Exhibit N

CIR

Shawn Musgrave <smusgrave@revealnews.org>

Fwd: Freedom of Information Act Request No. EPA-2022-000019: Due Date Extension Due to Unusual Circumstances

Mohamed Al Elew <malelew@revealnews.org> Thu, Oct 14, 2021 at 8:47 AM
To: Shawn Musgrave <smusgrave@revealnews.org>

Expected completion date

---------- Forwarded message ---------
From: **Hopkins, Daniel** <Hopkins.Daniel@epa.gov>
Date: Thu, Oct 14, 2021 at 9:58 AM
Subject: Freedom of Information Act Request No. EPA-2022-000019: Due Date Extension Due to Unusual Circumstances
To: malelew@revealnews.org <malelew@revealnews.org>
Cc: Graff, Michelle <graff.michelle@epa.gov>, Lau, Patrick <Lau.Patrick@epa.gov>, Atkinson, Ephraim <Atkinson.Ephraim@epa.gov>

Dear Mr. Al Elew,

Thank you for your Freedom of Information Act request. This e-mail concerns the above-referenced Freedom of Information Act (FOIA) request, received by the U.S. Environmental Protection Agency (EPA) Freedom of Information Office on October 1, 2021 in which you requested:

> *"Natural Gas STAR Program implementation plans submitted by any current and former program partners to the Environmental Protection Agency from January 1, 2010 through to September 30, 2021. Respondent records should include implementation plans from all segments of the oil and natural gas industry, including but not be limited to Production Segment, Transmission Segment, Distribution Segment, and Gathering and Processing Segment."*

Pursuant to 40 C.F.R. § 2.104(e), an extension of time to respond to your request is necessary. Given the scope of the request, EPA anticipates that response will require significant amount of EPA's resources and time to search for, and appropriately examine the voluminous amount of records to complete this request.

EPA anticipates that the response will take at least an additional 10 working days to respond. EPA has initiated the coordination of and search for responsive records in our files. Because of the circumstances described above, it is difficult to predict with certainty how many records may be involved. If you would like to modify or narrow your request so that it may be processed sooner, please contact Daniel Hopkins at hopkins.daniel@epa.gov or at 202-564-8626 with your response or if you have any further questions. At this time, EPA estimates the Agency will be able to complete this request by Friday, November 19, 2021. We appreciate your patience.

If you need any further assistance or would like to discuss any aspect of your request, you may seek assistance from EPA's FOIA Public Liaison at hq.foia@epa.gov or call (202) 566-1667. You may also seek assistance from the Office of Government Information Services (OGIS). You may contact OGIS in any of the following ways: by mail, Office of Government Information Services, National Archives and Records Administration, 8601 Adelphi Road, College Park, MD 20740-6001; email: ogis@nara.gov; telephone: (202) 741-5770 or (877) 684-6448; or fax: (202) 741-5769.

Thanks,

Daniel J. Hopkins

U.S. Environmental Protection Agency

Office of Air and Radiation, Office of Atmospheric Programs

Office of Program Management Operations

Got a question? Check out PMO's SharePoint site.

T: 202-564-8626

Exhibit O

Shawn Musgrave <smusgrave@revealnews.org>

Fwd: Clarification Request: FOIA No. EPA-2022-000018 and EPA-2022-000019

Shawn Musgrave <smusgrave@revealnews.org> Tue, Dec 7, 2021 at 5:56 PM
To: Shawn Musgrave <smusgrave@revealnews.org>

---------- Forwarded message ---------
From: **Hopkins, Daniel** <Hopkins.Daniel@epa.gov>
Date: Fri, Nov 12, 2021 at 12:38 PM
Subject: RE: Clarification Request: FOIA No. EPA-2022-000018 and EPA-2022-000019
To: Mohamed Al Elew <malelew@revealnews.org>
Cc: Victoria Baranetsky <vbaranetsky@revealnews.org>, Shawn Musgrave <smusgrave@revealnews.org>

Hello Mohamed,

I sent a meeting invite with a teams link/call-in number for Monday. Please let me know if there are any issues. Looking forward to chatting.

Thanks,

-Daniel

From: Mohamed Al Elew <malelew@revealnews.org>
Sent: Friday, November 12, 2021 2:24 PM
To: Hopkins, Daniel <Hopkins.Daniel@epa.gov>
Cc: Victoria Baranetsky <vbaranetsky@revealnews.org>; Shawn Musgrave <smusgrave@revealnews.org>
Subject: Re: Clarification Request: FOIA No. EPA-2022-000018 and EPA-2022-000019

Hi Daniel,

Thank you for updating me on the status of the request.

I can do the meeting on Monday, November 15 from 12:30PM – 1:00 PM ET.

On Fri, Nov 12, 2021 at 8:29 AM Hopkins, Daniel <Hopkins.Daniel@epa.gov> wrote:

> Hello Mohamed,
>
> I should have also said that I intend to restart the clock, backing dating the restart to when we sent the clarification request, so that the due date for this FOIA will be unchanged. However, we hope that you will still talk to us about this FOIA, as we do have additional clarification questions about the FOIA, and what to provide you an update on our progress to date processing this request.

Thanks,

-Daniel

From: Hopkins, Daniel
Sent: Friday, November 12, 2021 9:11 AM
To: Mohamed Al Elew <malelew@revealnews.org>
Cc: Victoria Baranetsky <vbaranetsky@revealnews.org>; Shawn Musgrave <smusgrave@revealnews.org>
Subject: RE: Clarification Request: FOIA No. EPA-2022-000018 and EPA-2022-000019

Hello Mohamed,

My apologies for missing your call yesterday, it was a federal holiday and I was out of the office. I can confirm that your response to the clarification request was received. We look forward to discussing the request to better understand the subject matter of your FOIA requests and the possible locations of these records.

We have two spots early next week were all the SMEs are available for a discussion. They are Monday, November 15 from 12:30PM – 1:00 PM ET and Wednesday November 17 from 11:00 AM to 11:30 AM ET. Do either of those times work for you?

In addition, if I am unavailable at 202 564 8626, please feel free to contact me at 202-779-3893. This is my mobile device number.

Thanks,

-Daniel

From: Mohamed Al Elew <malelew@revealnews.org>
Sent: Thursday, November 11, 2021 2:24 PM
To: Hopkins, Daniel <Hopkins.Daniel@epa.gov>
Cc: Victoria Baranetsky <vbaranetsky@revealnews.org>; Shawn Musgrave <smusgrave@revealnews.org>
Subject: Re: Clarification Request: FOIA No. EPA-2022-000018 and EPA-2022-000019

Hi,

I tried reaching you at 202 564 8626 today and left a message. I wanted to confirm my response to the clarification request was received.

Additionally, the FOIAOnline portal is down for planned maintenance until Monday, so I cannot access the request statuses online.

Are EPA-2022-000018 and EPA-2022-000019 being processed or have they been put on hold?

Best,

Mohamed Al Elew

858-649-9519

On Tue, Nov 9, 2021 at 4:58 PM Mohamed Al Elew <malelew@revealnews.org> wrote:

> Hello FOIA Coordinator Hopkins,
>
> I've added CIR's general counsel, Victoria Baranetsky, to this email. Although I am happy to discuss the request, it is inappropriate to stop the processing clock, particularly since the determination deadline is fast approaching. Both of my initial requests were sufficiently detailed, including in the portions you quoted in your letters requesting clarification.
>
> In EPA-2022-000018, I requested:
>
> “Natural Gas STAR Program annual reports submitted by any current and former program partners to the Environmental Protection Agency from reporting year 2010 through to reporting year 2020. Respondent records should include reports from all segments of the oil and natural gas industry, including but not be limited to Production Segment, Transmission Segment, Distribution Segment, and Gathering and Processing Segment.”
>
> I attached multiple documents downloaded from the Natural Gas STAR Program website (see https://www.epa.gov/natural-gas-star-program/natural-gas-star-program-reporting and https://www.epa.gov/natural-gas-star-program/join-natural-gas-star-program), including: (1) a blank copy of the Natural Gas STAR Program Partnership Agreement; (2) a blank copy of the current Natural Gas STAR Program template for annual reporting for each sector segment.
>
> For EPA-2022-000019, I requested:
>
> “Natural Gas STAR Program implementation plans submitted by any current and former program partners to the Environmental Protection Agency from January 1, 2010 through to September 30, 2021. Respondent records should include implementation plans from all segments of the oil and natural gas industry, including but not be limited to Production Segment, Transmission Segment, Distribution Segment, and Gathering and Processing Segment.”
>
> I attached multiple documents downloaded from the Natural Gas STAR Program website (see https://www.epa.gov/natural-gas-star-program/join-natural-gas-star-program), including: (1) a blank copy of the Natural Gas STAR Program Partnership Agreement; (2) a blank copy of the current Natural Gas STAR Program Implementation Plan template for each sector segment.
>
> Between the specificity of my request language and the agency documents I attached, both of these requests more than satisfy the legal requirement. Again, I am willing to discuss these requests, but you must continue processing them.
>
> Best regards,
> Mohamed Al Elew
> 858-649-9519

