testing is required pursuant to Special Condition Nos. 26 or 27, a pretest meeting shall be held with personnel from the TCEQ before the required tests are performed. The TCEQ Regional Office with jurisdiction shall be notified not less than 30 days prior to sampling to schedule a pretest meeting. The notice shall include:

    A. Date for pretest meeting;

B. Date sampling will occur;

C. Points or sources to be sampled;

D. Name of firm conducting sampling;

E. Type of sampling equipment to be used; and

F. Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

37. Alternate sampling methods and representative unit testing may be proposed by the permit holder. A written proposed description of any deviation from sampling procedures or emission sources specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. Such a proposal must be approved, in writing, by the TCEQ Regional Office with jurisdiction and the TCEQ Office of Air, Air Permits Division in Austin at least two weeks prior to sampling.

38. Requests to waive testing for any pollutant specified shall be submitted, in writing, for approval to the TCEQ Office of Air, Air Permits Division in Austin.

39. During stack sampling emission testing, the facilities shall operate at maximum represented production rates. Primary operating parameters that enable determination of production rates shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting.

    If the plant is unable to operate at the maximum represented production/throughput rates during testing, then additional stack testing shall be required when the production rate exceeds the previous stack test production rate by +10 percent unless otherwise determined, in writing, by the TCEQ Executive Director.

40. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office with jurisdiction. Additional time to comply with the applicable federal requirements requires EPA approval, and requests shall be submitted to the TCEQ Regional Office with jurisdiction.

41. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

    A. One paper copy and one computer compact disc (CD) to the TCEQ Regional Office with jurisdiction.

B. One paper copy to the TCEQ Office of Air, Air Permits Division in Austin.

C. One paper copy to each appropriate local air pollution control program with jurisdiction.

42. If, as a result of stack sampling, compliance with the permitted emission rates cannot be demonstrated, the holder of this permit shall adjust any operating parameters so as to comply with Special Condition No. 1 and the permitted emission rates.

43. If the holder of this permit is required to adjust any operating parameters for compliance, then beginning no later than 60 days after the date of the test conducted, the holder of this permit shall submit to the TCEQ, on a monthly basis, a record of adjusted operating parameters and daily records of production sufficient to demonstrate compliance with the permitted emission rates. Daily records of production and operating parameters shall be distributed as follows:

A. One copy to the TCEQ Regional Office with jurisdiction.

B. One copy to the TCEQ Office of Air, Air Permits Division in Austin.

Reporting Requirements

44. The holder of this permit shall submit quarterly NO_x, SO_2, and CO CEMS reports for Kiln Nos. 1, 2, and 3 (EPN 2, 6, and 12) (one copy) and quarterly PM, NO_x, CO, SO_2, THC, and Hg CEMS reports for the Reconstructed No. 3 Cement Kiln Stack (EPN 331.SK410) to the TCEQ Regional Office; however, submission of opacity data is not required. In addition to hard copies, all CEMS reports shall be submitted electronically either as an electronic spreadsheet file, a Portable Document Format (.pdf), or another format acceptable to the TCEQ Regional Director. All reports shall be postmarked by the 30th day following the end of each calendar quarter and shall include the following information for each monitor: **(5/12)**

A. The date and duration of time from the commencement to the completion of an event which resulted in excess stack emissions.

B. The date and time of the commencement and completion of each specific time period of excess stack emissions within that event.

C. The total time duration of excess stack emissions.

D. The magnitude of the excess stack emissions including the highest and average (hourly) emission rate(s). For the purposes of this quarterly CEMS report, all excess stack emissions shall be converted into the units of the permit with conversion factors and equations included.

E. The nature and cause of any malfunction resulting in excess emissions and the corrective action taken and/or preventative measures adopted.

F. The date and time identifying each period during which a CEMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.

G. When no excess emissions have occurred or the respective CEMS has not been inoperative or repaired, such information shall be stated in the report.