On Tue, Nov 9, 2021 at 3:04 PM Hopkins, Daniel <Hopkins.Daniel@epa.gov> wrote:

> Good Afternoon Dear Mr. Al Elew,
>
> Attached are formal requests for clarification regarding Freedom of Information Act Request No. EPA-2022-000018 and EPA-2022-000019. We would like to discuss the types of records you are interested in to better understand the subject matter of your FOIA request and the possible locations of these records.
>
> Please contact me at hopkins.daniel@epa.gov or 202 564 8626 to set a time to discuss the request. Afer a discussion between you, myself, and the appropriate subject matter experts, we hopefully will be able to craft a search and provide you with the records you seek.
>
> Thanks,
>
> Daniel J. Hopkins
>
> U.S. Environmental Protection Agency
>
> Office of Air and Radiation, Office of Atmospheric Programs
>
> Office of Program Management Operations
>
> Got a question? Check out PMO's SharePoint site.
>
> T: 202-564-8626

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

November 9, 2021

OFFICE OF
AIR AND RADIATION

Mohamed Al Elew
Center for Investigative Reporting
1400 65th St. Suite 200
Emeryville, CA 94608

Re: Freedom of Information Act Request No. EPA-2022-000018

Dear Mr. Al Elew:

Thank you for your Freedom of Information Act (FOIA) request. This letter concerns the above referenced FOIA request, received by the U.S. Environmental Protection Agency (EPA or Agency) on October 1, 2021, in which you requested:

> "Natural Gas STAR Program annual reports submitted by any current and former program partners to the Environmental Protection Agency from reporting year 2010 through to reporting year 2020. Respondent records should include reports from all segments of the oil and natural gas industry, including but not be limited to Production Segment, Transmission Segment, Distribution Segment, and Gathering and Processing Segment."

Your request does not reasonably describe the records you are seeking in a way that will permit EPA employees to identify and locate them.

We would like to discuss the types of records you are interested in, and the possible locations of these records. We would like to further understand the specific subject matter of the records so that we are able to craft a search and provide you with the records you seek. The request does not specify what information you are most interested in. For example, are you interested in the quantitative methane reductions data or also the qualitative information? Are there specific segments you are more interested in than others or all segments equally?

EPA's FOIA regulations state:

> "Whenever possible, your request should include specific information about each record sought, such as the date, title or name, author, recipient, and subject matter. If known, you should include any file designations or descriptions for the records that you want. The more specific you are about the records or type of records that you want, the more likely EPA will be able to identify and locate records responsive to your request." 40 C.F.R. § 2.102(c).

We would like to provide you the opportunity to discuss the request with us and clarify the records that you are seeking so that EPA can process your request. As indicated in 40 C.F.R. § 2.102(c), please include or be prepared to discuss any specific information about the records you seek, including time period, authors, or a more detailed description of the records' subject matter.

The processing clock is stopped for your FOIA request until we receive your clarification or modification. Please respond within ten (10) calendar days from the date of this letter to arrange a date and time for EPA to conduct a conference call with you to discuss your request.

You may contact Daniel Hopkins by email at hopkins.daniel@epa.gov or by phone at (202) 564-8626 with your response or if you have any further questions. Once the request is clarified we will continue processing your FOIA request and provide you with an estimated timeframe for completion. If you wish to request information connected to this request in the future, please reference the FOIA request number.

Additionally, you may seek assistance from EPA's FOIA Public Liaison at hq.foia@epa.gov or (202) 566-1667, or from the Office of Government Information Services (OGIS). You may contact OGIS in any of the following ways: by mail, Office of Government Information Services, National Archives and Records Administration, 8601 Adelphi Road-OGIS, College Park, MD 20740-6001; email: ogis@nara.gov; telephone: (202) 741-5770 or (877) 684-6448; or fax: (202) 741-5769.

Sincerely,

Daniel Hopkins
FOIA Coordinator
Office of Atmospheric Programs
Office of Air and Radiation, US EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

November 9, 2021

OFFICE OF
AIR AND RADIATION

Mohamed Al Elew
Center for Investigative Reporting
1400 65th St. Suite 200
Emeryville, CA 94608

Re: Freedom of Information Act Request No. EPA-2022-000019

Dear Mr. Al Elew:

Thank you for your Freedom of Information Act (FOIA) request. This letter concerns the above referenced FOIA request, received by the U.S. Environmental Protection Agency (EPA or Agency) on October 1, 2021, in which you requested:

> "Natural Gas STAR Program implementation plans submitted by any current and former program partners to the Environmental Protection Agency from January 1, 2010 through to September 30, 2021. Respondent records should include implementation plans from all segments of the oil and natural gas industry, including but not be limited to Production Segment, Transmission Segment, Distribution Segment, and Gathering and Processing Segment."

Your request does not reasonably describe the records you are seeking in a way that will permit EPA employees to identify and locate them.

We would like to discuss the types of records you are interested in, and the possible locations of these records. We would like to further understand the specific subject matter of the records so that we are able to craft a search and provide you with the records you seek. The request does not specify what information you are most interested in. For example, are there specific segments you are more interested in than others or all segments equally? Could you share what you are specifically interested in in the implementation plans?

EPA's FOIA regulations state:

> "Whenever possible, your request should include specific information about each record sought, such as the date, title or name, author, recipient, and subject matter. If known, you should include any file designations or descriptions for the records that you want. The more specific you are about the records or type of records that you want, the more likely EPA will be able to identify and locate records responsive to your request." 40 C.F.R. § 2.102(c).

We would like to provide you the opportunity to discuss the request with us and clarify the records that you are seeking so that EPA can process your request. As indicated in 40 C.F.R. § 2.102(c), please include or be prepared to discuss any specific information about the records you seek, including time period, authors, or a more detailed description of the records' subject matter.

The processing clock is stopped for your FOIA request until we receive your clarification or modification. Please respond within ten (10) calendar days from the date of this letter to arrange a date and time for EPA to conduct a conference call with you to discuss your request.

You may contact Daniel Hopkins by email at hopkins.daniel@epa.gov or by phone at (202) 564-8626 with your response or if you have any further questions. Once the request is clarified we will continue processing your FOIA request and provide you with an estimated timeframe for completion. If you wish to request information connected to this request in the future, please reference the FOIA request number.

Additionally, you may seek assistance from EPA's FOIA Public Liaison at hq.foia@epa.gov or (202) 566-1667, or from the Office of Government Information Services (OGIS). You may contact OGIS in any of the following ways: by mail, Office of Government Information Services, National Archives and Records Administration, 8601 Adelphi Road-OGIS, College Park, MD 20740-6001; email: ogis@nara.gov; telephone: (202) 741-5770 or (877) 684-6448; or fax: (202) 741-5769.

Sincerely,

Daniel Hopkins
FOIA Coordinator
Office of Atmospheric Programs
Office of Air and Radiation, US EPA

Exhibit P

Mohamed Al Elew <malelew@revealnews.org>

Follow-Up: Clarification Discussion for FOIA No. EPA-2022-000018 and EPA-2022-000019

Hopkins, Daniel <Hopkins.Daniel@epa.gov> Mon, Nov 15, 2021 at 3:49 PM
To: Mohamed Al Elew <malelew@revealnews.org>
Cc: "Atkinson, Ephraim" <Atkinson.Ephraim@epa.gov>, "Lau, Patrick" <Lau.Patrick@epa.gov>

Hello Mohamed,

Thank you for talking to us today to discuss FOIA No. EPA-2022-000018 and EPA-2022-000019. A summary of our conversation:

- We discussed the specifics and context of your request, including that your journalistic research would be best served by getting quantitative information by company.
- We also discussed the differences between the natural gas star program and the methane challenge program. In addition, we discussed that implementation plans have been optional for natural gas star partners for a few years and that EPA may not have implementation plans for all partners that joined the program.
- We also discussed that, after consultation with our Office of General Council, EPA will need to contact natural gas partners to see if they consider records responsive to your request to be confidential business information (CBI).
- EPA did research previous FOIA requests/responses that had records responsive to your request and where the CBI claim process had already occurred. We intend to release these non-CBI records to you in an interim release.
- We also discussed that you may consider narrowing your request after consulting with your colleagues. Possible narrowing options you may consider are:
    - Specific partner information, rather than all partners.
    - Specific section information, rather than all sectors.
    - Reducing the time horizon of the request from ten years to a smaller amount.

Under the current scope of the request, we expect that it will take an additional 90 business days to search for all records responsive to your request, contact natural gas star partners to see if they claim CBI on responsive records, find the correct decision making official within the partner organization to make CBI claims, apply reactions/withhold records in accordance with the CBI claim, and then prepare a final response. The new estimated competition date for the FOIA would be **Friday, April 1, 2022**. We would produce interim releases of information where possible. We would like to change the due date in FOIA online to reflect our estimate for completing these FOIAs.

Please let me know if this conversation summary is accurate. If you would like to revise the scope of the request, let us know and we will generate a new estimate for completing this FOIA.

Thanks,

Daniel J. Hopkins

U.S. Environmental Protection Agency

Office of Air and Radiation, Office of Atmospheric Programs

Office of Program Management Operations

Got a question? Check out PMO's SharePoint site.

T: 202-564-8626

Mohamed Al Elew <malelew@revealnews.org>

Follow-Up: Clarification Discussion for FOIA No. EPA-2022-000018 and EPA-2022-000019

Mohamed Al Elew <malelew@revealnews.org> Thu, Nov 18, 2021 at 2:46 PM
To: "Hopkins, Daniel" <hopkins.daniel@epa.gov>

Hi Daniel,
The conversation summary is accurate. I'm still discussing whether to revise the request scope.
For the records responsive to my request where the CBI claim process has already occurred, I was under the impression that some if not all of those records would be sent to me on November 19.
But your summary does not give an estimated completion date for the interim release. Am I correct to assume the interim release will be completed by tomorrow? Or does the EPA expect to make the interim release of previously cleared non-CBI records when possible between now and April 1, 2021?
[Quoted text hidden]

Mohamed Al Elew <malelew@revealnews.org>

Follow-Up: Clarification Discussion for FOIA No. EPA-2022-000018 and EPA-2022-000019

Hopkins, Daniel <Hopkins.Daniel@epa.gov> Thu, Nov 18, 2021 at 2:57 PM
To: Mohamed Al Elew <malelew@revealnews.org>

Hello Mohamed,

I intend to get you the interim release tomorrow, assuming that FOIA online is working. If something goes wrong, I will let you know and get them out by Monday of next week. Quick clarifying question on the interim releases:

- Some of the implementation plans/annual reports are older than 2010, would you want those?
- Do you care if the implementation plans/annual reports are released under the same FOIA, or do you want them spilt by FOIA request topic (one for implementation plans, the other for annual reports)?

Another, non-interim release question: are you OK with making due date equal to the estimate? We can move it back to an earlier time if you decide to narrow the request.

Thanks,

-Daniel

[Quoted text hidden]

Mohamed Al Elew <malelew@revealnews.org>

Follow-Up: Clarification Discussion for FOIA No. EPA-2022-000018 and EPA-2022-000019

Mohamed Al Elew <malelew@revealnews.org> Fri, Nov 19, 2021 at 10:23 AM
To: "Hopkins, Daniel" <hopkins.daniel@epa.gov>

- Some of the implementation plans/annual reports are older than 2010, would you want those?

Yes please

- Do you care if the implementation plans/annual reports are released under the same FOIA, or do you want them spilt by FOIA request topic (one for implementation plans, the other for annual reports)?

Does it make a difference in processing time? I submitted them as separate requests in case the waiting time of one request slows down the release of the other's requests

I will get back soon about the updated due date

[Quoted text hidden]

Mohamed Al Elew <malelew@revealnews.org>

Follow-Up: Clarification Discussion for FOIA No. EPA-2022-000018 and EPA-2022-000019

Mohamed Al Elew <malelew@revealnews.org> Fri, Nov 19, 2021 at 11:13 AM
To: "Hopkins, Daniel" <hopkins.daniel@epa.gov>

Daniel,

We do not agree to the moved due date but look forward to the release at your earliest convenience.

Mohamed
[Quoted text hidden]

Mohamed Al Elew <malelew@revealnews.org>

Follow-Up: Clarification Discussion for FOIA No. EPA-2022-000018 and EPA-2022-000019

Hopkins, Daniel <Hopkins.Daniel@epa.gov> Fri, Nov 19, 2021 at 3:29 PM
To: Mohamed Al Elew <malelew@revealnews.org>

Hello Mohamed,

Following up from my voicemail. I tried to release some responsive documents but hit a technical snag I was not expecting. I hope to have the document released by next week, my apologies for the delay.

[Quoted text hidden]

Exhibit Q

Mohamed Al Elew <malelew@revealnews.org>

Confirming Interim Releases Are Available

2 messages

Hopkins, Daniel <Hopkins.Daniel@epa.gov> Mon, Nov 29, 2021 at 1:58 PM
To: Mohamed Al Elew <malelew@revealnews.org>
Cc: "Atkinson, Ephraim" <Atkinson.Ephraim@epa.gov>

Hello Mohamed,

I wanted to confirm that you are able to access the interim releases for FOIA No. EPA-2022-000018 and EPA-2022-000019. I think the system should have released them, but wanted to check in with you to confirm.

Thanks,

Daniel J. Hopkins

U.S. Environmental Protection Agency

Office of Air and Radiation, Office of Atmospheric Programs

Office of Program Management Operations

Got a question? Check out PMO's SharePoint site.

T: 202-564-8626

Mohamed Al Elew <malelew@revealnews.org> Mon, Nov 29, 2021 at 3:49 PM
To: "Hopkins, Daniel" <hopkins.daniel@epa.gov>
Cc: "Atkinson, Ephraim" <Atkinson.Ephraim@epa.gov>

Yes, I have access to the interim records.
[Quoted text hidden]

Mohamed Al Elew <malelew@revealnews.org>

Interim Release, Request EPA-2022-000018

1 message

hopkins.daniel@epa.gov <hopkins.daniel@epa.gov> Mon, Nov 29, 2021 at 8:52 AM
To: malelew@revealnews.org

EPA-2022-000018 has been approved for an interim release.

Records were released to the public as a result of this request. You may retrieve these records immediately using the following link: **View Records** Over the next 2 hours, these records are also being added to FOIAonline's search pages, further enabling you to retrieve these documents associated with your FOIA request at any time.

Mohamed Al Elew <malelew@revealnews.org>

Interim Release, Request EPA-2022-000019

1 message

hopkins.daniel@epa.gov <hopkins.daniel@epa.gov> Mon, Nov 29, 2021 at 5:39 AM
To: malelew@revealnews.org

EPA-2022-000019 has been approved for an interim release.

Records were released to the public as a result of this request. You may retrieve these records immediately using the following link: **View Records** Over the next 2 hours, these records are also being added to FOIAonline's search pages, further enabling you to retrieve these documents associated with your FOIA request at any time.

Exhibit R

Natural Gas STAR Online Reporting

Annual Report 2013

Production Sector

OMB Control No. 2060-0328
Pending OMB Approval

Company Information

Company Name:	**Apache Corporation**
Gas STAR Contact:	**C.J. Doiron**
Title	**GHG Specialist Sr. Staff**
Address:	**2000 Post Oak Blvd.**
	Suite 100
City:	**Houston**
State:	
Zip:	**77056-4400**
Phone:	**713-296-6589**
Fax:	**713-296-6917**
E-mail:	**cj.doiron@apachecorp.com**

Company Information Updated: **No**

Activities Reported

BMP1: No **BMP2: No** **BMP3: Yes**

Total Methane Emission Reductions Reported This Year : **420,700**

Previous Years' Activities Reported: **No**

Period Covered by Report

From: **01/01/2013** To: **12/31/2013**

☑ I hereby certify the accuracy of the data contained in this report.

Additional Comments

Annual Report 2013

Production Sector

OMB Control No. 2060-0328
Pending OMB Approval

BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Central Region, anadarko Basin

B. Description of PRO

Please specify the technology or practice that was implemented:

Eliminate unnecessary equipment and/or systems

Please describe how your company implemented this PRO:

Released 61 production compressors, gas lift compressors, coolers and vent gas compressors from service by optimizing production processes, producing to low pressure pipelines, and other projects.

C. Level of Implementation

Number of units installed: 61 units

D. Methane Emissions Reduction

Methane Emissions Reduction: **201,000 Mcf/year**

Basis for the emissions reduction estimate: **Calculation using manufacturer specifications**

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

✓ One-year Multi-year

If Multi-year:

Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

Annual Report 2013

Production Sector

OMB Control No. 2060-0328
Pending OMB Approval

F. Cost Summary
Estimated cost of implementing the PRO (including equipment and labor): **$ 0**

G. Total Value of Gas Saved
Value of Gas Saved: **$ 743,700**
$ / Mcf used: **$ 3.70**

H. Planned Future Activities
To what extent do you expect to implement this PRO next year?:
Efficiency improvements are ongoing.

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * ($)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved ($)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

Annual Report 2013

Production Sector

OMB Control No. 2060-0328
Pending OMB Approval

BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Gulf Coast Region, Gulf Coast Basin

B. Description of PRO

Please specify the technology or practice that was implemented:

Eliminate unnecessary equipment and/or systems

Please describe how your company implemented this PRO:

Equipment optimization allowed 7 compressors to be released from service or downsized to improve operating efficiencies.

C. Level of Implementation
Number of units installed: 7 units

D. Methane Emissions Reduction
Methane Emissions Reduction: **30,000 Mcf/year**

Basis for the emissions reduction estimate: **Calculation using manufacturer specifications**

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

✓ One-year Multi-year

If Multi-year:

Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

Annual Report 2013

Production Sector

OMB Control No. 2060-0328
Pending OMB Approval

F. Cost Summary
Estimated cost of implementing the PRO (including equipment and labor): **$ 7,066,000**

G. Total Value of Gas Saved
Value of Gas Saved: **$ 111,000**
$ / Mcf used: **$ 3.70**

H. Planned Future Activities
To what extent do you expect to implement this PRO next year?:
Equipment optimization is an ongoing effort in the region.