H. The total tons of NO_x, SO_2, and CO emitted during the quarter from Kiln Nos. 1, 2, and 3 (EPNs 2, 6, and 12), the total tons of PM, NO_x, CO, SO_2, VOC, and Hg emitted during the quarter from the Reconstructed No. 3 Cement Kiln Stack (EPN 331.SK410), and the total hours of kiln operation. **(5/12)**

I. The reporting of excess emissions required by this condition does not relieve the holder of this permit from notification requirements of emission events as required by 30 TAC § 101.201 or notification of scheduled maintenance, start-up, and shutdown as required by 30 TAC § 101.211.

J. Written records of all test results from quarterly gas audits.

45. The permit holder shall submit annual reports of the rolling 12-month VOC emissions calculated in accordance with Special Condition No. 32(H) to the TCEQ Regional Office. The reports shall be submitted by March 31 of each year for the previous calendar year.

Miscellaneous

46. The holder of this permit shall physically identify (minimum 3" letters/numbers) and mark in a conspicuous location all equipment that has the potential of emitting air contaminants as follows within 90 days of the approval of these revised conditions:

A. The FINs as submitted to the Emissions Inventory Section of the TCEQ.

B. The EPNs as listed on the MAERT.

Recordkeeping Requirements

47. The following records shall be kept at the plant site for the life of the permit. All records required in this permit shall be made available at the request of personnel from the TCEQ, EPA, or any air pollution control agency with jurisdiction. **(5/12)**

A. A copy of this permit.

B. A complete copy of the testing reports and records of the initial performance testing and initial determination of compliance completed pursuant to Special Condition No. 26 to demonstrate initial compliance.

C. Stack sampling results or other air emissions testing (other than CEMS data) that may be conducted on units authorized under this permit after the date of issuance of this permit.

48. The following information shall be maintained at the plant site and made available at the request of personnel from the TCEQ, EPA, or any air pollution control agency with jurisdiction to demonstrate compliance with permit limitations. These records shall be totaled (as applicable) for each calendar month, retained for a rolling 60-month period, and include the items identified below. Records generated before May 16, 2010 are not subject to the 60-month retention requirement. **(5/12)**

A. Hourly and annual Stamler Feeder (FIN 1-24) raw material throughput.

B. Hourly and annual Outside Hopper (FIN 1-6) throughput.

C. Hourly and annual Hammer Mill/Coal Crusher (FIN 6-7) throughput.

D. Hourly and annual clinker throughput for Kiln Nos. 1, 2, and 3 (FINs 2-1, 2-2, and 2-3) and the Reconstructed No. 3 Cement Kiln (FIN 431.KL100). **(5/12)**

The hourly Stamler Feeder throughput shall be calculated from records of the material throughput and hours of operation for the calendar month and recorded by the 15th day of the month following the month to which the records pertain. A rolling 12-month total throughput for the Stamler Feeder shall be based on monthly throughput records and recorded by the 15th day of the month following the month to which the records pertain.

The hourly outside hopper and hammer mill/coal crusher throughput shall be calculated and recorded at least once per calendar year from measurements of the time required to move a known quantity of material through these facilities. A rolling 12-month total throughput for the outside hopper and hammer mill/coal crusher shall be based on monthly throughput records and recorded by the 15th day of the month following the month to which the records pertain.