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * ($)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved ($)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

Annual Report 2013

Production Sector

OMB Control No. 2060-0328
Pending OMB Approval

BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Central Region, Anadarko Basin

B. Description of PRO

Please specify the technology or practice that was implemented:

Improve electrical power generation systems

Please describe how your company implemented this PRO:

Released 6 gas fired electrical generator sets and converted 2 locations from gas fired electrical generators to commercial electrical grid power

C. Level of Implementation
Number of units installed: 8 units

D. Methane Emissions Reduction
Methane Emissions Reduction: **75,700 Mcf/year**

Basis for the emissions reduction estimate: **Calculation using manufacturer specifications**

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

✓ One-year Multi-year

If Multi-year:

Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

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F. Cost Summary
Estimated cost of implementing the PRO (including equipment and labor): **$ 0**

G. Total Value of Gas Saved
Value of Gas Saved: **$ 280,090**
$ / Mcf used: **$ 3.70**

H. Planned Future Activities
To what extent do you expect to implement this PRO next year?:

_____

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * ($)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved ($)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

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Production Sector

OMB Control No. 2060-0328
Pending OMB Approval

BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Central Region, Anadarko Basin

B. Description of PRO

Please specify the technology or practice that was implemented:

Improve system design/operation

Please describe how your company implemented this PRO:

Removed 5 gas fired production units and replaced them with non-fired separators or fired heater units, all with no bleed manual control valves.

C. Level of Implementation
Number of units installed: 5 units

D. Methane Emissions Reduction
Methane Emissions Reduction: **2,000 Mcf/year**

Basis for the emissions reduction estimate: **Calculation using manufacturer specifications**

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

✓ One-year Multi-year

If Multi-year:

Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

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Production Sector

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F. Cost Summary
Estimated cost of implementing the PRO (including equipment and labor): **$ 0**

G. Total Value of Gas Saved
Value of Gas Saved: **$ 7,400**
$ / Mcf used: **$ 3.70**

H. Planned Future Activities
To what extent do you expect to implement this PRO next year?:
Optimization programs are ongoing

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * ($)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved ($)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

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Production Sector

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BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Permian Region, Permian Basin

B. Description of PRO

Please specify the technology or practice that was implemented:

Install flares (10 years)

Please describe how your company implemented this PRO:

Installed dual flare stacks to reduce emergency field gas venting and tank vapors at 26 leases and tank batteries in the Garden City District.

C. Level of Implementation
Number of units installed: 26 units

D. Methane Emissions Reduction
Methane Emissions Reduction: **26,000 Mcf/year**

Basis for the emissions reduction estimate: **Calculation using manufacturer specifications**

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

One-year ✓ Multi-year

If Multi-year:

✓ Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

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F. Cost Summary
Estimated cost of implementing the PRO (including equipment and labor): **$ 1,600,000**

G. Total Value of Gas Saved
Value of Gas Saved: **$ 96,200**
$ / Mcf used: **$ 3.70**

H. Planned Future Activities
To what extent do you expect to implement this PRO next year?:
Reduction programs are ongoing in this region.

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * ($)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved ($)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

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BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Permian Region, Permian Basin

B. Description of PRO

Please specify the technology or practice that was implemented:

Install flares (10 years)

Please describe how your company implemented this PRO:

Installed dual flare stacks to reduce field gas vented during emergency events. Also meter flared gas and tank vapor emissions on the University Devonian 'O' tank battery (Sandhills Area).

C. Level of Implementation
Number of units installed: 4 units

D. Methane Emissions Reduction
Methane Emissions Reduction: **11,000 Mcf/year**

Basis for the emissions reduction estimate: **Calculation using manufacturer specifications**

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

One-year ✓ Multi-year

If Multi-year:

✓ Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

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F. Cost Summary
Estimated cost of implementing the PRO (including equipment and labor): **$ 30,000**

G. Total Value of Gas Saved
Value of Gas Saved: **$ 40,700**
$ / Mcf used: **$ 3.70**

H. Planned Future Activities
To what extent do you expect to implement this PRO next year?:
Vent reduction projects are ongoing in the region.

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * ($)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved ($)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

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BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Permian Region, Permian Basin

B. Description of PRO

Please specify the technology or practice that was implemented:

Install vapor recovery units (VRUs) on storage tanks (10 years)

Please describe how your company implemented this PRO:

Installed 10 separate Vapor Recovery Units to reduce field gas released to the atmosphere in the Eunice, Artesia areas.

C. Level of Implementation
Number of units installed: 10 units

D. Methane Emissions Reduction
Methane Emissions Reduction: **49,000 Mcf/year**

Basis for the emissions reduction estimate: **Calculation using manufacturer specifications**

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

One-year ✓ Multi-year

If Multi-year:

✓ Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

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F. Cost Summary
Estimated cost of implementing the PRO (including equipment and labor): **$ 330,000**

G. Total Value of Gas Saved
Value of Gas Saved: **$ 181,300**
$ / Mcf used: **$ 3.70**

H. Planned Future Activities
To what extent do you expect to implement this PRO next year?:
Ongoing implementation of reduction programs in this region.

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * ($)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved ($)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

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BMP3: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Central Region, Anadarko Basin

B. Description of PRO

Please specify the technology or practice that was implemented:

Optimize pumping engines and fired units

Please describe how your company implemented this PRO:

Replaced pumping unit engines with lower horsepower, more efficient units, fired production units with unfired separators and higher horsepower compressors with smaller units.

C. Level of Implementation
Number of units installed: 15 units

D. Methane Emissions Reduction
Methane Emissions Reduction: **26,000 Mcf/year**

Basis for the emissions reduction estimate: **Calculation using manufacturer specifications**

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

✓ One-year Multi-year

If Multi-year:

Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

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F. Cost Summary
Estimated cost of implementing the PRO (including equipment and labor): **$ 0**

G. Total Value of Gas Saved
Value of Gas Saved: **$ 182,000**
$ / Mcf used: **$ 7.00**

H. Planned Future Activities
To what extent do you expect to implement this PRO next year?:
Efficiency improvement programs are ongoing.

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * ($)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved ($)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

Annual Report 2013

Production Sector

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Additional Accomplishments

Exhibit S

Joshua McIntosh
Air Team Lead

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January 24, 2013

Carey Bylin
Natural Gas Star Program
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW (MC6207-J)
Washington, DC 20460

Dear Ms. Bylin,

Please find enclosed the 2011 Annual Report for Chevron North America Exploration and Production Company's MidContinent Business Unit (MCBU). Want to apologize for any confusion this may have caused in submitting this report prior to this time.

If you have any questions, do not hesitate to contact Jerry Harrington at (713) 372-1886 or jerry.harrington@chevron.com

Sincerely,

Joshua McIntosh

Enclosure: 2011 EPA Natural Gas STAR Report

Natural Gas STAR Program
MidContinent Business Unit
2011 Methane Emission Reductions

January 24, 2013

Chevron has been a participant in the Natural Gas STAR program since 1995. The program is a voluntary partnership between the EPA and the oil and gas industry to encourage methane emissions reductions among natural gas producers, processors, and transmission companies. As a partner, Chevron is required to annually report our methane emissions reductions. Below is a summary of the 2011 MCBU results, collected through collaboration HES Specialists, Compressor Optimization Specialists and a review of the MCBU capital project list.

Projects		Methane Reductions [1]		$ Spent	Value of Gas Saved [2]
6	Flares	12.0	MMCF	$175,836	$84,000
47	Plunger Lifts	220.9	MMCF	$3,055,636	$1,546,300
55	Pumping Units	53.5	MMCF	$2,401,904	$374,605
20	Velocity Strings	93.6	MMCF	$571,542	$655,200
2	Electric Compressor	0.6	MMCF	$145,812	$3914
1	Soap Units	2.5	MMCF	$2,750	$17,640
6	Solar Pumps	2.1	MMCF	$18,000	$14,767
5	Instrument Air	28.9	MMCF	$252,281	$202,356
7	VRUs	211.5	MMCF	$589,194	$1,480,479
149	**TOTAL**	**625.6**	**MMCF**	**$7,212,957**	**$4,379,261**

1. Most methane reductions are calculated using emissions factors provided by the EPA NG STAR program
2. Gas value based on $7/mcf

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Production Sector

Company Information

Company Name:	Chevron North America Exploration and Production Company MidContinent Business Unit
Gas STAR Contact:	Bruce Beynon
Title:	Environmental Team Leader
Address:	P.O. Box 36366
City, State, Zip Code:	Houston, TX 77236
Telephone:	(281) 561-3689
Fax:	(281) 561-3702
E-mail:	bbey@chevron.com

Annual Report Summary

Please mark the Best Management Practices your company implemented and submit a report page for only those practices

- ☒ BMP 1: Identify and replace high-bleed pneumatic devices
- ☐ BMP 2: Install flash tank separators on glycol dehydrators
- ☒ BMP 3: Partner Reported Opportunities (*Please specify)*

Period covered by report: From: January 2005 To: December 2005

Signature: Bruce Beynon Date: August 31, 2006

* In addition to reporting methane emissions reductions, you are welcome to include other information about your company's participation in Natural Gas STAR in the "Additional Program Accomplishments" section of this form. The Natural Gas STAR Program will use any information entered in this section to recognize the efforts and accomplishments of outstanding partners.