The hourly throughputs for Kiln Nos. 1, 2, and 3 and the Reconstructed No. 3 Cement Kiln shall be calculated from daily records of clinker throughputs and hours of operation for Kilns Nos. 1, 2, and 3 and the Reconstructed No. 3 Cement Kiln. A rolling 12-month total clinker throughput for Kilns 1, 2, and 3 and the Reconstructed No. 3 Cement Kiln shall be based on monthly throughput records and recorded by the 15th day of the month following the month to which the records pertain. **(5/12)**

E. Records of daily visible emissions observations for the EPNs required by Compliance Assurance Monitoring required in Special Condition No. 33. **(9/10)**

F. Records of weekly visible emissions observations for the EPNs required by Periodic Monitoring required in Special Condition No. 28. **(9/10)**

G. Records of quarterly property line visible emissions observations and any corrective action taken as required by Periodic Monitoring required in Special Condition No. 29. **(5/12)**

H. Records of any Test Method 9 conducted as specified in Special Condition Nos. 28 and 33. **(9/10)**

I. Records of NH_3 concentrations monitored or calculated pursuant to Special Condition No. 30 and the corresponding NH_3 emissions. **(5/12)**

J. Records of sulfur content of diesel fuel pursuant to Special Condition No. 31. **(5/12)**

K. Records of NO_x, CO, diluent gases (O_2 or CO_2), PM, SO_2, THC, and Hg CEMS emissions data, as applicable, and continuous flow rate monitoring data to demonstrate compliance with the emission rates listed in the MAERT. **(5/12)**

L. Raw data files of all CEMS data including calibration checks and adjustments and maintenance performed on these systems. **(5/12)**

M. Records of methane concentrations and VOC emissions calculated pursuant to Special Condition No. 32H. **(5/12)**

N. Records of the hours of operation of the Emergency Diesel Generator to demonstrate compliance with Special Condition No. 25. **(5/12)**

Special Provision

49. After completion of construction and initial shakedown of the Reconstructed No. 3 Cement Kiln, Kiln Nos. 1 and 2 shall be shut down and rendered permanently inoperable. During the 180-day shakedown period following completion of construction, the Reconstructed No. 3 Cement Kiln may operate for clinker production only while Kiln Nos. 1 and 2 are not operating for production of clinker. **(5/12)**

50. Upon completion of construction of the Reconstructed No. 3 Cement Kiln, the permit holder shall notify the TCEQ Regional Office of the project completion within 30 days and submit a permit alteration to the TCEQ Air Permits Division within 180 days to revise this permit to remove the shutdown facilities and associated requirements. **(5/12)**

Dated: May 25, 2012

To: gyarwood@environcorp.com;unopmongcol@environcorp.com[]; nopmongcol@environcorp.com[]
Cc: CN=Michael Feldman/OU=R6/O=USEPA/C=US@EPA;CN=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA[]; N=Joe Kordzi/OU=R6/O=USEPA/C=US@EPA;CN=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA[]; N=Ellen Belk/OU=R6/O=USEPA/C=US@EPA;CN=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA[]; N=Lynde Schoellkopf/OU=R6/O=USEPA/C=US@EPA;snw@rti.org;CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA[]; nw@rti.org;CN=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA[]; N=Jolynn Collins/OU=RTP/O=USEPA/C=US@EPA[]
Bcc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Wed 12/19/2012 3:22:36 PM
Subject: 2002 Met files

Hi,

Met file update.

I have talked with Matthew Johnson at IDNR and he has the MM5 files and indicated he can also send a copy of the CAMx ready 36km Met input files from some PSAT runs he did at one point.

I am also checking further with CENSARA on their drive. The drive they sent looks like it may have had a symbolic link to the CMAQ met files on another array, but not on the drive they sent. I will be talking with them tomorrow to try and see if they have the files.

I have shipped a hard drive to Matthew, but it will be after the 1st before he can get a copy sent out.