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Production Sector Annual Report

BMP 1: Identify and Replace High-Bleed Pneumatic Devices

Current Year Activities

A. Facility summary:

Number of devices replaced: 176 devices

Percent of system now equipped with low/no-bleed units: NDA %

B. Cost summary:

Estimated cost per replacement (including equipment and labor): $100 /replacement

C. Methane emissions reduction: 21824 Mcf

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

☐ Standard calculation

Methane emissions reduction
= [Annual emissions from high-bleed devices being replaced (in Mcf/yr)
- Annual emissions for the replacement devices (in Mcf/yr)]
x Number of devices replaced

Please specify your data source:
☐ Field measurement
☐ Manufacturer specifications

☒ Calculation using default

Methane emissions reduction
= 124 Mcf/yr x Number of devices replaced

☐ Other (*Please specify)*

D. Total value of gas saved: $ 131,000

Total value of gas saved
= Methane emissions reduction (in Mcf)
x Gas value (in $/Mcf) [If not known, use default of $3.00/Mcf]

E. How many high-bleed devices do you plan to replace next year? 0 devices

Previous Years' Activities

Use the table below to report any past activities implemented, but not previously reported to the Natural Gas STAR Program

Year	# Devices Replaced	Total Cost of Replacements (incl. equipment and labor) ($)	Estimated Reductions (Mcf/yr)	Value of Gas Saved ($)

BMP 1 Comments: *Please use the back of the page for additional space if needed.*

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Production Sector Annual Report

BMP 2: Install Flash Tank Separators on Glycol Dehydrators

Current Year Activities

A. Facility summary:

Number of flash tank separators installed: _____ separators

Percent of dehydrators in system equipped with flash tank separators: _____ %

B. Cost summary:

Estimated cost per flash tank separator installation (including equipment and labor): $ _____ /installation

C. Methane emissions reduction: _____ Mcf

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

☐ Standard calculation

Methane emissions reduction per flash tank installation = [TEG circulation rate (in gal/hr) x Methane entrainment rate (in scf/gal) x hours of operation (in hrs/yr) x 0.90] / 1,000*

**If methane entrainment rate is not known, use a default value of 3 scf/gal for energy exchange pumps or 1 scf/gal for electric pumps*

Please specify your data source:

☐ Field measurement
☐ Manufacturer specifications

☐ Calculation using default

Methane emissions reduction = [Average gas throughput (in MMcf/yr) x 170 scf/MMcf x 0.90] / 1,000

☐ Other (*Please specify*)

D. Total value of gas saved: $ _____

Total value of gas saved = Methane emissions reduction (in Mcf) x Gas value (in $/Mcf) [If not known, use default of $3.00/Mcf]

E. How many flash tank separators do you plan to install next year? _____ flash tanks

Previous Years' Activities

Use the table below to report any past activities implemented, but not previously reported to the Natural Gas STAR Program

Year	# Flash Tank Separators Installed	Total Cost of Installation (incl. equipment and labor) ($)	Estimated Reductions (Mcf/yr)	Value of Gas Saved ($)

BMP 2 Comments: *Please use the back of the page for additional space if needed.*

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Production Sector Annual Report

BMP 3: Partner Reported Opportunities (PROs)

(For more details on PROs, visit www.epa.gov/gasstar/pro/index.htm)

Current Year Activities

A. Activity description: Please provide a separate PRO reporting form for each activity reported

Check one of the following:

- ☐ Install vapor recovery units (VRUs)
- ☒ Install flares
- ☐ Install electronic safety devices
- ☐ Install instrument air systems
- ☐ Eliminate unnecessary equipment and/or systems
- ☐ Other *(Please specify)*: _____

Please describe how your company implemented this practice/activity:

B. Level of Implementation *(check one)*:

- ☒ Number of units installed: 4 units
- ☐ Frequency of practice: _____ times/year

C. Are these emissions reductions *(check one)*:

- ☒ Continuing/ongoing
- ☐ One-time

D. Methane emissions reduction: 8000 Mcf

E. Cost summary: Estimated cost of implementing this practice/activity (including equipment and labor): $88,000

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

- ☐ Actual field measurement
- ☐ Calculation using manufacturer specifications/other source
- ☒ Other (*Please specify)* PRO Reported Savings

F. Total value of gas saved: $ 48,000

Total value of gas saved
= Methane emissions reduction (in Mcf)
x Gas value (in $/Mcf) [If not known, use default of $3.00/Mcf]

G. To what extent do you expect to implement this practice next year? Case-by-case assessments

Previous Years' Activities

Use the table below to report any past implementation of this PRO, but not previously reported to Natural Gas STAR

Year	Frequency of Practice/Activity or # of Installations	Total Cost of Practice/Activity (incl. equipment and labor) ($)	Estimated Reductions (Mcf/yr)	Value of Gas Saved ($)

BMP 3 Comments/Additional Benefits: *Please describe any additional economic, operational, environmental, or safety benefits achieved by implementing this practice/activity. Use the back of the page for additional space if needed.*

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Production Sector Annual Report

BMP 3: Partner Reported Opportunities (PROs)

(For more details on PROs, visit www.epa.gov/gasstar/pro/index.htm)

Current Year Activities

A. Activity description: Please provide a separate PRO reporting form for each activity reported

Check one of the following:

- ☐ Install vapor recovery units (VRUs)
- ☐ Install flares
- ☐ Install electronic safety devices
- ☐ Install instrument air systems
- ☐ Eliminate unnecessary equipment and/or systems
- ☒ Other *(Please specify)*: Plunger lifts

Please describe how your company implemented this practice/activity:

B. Level of Implementation *(check one)*:

- ☒ Number of units installed: 68 units
- ☐ Frequency of practice: _____ times/year

C. Are these emissions reductions *(check one)*:

- ☒ Continuing/ongoing
- ☐ One-time

D. Methane emissions reduction: 319,600 Mcf

E. Cost summary: Estimated cost of implementing this practice/activity (including equipment and labor): _____ $759,000

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

- ☐ Actual field measurement
- ☐ Calculation using manufacturer specifications/other source
- ☒ Other (*Please specify)* PRO Reported Savings

F. Total value of gas saved: $ 1,918,000

Total value of gas saved
= Methane emissions reduction (in Mcf)
x Gas value (in $/Mcf) [If not known, use default of $3.00/Mcf]

G. To what extent do you expect to implement this practice next year? Case-by-case evaluation

Previous Years' Activities

Use the table below to report any past implementation of this PRO, but not previously reported to Natural Gas STAR

Year	Frequency of Practice/Activity or # of Installations	Total Cost of Practice/Activity (incl. equipment and labor) ($)	Estimated Reductions (Mcf/yr)	Value of Gas Saved ($)

BMP 3 Comments/Additional Benefits: *Please describe any additional economic, operational, environmental, or safety benefits achieved by implementing this practice/activity. Use the back of the page for additional space if needed.*

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Production Sector Annual Report

BMP 3: Partner Reported Opportunities (PROs)

(For more details on PROs, visit www.epa.gov/gasstar/pro/index.htm)

Current Year Activities

A. Activity description: Please provide a separate PRO reporting form for each activity reported

Check one of the following:

- ☐ Install vapor recovery units (VRUs)
- ☐ Install flares
- ☐ Install electronic safety devices
- ☐ Install instrument air systems
- ☐ Eliminate unnecessary equipment and/or systems
- ☒ Other *(Please specify)*: Pumping units

Please describe how your company implemented this practice/activity:

B. Level of Implementation *(check one)*:

- ☒ Number of units installed: 2 units
- ☐ Frequency of practice: _____ times/year

C. Are these emissions reductions *(check one)*:

- ☒ Continuing/ongoing
- ☐ One-time

D. Methane emissions reduction: 1,946 Mcf

E. Cost summary: Estimated cost of implementing this practice/activity (including equipment and labor): $ 18,000

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

- ☐ Actual field measurement
- ☐ Calculation using manufacturer specifications/other source
- ☒ Other (*Please specify)* PRO Reported Savings

F. Total value of gas saved: $ 12,000

Total value of gas saved
= Methane emissions reduction (in Mcf)
x Gas value (in $/Mcf) [If not known, use default of $3.00/Mcf]

G. To what extent do you expect to implement this practice next year? Case-by-case evaluation

Previous Years' Activities

Use the table below to report any past implementation of this PRO, but not previously reported to Natural Gas STAR

Year	Frequency of Practice/Activity or # of Installations	Total Cost of Practice/Activity (incl. equipment and labor) ($)	Estimated Reductions (Mcf/yr)	Value of Gas Saved ($)