Thanks,
Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

To: Uarporn Nopmongcol [unopmongcol@environcorp.com]
Cc: []
Bcc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Tue 1/15/2013 2:07:49 PM
Subject: Re: ENVIRON shipping address

I shipped the drive and it should be delivered today. Fed Ex tracking # is **Ex. 4 - CBI**

-Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

From: Uarporn Nopmongcol <unopmongcol@environcorp.com>
To: Erik Snyder/R6/USEPA/US@EPA
Date: 01/10/2013 01:42 PM
Subject: ENVIRON shipping address

Erik,

Here is our shipping address:

Attn: Uarporn Nopmongcol
773 San Marin Drive
Suite 2115
Novato, CA 94998
Tel: +1 415-8990700
Fax: +1 415-8990707

Ou

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Cc: []
Bcc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Mon 2/4/2013 4:56:21 PM
Subject: Fw: Feb. 4 -- BNA, Inc. Daily Environment Report

223 DEN A-12, 11/20/12
William H. Carlile
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Arizona Petitions 9th Circuit for ReviewOf EPA Decision on Haze Implementation Plan
Court Dismisses Bid to Block EPA StudiesThat Expose Humans to Fine Particles
South Coast District Makes Container PortsResponsible for Emissions-Reduction Targets
Curbing Short-Lived Pollutants Could LessenNear-Term Impacts, NASA Climatologist Says
Vice Chairs Named for Appropriations Subcommittees
Court Wants More Details From AgenciesBefore Ruling on Delta Smelt Case Extension
Fish and Wildlife Service Says WolverineThreatened Due to Expected Climate Change
Republican Senators Seek Full AccountingFor Costs of Critical Habitat Designations
Chu to Leave Energy Department at EndOf February, Return to Academia in California
Duke Energy Accelerates ClosureOf Coal-Fired Units in North Carolina
Lawmakers Urge Fast IRS GuidanceOn Tax Credit for Renewables Production
Mexico Revising Proposed Fuel StandardTo Address Automobile Industry Complaints
Auditor Criticizes Canadian ProvinceOver Hazardous Waste Sites, Landfills
Floor Sealant Not a 'Pollutant' Under Policy;Insurer Must Defend Contractor, Court Rules
Two Chinese Provinces Launch Pilot ProjectsRequiring Purchase of Pollution Insurance
Canada Said to Be Mulling Higher CapsOn Liability of Offshore Oil Operators
Gulf Restoration Council Proposes PlanOn Habitat, Water Quality Following BP Spill
EPA Requests Authority to Collect Stewardship Plans
EPA Sets Residue Limits for New Pyrethroid
Residue Limit Not Required for Inert Ingredient
House Panel Launches Site to HelpSmall Businesses Track Regulations
Federal Scientists Grapple With Scientific,Practical Issues About 'Low-Dose Hypothesis'
CRS Updating Report on Coal Ash LegislationAfter Republicans Dispute Findings as Biased
Maker of Tide Agrees to Reduce LevelsOf Toxic Chemical in Laundry Detergents
Municipal Stormwater Webinar Set for Feb. 12
Report Finds Most NPDES Permits LackExplicit Green Infrastructure Requirements
LEGISLATIVE CALENDAR
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Comment Deadlines
FEBRUARY 1 FEDERAL REGISTER
FEBRUARY 4 FEDERAL REGISTER
See Latest Video: Bloomberg BNA's John Sullivan and the U.S. Water Alliance's Ben Grumbles
discuss The Week Ahead in Daily Environment Report (Feb. 4, 2013)
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Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

From: Fox.Tyler@epamail.epa.gov [mailto:Fox.Tyler@epamail.epa.gov]
Sent: Monday, February 04, 2013 9:44 AM
To: Bridgers.George@epamail.epa.gov
Cc: Brode.Roger@epamail.epa.gov
Subject: Fw: Feb. 4 -- BNA, Inc. Daily Environment Report

FYI--we'll have to determine if modeling is or becomes an issue here. Perhaps a call to Scott B in R9?

Air Pollution
Arizona Petitions 9th Circuit for Review
Of EPA Decision on Haze Implementation Plan
PHOENIX—Arizona petitioned the U.S. Court of Appeals for the Ninth Circuit for review of an Environmental Protection Agency rule partially disapproving the state's regional haze program and promulgating a federal implementation plan in place of the disapproved portions (Arizona v. EPA, 9th Cir., No. 13-70366, 1/31/13).