BMP 3 Comments/Additional Benefits: *Please describe any additional economic, operational, environmental, or safety benefits achieved by implementing this practice/activity. Use the back of the page for additional space if needed.*

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Production Sector Annual Report

BMP 3: Partner Reported Opportunities (PROs)

(For more details on PROs, visit www.epa.gov/gasstar/pro/index.htm)

Current Year Activities

H. Activity description: Please provide a separate PRO reporting form for each activity reported

Check one of the following:

- ☐ Install vapor recovery units (VRUs)
- ☐ Install flares
- ☐ Install electronic safety devices
- ☐ Install instrument air systems
- ☐ Eliminate unnecessary equipment and/or systems
- ☒ Other *(Please specify)*: Velocity strings

Please describe how your company implemented this practice/activity:

I. Level of Implementation *(check one)*:

- ☒ Number of units installed: 10 units
- ☐ Frequency of practice: _____ times/year

J. Are these emissions reductions *(check one)*:

- ☒ Continuing/ongoing
- ☐ One-time

K. Methane emissions reduction: 46,800 Mcf

L. Cost summary: Estimated cost of implementing this practice/activity (including equipment and labor): $138,000

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

- ☐ Actual field measurement
- ☐ Calculation using manufacturer specifications/other source
- ☒ Other (*Please specify*) PRO Reported Savings

F. Total value of gas saved: $ 280,800

Total value of gas saved
= Methane emissions reduction (in Mcf)
x Gas value (in $/Mcf) [If not known, use default of $3.00/Mcf]

M. To what extent do you expect to implement this practice next year? Case-by-case evaluation

Previous Years' Activities

Use the table below to report any past implementation of this PRO, but not previously reported to Natural Gas STAR

Year	Frequency of Practice/Activity or # of Installations	Total Cost of Practice/Activity (incl. equipment and labor) ($)	Estimated Reductions (Mcf/yr)	Value of Gas Saved ($)

BMP 3 Comments/Additional Benefits: *Please describe any additional economic, operational, environmental, or safety benefits achieved by implementing this practice/activity. Use the back of the page for additional space if needed.*

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Production Sector Annual Report

BMP 3: Partner Reported Opportunities (PROs)

(For more details on PROs, visit www.epa.gov/gasstar/pro/index.htm)

Current Year Activities

N. Activity description: Please provide a separate PRO reporting form for each activity reported

Check one of the following:

- ☐ Install vapor recovery units (VRUs)
- ☐ Install flares
- ☐ Install electronic safety devices
- ☐ Install instrument air systems
- ☐ Eliminate unnecessary equipment and/or systems
- ☒ Other *(Please specify)*: Electric compressors

Please describe how your company implemented this practice/activity:

O. Level of Implementation *(check one)*:

- ☒ Number of units installed: 3 units
- ☐ Frequency of practice: _____ times/year

P. Are these emissions reductions *(check one)*:

- ☒ Continuing/ongoing
- ☐ One-time

Q. Methane emissions reduction: 327 Mcf

R. Cost summary: Estimated cost of implementing this practice/activity (including equipment and labor): $ 338,000

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

- ☐ Actual field measurement
- ☐ Calculation using manufacturer specifications/other source
- ☒ Other (*Please specify)* PRO Reported Savings

F. Total value of gas saved: $ 2,000

Total value of gas saved
= Methane emissions reduction (in Mcf)
x Gas value (in $/Mcf) [If not known, use default of $3.00/Mcf]

S. To what extent do you expect to implement this practice next year? Case-by-case evaluation

Previous Years' Activities

Use the table below to report any past implementation of this PRO, but not previously reported to Natural Gas STAR

Year	Frequency of Practice/Activity or # of Installations	Total Cost of Practice/Activity (incl. equipment and labor) ($)	Estimated Reductions (Mcf/yr)	Value of Gas Saved ($)

BMP 3 Comments/Additional Benefits: *Please describe any additional economic, operational, environmental, or safety benefits achieved by implementing this practice/activity. Use the back of the page for additional space if needed.*

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Production Sector Annual Report

BMP 3: Partner Reported Opportunities (PROs)

(For more details on PROs, visit www.epa.gov/gasstar/pro/index.htm)

Current Year Activities

T. Activity description: Please provide a separate PRO reporting form for each activity reported

Check one of the following:

- ☐ Install vapor recovery units (VRUs)
- ☐ Install flares
- ☐ Install electronic safety devices
- ☐ Install instrument air systems
- ☐ Eliminate unnecessary equipment and/or systems
- ☒ Other *(Please specify)*: Flareless completions

Please describe how your company implemented this practice/activity:

U. Level of Implementation *(check one)*:

- ☐ Number of units installed: _____ units
- ☒ Frequency of practice: 23 times/year

V. Are these emissions reductions *(check one)*:

- ☐ Continuing/ongoing
- ☒ One-time

W. Methane emissions reduction: 365,000 Mcf

X. Cost summary: Estimated cost of implementing this practice/activity (including equipment and labor): not reported

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

- ☐ Actual field measurement
- ☒ Calculation using manufacturer specifications/other source
- ☐ Other (*Please specify)* PRO Reported Savings

F. Total value of gas saved: $ 2,190,000

Total value of gas saved
= Methane emissions reduction (in Mcf)
x Gas value (in $/Mcf) [If not known, use default of $3.00/Mcf]

Y. To what extent do you expect to implement this practice next year? Case-by-case evaluation

Previous Years' Activities

Use the table below to report any past implementation of this PRO, but not previously reported to Natural Gas STAR

Year	Frequency of Practice/Activity or # of Installations	Total Cost of Practice/Activity (incl. equipment and labor) ($)	Estimated Reductions (Mcf/yr)	Value of Gas Saved ($)

BMP 3 Comments/Additional Benefits: *Please describe any additional economic, operational, environmental, or safety benefits achieved by implementing this practice/activity. Use the back of the page for additional space if needed.*

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Production Sector Annual Report

BMP 3: Partner Reported Opportunities (PROs)

(For more details on PROs, visit www.epa.gov/gasstar/pro/index.htm)

Current Year Activities

Z. Activity description: Please provide a separate PRO reporting form for each activity reported

Check one of the following:

- ☐ Install vapor recovery units (VRUs)
- ☐ Install flares
- ☐ Install electronic safety devices
- ☐ Install instrument air systems
- ☐ Eliminate unnecessary equipment and/or systems
- ☒ Other *(Please specify)*: Flareless workovers

Please describe how your company implemented this practice/activity:

AA. Level of Implementation *(check one)*:

- ☐ Number of units installed: _____ units
- ☒ Frequency of practice: 9 times/year

BB. Are these emissions reductions *(check one)*:

- ☐ Continuing/ongoing
- ☒ One-time

CC. Methane emissions reduction: 23,152 Mcf

DD. Cost summary: Estimated cost of implementing this practice/activity (including equipment and labor): $ not reported

Please identify the basis for the emissions reduction estimate, using the space provided to show any calculations

- ☐ Actual field measurement
- ☒ Calculation using manufacturer specifications/other source
- ☐ Other (*Please specify*) PRO Reported Savings

F. Total value of gas saved: $ 139,000

Total value of gas saved
= Methane emissions reduction (in Mcf)
x Gas value (in $/Mcf) [If not known, use default of $3.00/Mcf]

EE. To what extent do you expect to implement this practice next year? Case-by-case evaluation

Previous Years' Activities

Use the table below to report any past implementation of this PRO, but not previously reported to Natural Gas STAR

Year	Frequency of Practice/Activity or # of Installations	Total Cost of Practice/Activity (incl. equipment and labor) ($)	Estimated Reductions (Mcf/yr)	Value of Gas Saved ($)

BMP 3 Comments/Additional Benefits: *Please describe any additional economic, operational, environmental, or safety benefits achieved by implementing this practice/activity. Use the back of the page for additional space if needed.*

NaturalGas
EPA POLLUTION PREVENTER

Production Sector Annual Report

Additional Program Accomplishments

The Natural Gas STAR Program will use any information entered here to recognize the efforts and achievements of outstanding partners.

Please include any additional information you would like to share about your company's participation in Natural Gas STAR. Examples may include:

- **Activities to strengthen your program (e.g., training/education, innovative technologies or activities, pilot projects, employee incentive programs).**
- **Efforts to communicate your participation and successes (e.g., internal newsletters, press releases, company Web site).**
- **Participation in Natural Gas STAR program activities (e.g., contributions to case studies, presentation at annual workshop).**

Additional Accomplishments:

Additional Accomplishments: *Please use the back of the page for additional space if needed.*

Exhibit T

Annual Report 2012

Transmission Sector

OMB Control No. 2060-0328
Pending OMB Approval

Company Information

Company Name: **Kinder Morgan**

Gas STAR Contact: **Thomas Bach**

Title **Director, EHS**

Address: **370 Van Gordon St.**

City: **Lakewood**

State:

Zip: **80228-8304**

Phone: **303-914-7842**

Fax: **303-984-3496**

E-mail: **thomas_bach@kindermorgan.com**

Company Information Updated: **No**

Activities Reported

BMP1: Yes **BMP2: Yes** **BMP3: No** **BMP4: Yes**

Total Methane Emission Reductions Reported This Year: **1,802,817**

Previous Years' Activities Reported: **Yes**

Period Covered by Report

From: **01/01/2012** To: **12/31/2012**

☑ I hereby certify the accuracy of the data contained in this report.