The appeal, filed Jan. 31, centers on EPA's decision to disapprove part of the state's implementation plan for improving visibility in protected national parks and wilderness areas and mandating costly controls on nitrogen oxide emissions from three coal-fired Arizona power plants.
The case was brought on behalf of the Arizona Department of Environmental Quality, which in February 2011 submitted a proposed air quality plan. It detailed how the state intended to reduce haze in protected national parks and wilderness areas. EPA was required under the Clean Air Act to approve or disapprove the entire plan by August 2012.
Strict NOx LImits for Three Plants
In accordance with a court-approved consent decree between EPA and a number of environmental groups, the agency split its decision into two parts. It took final action on the first part on Dec. 5, 2012, imposing strict controls on nitrogen oxide emissions at the three power plants: Apache Generating Station near Benson, Cholla Power Plant near Joseph City, and Coronado Generating Station between St. Johns and Springerville (77 Fed. Reg. 72,512; 223 DEN A-12, 11/20/12).
In a separate development, EPA announced Feb. 1 it is extending by 30 days, until March 6, a comment period that had been set to expire Feb. 4 on the second phase of the regional haze program, Colleen McKaughan, associate director of the EPA Region 9 air division, told BNA Feb. 1.
ADEQ estimates the costs for the stringent controls at about $1 billion, but the agency contends that the controls would not improve visibility in Grand Canyon National Park or other protected areas.
Challenge Focuses on Visibility
ADEQ Director Henry Darwin said in a prepared statement, "We are not challenging EPA's right to act on our state implementation plan, but what we are challenging is EPA replacing Arizona's decision with its own on an issue not related to protecting public health and the environment, but visibility."
Darwin continued, "As is provided under the Clean Air Act, the state of Arizona should be making decisions about what is in its best interest, not EPA."
A number of environmental groups sued EPA in August 2011, saying it had failed to approve regional haze plans for 40 states, including Arizona. ADEQ successfully intervened in the lawsuit in January 2012, but was shut out of negotiations that resulted in a consent decree settling the matter.
Despite Arizona's objections, the U.S. District Court for the District of Columbia upheld the consent decree between the plaintiffs and EPA. Arizona's appeal of the consent decree is still pending in the U.S. Court of Appeals for the District of Columbia Circuit.
The petitioner's brief in the petition for review is due April 22, with respondent's brief due May 21, according to court records in the case.
By William H. Carlile
For More Information
The state's petition to the U.S. Court of Appeals for the 9th Circuit in Arizona v. EPA and other documents in the case are available at http://op.bna.com/env.nsf/r?Open=smiy-94hmg8.

----- Forwarded by Tyler Fox/RTP/USEPA/US on 02/04/2013 11:43 AM -----

From: BNA Highlights <bhighlig@bna.com>
To: Tyler Fox/RTP/USEPA/US@EPA
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Subject: Feb. 4 -- BNA, Inc. Daily Environment Report

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NEWS

Air Pollution
Arizona Petitions 9th Circuit for Review
Of EPA Decision on Haze Implementation Plan
PHOENIX—Arizona petitioned the U.S. Court of Appeals for the Ninth Circuit for review of an Environmental Protection Agency rule partially disapproving the state's regional haze program and promulgating a federal implementation...

Air Pollution
Court Dismisses Bid to Block EPA Studies
That Expose Humans to Fine Particles
A federal district court judge dismissed a case seeking to block the Environmental Protection Agency from conducting studies that expose human subjects to fine particulate matter (American Tradition Institute Environmental Law Center...

Air Pollution
South Coast District Makes Container Ports
Responsible for Emissions-Reduction Targets
LOS ANGELES—Southern California air quality officials approved a measure Feb. 1 making the ports of Los Angeles and Long Beach accountable for achieving their voluntary emissions-reduction targets....