Additional Comments

Annual Report 2012

Transmission Sector

OMB Control No. 2060-0328
Pending OMB Approval

BMP1: Directed Inspection and Maintenance at Compressor Stations

Current Year Activities

A. Facility/location identifier information:

All

B. Leak Summary

Number of surveys at this facility for reporting period: **9 surveys**

Total number of leaks found this reporting period: **9 found**

Total number of leaks repaired: **9 repaired**

C. Cost Summary

Total cost of surveys conducted this reporting period: **$ 0**
Total cost of leak repairs: **$ 639**

D. Methane Emissions Reduction

Method Used: **Actual field measurement**
Methane Emissions Reduction: **42 Mcf/year**

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Transmission Sector

OMB Control No. 2060-0328
Pending OMB Approval

E. Total Value of Gas Saved

Value of Gas Saved: **$ 210**
$ / Mcf used: **$ 5.00**

F. Planned Future Activities

Do you plan to survey this facility/location next year? **Yes**

Previous Years' Activities

Year	Total Cost of Surveys ($)	Total Cost of Repairs ($)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved ($)

Additional Comments

The numbers entered above are for one compressor station surveyed in 2012.

Annual Report 2012

Transmission Sector

OMB Control No. 2060-0328
Pending OMB Approval

BMP2: Use of Turbines at Compressor Stations

Current Year Activities

A. Facility/location identifier information:

B.Turbine Summary

Number of turbines installed this reporting period: **0 turbines**
Total cost of turbine installations (equipment and labor): **$ _____**

B. Reciprocating Summary

Number of reciprocating engines retired this reporting period: **0 engines**

D. Equipment Description

Turbines:

Reciprocating Engines:

E. Methane Emissions Reduction

Method Used: **Other**

Data Source: **Not Applicable**

Methane Emissions Reduction: **21,608 Mcf/year**

Reciprocating Engines Retired			Turbines Installed		
# Engines Retired of this type	Emission rate per MMcf of fuel used	Fuel consumption (MMcf/hour)	# Turbines Installed of this type	Emission rate per MMcf of fuel used	Fuel consumption (MMcf/hour)

Annual Report 2012

Transmission Sector

OMB Control No. 2060-0328
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F. Are these emissions reductions a one-year reduction or a multi-year reduction?

One-year ✓ Multi-year

If Multi-year:

Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration (BMP 2 has a sunset period of 20 years).

✓ Partner will report this activity annually up to allowed sunset date.

G. Total Value of Gas Saved

Value of Gas Saved: **151,256**
$ / Mcf used: **7.00**

H. Planned Future Activities

Number of turbines to be installed next year:

Number of reciprocating engines to be retired next year:

Previous Years' Activities

Year	# Turbines Installed	Total Cost * ($)	# Reciprocating Engines Retired	Estimated Reductions (Mcf/Yr)	Value of Gas Saved ($)
1993	1		0	21,608	151,256

* Total cost of installation (including equipment and labor)

Additional Comments

1993 turbine installation; As of 2012 there is 1 year left on the 20 year sunset

Annual Report 2012

Transmission Sector

OMB Control No. 2060-0328
Pending OMB Approval

BMP2: Use of Turbines at Compressor Stations

Current Year Activities

A. Facility/location identifier information:

Lockport

B.Turbine Summary

Number of turbines installed this reporting period: **2 turbines**
Total cost of turbine installations (equipment and labor): **$ 2,014,560**

B. Reciprocating Summary

Number of reciprocating engines retired this reporting period: _____ **engines**

D. Equipment Description

Turbines: Replacement of 2 SOLAR turbines on Units 2A and 3A with new SOLAR C-50 15ppm SoLoNOx 50ppm drivers; 6130hp each

Reciprocating Engines:

E. Methane Emissions Reduction

Method Used: **Calculation using default**

Data Source: **Not Applicable**

Methane Emissions Reduction: **25,131 Mcf/year**

Reciprocating Engines Retired			Turbines Installed		
# Engines Retired of this type	Emission rate per MMcf of fuel used	Fuel consumption (MMcf/hour)	# Turbines Installed of this type	Emission rate per MMcf of fuel used	Fuel consumption (MMcf/hour)

Annual Report 2012

Transmission Sector

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Pending OMB Approval

F. Are these emissions reductions a one-year reduction or a multi-year reduction?

One-year	✓	Multi-year
If Multi-year:	✓	Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration (BMP 2 has a sunset period of 20 years).
		Partner will report this activity annually up to allowed sunset date.

G. Total Value of Gas Saved

Value of Gas Saved: **175,917**
$ / Mcf used: **7.00**

H. Planned Future Activities

Number of turbines to be installed next year:

Number of reciprocating engines to be retired next year:

Previous Years' Activities

Year	# Turbines Installed	Total Cost * ($)	# Reciprocating Engines Retired	Estimated Reductions (Mcf/Yr)	Value of Gas Saved ($)

* Total cost of installation (including equipment and labor)

Additional Comments

Annual Report 2012

Transmission Sector

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BMP4: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Station 260A Southwick MA

B. Description of PRO

Please specify the technology or practice that was implemented:

Install electric compressors (10 years)

Please describe how your company implemented this PRO:

Installation of one 2000 hp electric motor driven booster station

C. Level of Implementation
Number of units installed: 1 units

D. Methane Emissions Reduction
Methane Emissions Reduction: **4,220 Mcf/year**

Basis for the emissions reduction estimate: **Other**

Calculated using emission factor of 2.11 Mcf/year per horsepower (from PRO Fact Sheet No. 105)

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

One-year ✓ Multi-year

If Multi-year:

✓ Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

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F. Cost Summary

Estimated cost of implementing the PRO (including equipment and labor): **$ 14,659,747**

G. Total Value of Gas Saved

Value of Gas Saved: **$ 29,540**

$ / Mcf used: **$ 7.00**

H. Planned Future Activities

To what extent do you expect to implement this PRO next year?: **see additional comments**

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * ($)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved ($)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

2013 PRO implementation: Report gas savings associated with the installation of electric motor driven compression either as new gas compression equipment or for replacement of existing reciprocating internal combustion engine driven gas compression equipment

Annual Report 2012

Transmission Sector

OMB Control No. 2060-0328
Pending OMB Approval

BMP4: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

Ellerslie #9; Harris County GA

B. Description of PRO

Please specify the technology or practice that was implemented:

Install electric compressors (10 years)

Please describe how your company implemented this PRO:

Installation of 7,000 hp EMD of compression

C. Level of Implementation
Number of units installed: 1 units

D. Methane Emissions Reduction
Methane Emissions Reduction: **14,770 Mcf/year**

Basis for the emissions reduction estimate: **Other**

Calculated using emission factor of 2.11 Mcf/year per horsepower (from PRO Fact Sheet No. 105)

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

✓ One-year Multi-year

If Multi-year:

Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

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F. Cost Summary

Estimated cost of implementing the PRO (including equipment and labor): **$ 16,039,517**

G. Total Value of Gas Saved

Value of Gas Saved: **$ 103,390**

$ / Mcf used: **$ 7.00**

H. Planned Future Activities

To what extent do you expect to implement this PRO next year?: **see additional comments below**

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * ($)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved ($)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

2013 PRO implementation: Report gas savings associated with the installation of electric motor driven compression either as new gas compression equipment or for replacement of existing reciprocating internal combustion engine driven gas compression equipment

Annual Report 2012

Transmission Sector

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BMP4: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

ALL

B. Description of PRO

Please specify the technology or practice that was implemented:

Reduce/downgrade system pressure

Please describe how your company implemented this PRO:

Reduced pressure in pipeline prior to blowdown

C. Level of Implementation

Other: 85 times in 2012

D. Methane Emissions Reduction

Methane Emissions Reduction: **2,316 Mcf/year**

Basis for the emissions reduction estimate: **Actual field measurement**

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

✓ One-year Multi-year

If Multi-year:

Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

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F. Cost Summary

Estimated cost of implementing the PRO (including equipment and labor): **$ _____**

G. Total Value of Gas Saved

Value of Gas Saved: **$ 16,978**

$ / Mcf used: **$ 7.33**

H. Planned Future Activities

To what extent do you expect to implement this PRO next year?: **Same, as practical**

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * ($)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved ($)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

Annual Report 2012

Transmission Sector

OMB Control No. 2060-0328
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BMP4: Partner Reported Opportunities (PROs)

Current Year Activities

A. Facility/location identifier information:

ALL

B. Description of PRO

Please specify the technology or practice that was implemented:

Use pipeline pump-down techniques to lower gas line pressure before maintenance

Please describe how your company implemented this PRO:

Rented reserve compressors to reinject gas back into system instead of venting to atmosphere

C. Level of Implementation

Other: 80 times in 2012

D. Methane Emissions Reduction

Methane Emissions Reduction: **1,734,730 Mcf/year**

Basis for the emissions reduction estimate: **Actual field measurement**

E. Are these emissions reductions a one-year reduction or a multi-year reduction?

✓ One-year Multi-year

If Multi-year:

Partner will report this activity once and let EPA automatically calculate future emission reductions based on sunset date duration.