Climate Change
Curbing Short-Lived Pollutants Could Lessen
Near-Term Impacts, NASA Climatologist Says
Reducing short-lived climate pollutants is critical to curbing near-term climate impacts such as crop loss, a government scientist said Feb. 1....

Congress
Vice Chairs Named for Appropriations Subcommittees
House Appropriations Committee Chairman Hal Rogers (R-Ky.) has announced the Republican vice chairmen for 12 subcommittees in the 113th Congress, including two subcommittees that oversee agencies related to energy and the environment....

Endangered Species
Court Wants More Details From Agencies
Before Ruling on Delta Smelt Case Extension
LOS ANGELES—Three federal agencies and state authorities in California have until March 1 to persuade a federal court to give them three more years to revise protection plans for Delta smelt and salmon (Consolidated Delta Smelt Cases,...

Endangered Species
Fish and Wildlife Service Says Wolverine
Threatened Due to Expected Climate Change
The U.S. Fish and Wildlife Service is proposing to list the North American wolverine as a threatened species in the contiguous United States under the Endangered Species Act because of the agency's expectations for climate change....

Endangered Species
Republican Senators Seek Full Accounting
For Costs of Critical Habitat Designations
Proposed policy revisions to the economic analyses for Endangered Species Act critical habitat designations should be revamped to better estimate impacts, 23 Republican senators said in Jan. 31 letter to the U.S. Fish and Wildlife Service...

Energy
Chu to Leave Energy Department at End
Of February, Return to Academia in California
Energy Secretary Steven Chu announced Feb. 1 his plans to resign from the Obama administration and return to California to work in academia....

Energy
Duke Energy Accelerates Closure
Of Coal-Fired Units in North Carolina
RALEIGH, N.C.—Duke Energy will retire coal-fired units at two of its power plants in the Charlotte, N.C., area two years earlier than previously scheduled, a spokeswoman for the utility told BNA Feb. 1....

Energy
Lawmakers Urge Fast IRS Guidance
On Tax Credit for Renewables Production
Thirty members of Congress urged the Treasury Department and Internal Revenue Service Feb. 1. to quickly issue guidance on implementation of the renewable energy production tax credit....

Fuel Efficiency
Mexico Revising Proposed Fuel Standard
To Address Automobile Industry Complaints
MEXICO CITY—Mexico's government is revising a vehicle fuel economy standard for 2016—first proposed by its predecessor—to address auto industry complaints by adding provisions to increase compliance flexibility....

Hazardous Waste
Auditor Criticizes Canadian Province
Over Hazardous Waste Sites, Landfills
VANCOUVER, B.C.—Efforts by Manitoba's government, municipalities, and other entities to ensure proper management of contaminated sites and landfills are inadequate, the Canadian province's auditor general said in a...

Insurance

Floor Sealant Not a 'Pollutant' Under Policy;
Insurer Must Defend Contractor, Court Rules
An insurer must defend a contractor against plaintiffs' claims that they were injured by the contractor's use of floor sealant because the sealant is not a "pollutant" under the policy's pollution exclusion, a federal...

Insurance
Two Chinese Provinces Launch Pilot Projects
Requiring Purchase of Pollution Insurance
BEIJING, China—Environmental and insurance authorities in the Chinese provinces of Guangdong and Shaanxi are starting pilot projects requiring businesses with a high risk of serious environmental incidents to purchase pollution...

Oil Spills
Canada Said to Be Mulling Higher Caps
On Liability of Offshore Oil Operators
VANCOUVER, B.C.—The Canadian government is considering significantly raising oil spill liability caps for offshore oil operators and pipeline companies, according to an environmental law group. ...

Oil Spills
Gulf Restoration Council Proposes Plan
On Habitat, Water Quality Following BP Spill
HOUSTON—The Gulf Coast Ecosystem Restoration Council has released a proposed plan for restoring the habitat and water quality of the Gulf of Mexico following the 2010 Deepwater Horizon oil spill, which includes protecting marine...

Pesticides
EPA Requests Authority to Collect Stewardship Plans
The White House Office of Management and Budget is considering an Environmental Protection Agency request to collect information from pesticide users on their efforts to promote the use of integrated pest management, according to a notice...

Pesticides
EPA Sets Residue Limits for New Pyrethroid
The Environmental Protection Agency issued a final rule Feb. 1 establishing maximum limits for residues of the pesticide alpha-cypermethrin in or on several commodities, including wheat, rice, undelinted cotton seed, and various meats....

Pesticides
Residue Limit Not Required for Inert Ingredient
A maximum residue limit, or tolerance, is not required for residues of the substance 2-pyrrolidone, 1-ethenyl-, polymer with ethenol in or on food and feed commodities, the Environmental Protection Agency announced in a final rule published...

Regulatory Policy
House Panel Launches Site to Help
Small Businesses Track Regulations
The House Small Business Committee launched a website Feb. 1 to alert small businesses about pending environmental and other federal regulations and provide them a direct link for submitting comments on such rules....

Science Policy
Federal Scientists Grapple With Scientific,
Practical Issues About 'Low-Dose Hypothesis'

Federal scientists are grappling with scientific and practical issues as they consider whether the "low-dose hypothesis" warrants changes in regulatory toxicity test methods and chemical evaluation methods....

Solid Waste
CRS Updating Report on Coal Ash Legislation
After Republicans Dispute Findings as Biased
The Congressional Research Service will update a December 2012 report on coal ash legislation after Republicans from both chambers raised questions about "implicit bias" in the report, Sen. John Hoeven's (R-N.D.) office told...

Toxic Substances
Maker of Tide Agrees to Reduce Levels
Of Toxic Chemical in Laundry Detergents
Procter & Gamble Co., which makes Tide and other consumer products, has agreed to reduce the levels of a chemical in its laundry detergents that is classified in California as a known carcinogen (As You Sow v. Procter & Gamble Co., Cal....

Water Pollution
Municipal Stormwater Webinar Set for Feb. 12
The Environmental Protection Agency will hold a webinar Feb. 12 on newly regulated municipal separate storm sewer systems because of 2010 census updates. The webinar will attempt to answer questions relating to stormwater requirements...

Water Pollution
Report Finds Most NPDES Permits Lack
Explicit Green Infrastructure Requirements
Stormwater runoff remains a significant source of pollution in the nation's waterways because discharge permits lack clear requirements to use green infrastructure techniques to limit discharges, an American Rivers report found....

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Cc: []
Bcc: []
From: CN=Erik Snyder/OU=R6/O=USEPA/C=US
Sent: Thur 2/14/2013 9:36:56 PM
Subject: Re: Address
Hotspot

Hi Ou,

Ship it to office would be fine. You can send it slow to reduce costs. It will be mid-next week before we can start looking at.

Shipping address:
EPA Region 6
1445 Ross Ave. Suite 1200
MC:6PD-L attn. Erik Snyder
Dallas, TX 75202

We are close to our decisions on adjusting the emissions for the PIG sources. We may have something tomorrow or Tuesday next week.

Thanks,
Erik

Lead Regional Air Quality Modeler
EPA Region 6
Phone: 214-665-7305
Fax: 214-665-7263
email: snyder.erik@epa.gov

From: Uarporn Nopmongcol <unopmongcol@environcorp.com>
To: Erik Snyder/R6/USEPA/US@EPA
Date: 02/14/2013 01:03 PM
Subject: Address

Erik,
We have made a copy of the 2002 CAMx simulation results. What is the address we should use to ship a hard drive to you?
Ou

Uarporn Nopmongcol | Manager
ENVIRON International Corporation
773 San Marin Drive | Suite 2115
Novato, CA 94998
T: +1 415 899 0700 | F: +1 415 899 0707
unopmongcol@environcorp.com

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