Partner will report this activity annually up to allowed sunset date.

Annual Report 2012

Transmission Sector

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F. Cost Summary

Estimated cost of implementing the PRO (including equipment and labor): **$ 3,145,799**

G. Total Value of Gas Saved

Value of Gas Saved: **$ 6,938,920**

$ / Mcf used: **$ 4.00**

H. Planned Future Activities

To what extent do you expect to implement this PRO next year?: **Same, as practical**

Previous Years' Activities

Year	Frequency of practice/activity or # of Installations	Total Cost * ($)	Estimated Reductions (Mcf/Yr)	Value of Gas Saved ($)

* Total cost of practice/activity (including equipment and labor)

Additional Comments

Annual Report 2012

Transmission Sector

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Pending OMB Approval

Additional Accomplishments

Exhibit U

Dominion
55 Ashby Ridge Road, Parkersburg, WV 26104
Web Address: www.dom.com

Dominion

February 1, 2012

The Natural Gas STAR Program
U.S. EPA (6207J)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Please find enclosed the Natural Gas STAR Implementation Plan for Dominion Transmission, Inc. This is the first submittal for Dominion Transmission and we look forward to working with you as we continue to implement practices to minimize methane releases in our natural gas transmission system.

Should you have any questions regarding this submittal, please do not hesitate to contact me at (304)-464-5961.

Sincerely,

Roberta J. Jackson

Roberta J. Jackson, P.E.
Manager, Environmental Regulation

cc:
Mary Beth Stanton
Brian Sheppard
Jeff Barger
Paul Ruppert
Lisa Moerner

Received 2/10/12

2

OMB Control No. 2060-0328
Expires 07/31/2011

Implementation Plan

NaturalGas
EPA POLLUTION PREVENTER

Transmission Sector

Company Information

Partner Address Label Here

If the information provided above is incorrect, please make corrections below.

Company Name:	Dominion Transmission, Inc.
Gas Star Contact:	Roberta J. Jackson
Position:	Manager, Environmental Regulation
Address:	55 Ashby Ridge Road
City, State, Zip Code:	Parkersburg, WV 26104
Telephone:	304-464-5961
Fax:	
Email:	roberta.j.jackson@dom.com

Implementation Plan Elements

ELEMENT 1 Best Management Practices (BMPs)
The following BMPs have been identified as significant opportunities to cost effectively reduce methane emissions from the transmission sector. They were selected based on their applicability to the industry, economic feasibility, and cost-effectiveness. There are 3 core BMPs for the transmission sector.

BMP 1 Directed inspection and maintenance at compressor stations
BMP 2 Use of turbines at compressor stations
BMP 3 Identify and replace high-bleed pneumatic devices

For detailed information on these BMPs, please refer to the Lessons Learned publications on the Natural Gas STAR website: *epa.gov/gasstar/tools/recommended.html*.

ELEMENT 2 Partner Reported Opportunities (PROs)
Current partners have reported many processes and technologies that are considered "other Best Management Practices" by the program. New partners are encouraged to evaluate and report current and new practices or technologies that cost effectively reduce methane emissions. PROs are made available to all partners, and can be viewed at: *epa.gov/gasstar/tools/recommended.html*.

ELEMENT 3 Inventory Past Reductions
Partners are encouraged to report past methane emission reductions back to 1993. Accounting for these historical reductions will create a permanent record of your company's methane emission reduction efforts. More information is available in the Spring 1999 Natural Gas STAR Partner Update, which can be viewed at: *epa.gov/gasstar/newsroom/partnerupdate.html*.

The Implementation Plan is designed to be a dynamic tool for Natural Gas STAR Partners to plan their program activities. As company priorities and plans shift over time, the Implementation Plan may be revised or updated by submitting a new form to the program.

3

OMB Control No. 2060-0328
Expires 07/31/2011

ELEMENT 1
Best Management Practices

BMP 1
Implement Directed Inspection and Maintenance at Compressor Stations

A DI&M program is a system for performing routine leak detection and repair where leak measurement data from previous inspections are used to guide subsequent inspections and direct maintenance to those leaks that are cost effective to repair.

Estimated Reduction Potential
8,540 Mcf per station

Will you be implementing this BMP? ☒ Yes ☐ No

If no, why?
- ☐ Not cost effective
- ☐ May consider at a later date
- ☐ Other _____ please describe:

If yes, at what scale will you be implementing this BMP?
- ☒ Company Wide
- ☐ Pilot Project
- ☐ Other _____

Compressor stations will be inspected to detect and remediate leaks and other issues. Subsequent inspections are scheduled based on previous inspection data.

Please describe:

Activity Summary

Total number of compressor stations? 102

Total number of compressor stations at which DI&M will take place? 91

Inspection Schedule

Stations will be inspected: ☐ quarterly ☐ annually ☒ biannually ☐ other _____

Please list in detail the number of compressor stations that will implement BMP 1 in upcoming years.

Year 2011 Number of compressor stations 1

Year 2012 Number of compressor stations 90

Year 2013 Number of compressor stations TBD

Year 2014 Number of compressor stations TBD

Additional Information on Anticipated Plans and Projects

If additional space is needed, please continue on the back.

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OMB Control No. 2060-0328
Expires: 07/31/2011

BMP 2
Use of Turbines at Compressor Stations

Reciprocating engines used to drive compressors throughout transmission systems release significant amounts of methane in their exhaust. Replacing these engines with turbines can reduce a large portion of these methane emissions.

Estimated Reduction Potential
0.234 Mcf/hp/hr per replacement

Will you be implementing this BMP? ☐ Yes ☒ No

If no, why?

- ☒ Not cost effective
- ☐ May consider at a later date
- ☐ Have already implemented
- ☐ Other _____ please describe:

Not cost effective at the volume levels of our stations.

If yes, at what scale will you be implementing this BMP?

- ☐ Company Wide
- ☐ Pilot Project
- ☐ Other _____

Please describe:

Activity Summary

Please fill out the table below to show the total number of engines selected for BMP 3.

	Reciprocating Engines in Operation	Reciprocating Engines to be Retired	Turbines to Replace Retired Reciprocating Engines	New Turbine Installations (i.e., not Replacing Retired Engines)
Number				
Horsepower				
Fuel use (e.g., MMcf/year)				

Installation Schedule

Total number of turbines installed by the end of:

Year 1: _____ Year 2: _____ Year 3: _____ Year 4: _____

Total number of reciprocating engines retired by the end of:

Year 1: _____ Year 2: _____ Year 3: _____ Year 4: _____

Additional Information on Anticipated Plans and Projects

If additional space is needed, please continue on the back.

5

OMB Control No. 2060-0328
Expires 07/31/2011

BMP 3
Identify and Replace High-Bleed Pneumatic Devices

Pneumatic devices used in the transmission sector actuate isolation valves and regulate gas flow and pressure at compressor stations, pipelines, and storage facilities. In the distribution sector they are used on meter runs at gate stations for regulating flow and pressure. Replacing high-bleed pneumatic devices with low- or no-bleed devices reduces or eliminates emissions and improves safety.

Estimated Reduction Potential

124 Mcf/yr/device

Will you be implementing this BMP? ☒ Yes ☐ No

If no, why?

- ☐ Not cost effective
- ☐ May consider at a later date
- ☐ Have already implemented
- ☐ Other _____ please describe:

We will pilot this project in one area. However, large bleed devices in other areas are under consideration for replacement.

If yes, at what scale will you be implementing this BMP?

- ☐ Company Wide
- ☒ Pilot Project
- ☐ Other _____

There are 55-60 devices in the pilot area, representing 10-15% of the system devices.

Please describe:

Replacements in years 2 through 4 to be determined based on results of pilot project.

Activity Summary

Number of high-bleed pneumatic devices in system? 60

Number of high-bleed pneumatic devices to be replaced? 17

Replacement Schedule

Number of high-bleed pneumatic devices to be replaced by the end of:

Year 1: 17 Year 2: TBD Year 3: TBD Year 4: TBD

Additional Information on Anticipated Plans and Projects

If additional space is needed, please continue on the back.

OMB Control No. 2060-0328
Expires: 07/31/2011

ELEMENT 2
Partner Reported Opportunities

PROs
Your company may take advantage of additional technologies or practices to reduce methane emissions. These can be reported to Natural Gas STAR as PROs. Following is a list of some of the PROs that have been reported by other Gas STAR partners, which may be applicable to your operations (for more information on these PROs, please view: *epa.gov/gasstar/tools/recommended.html*):
☐ Use fixed/portable compressors for pipeline pumpdown ☐ Use composite wrap repair for non-leaking pipeline defects ☐ Install electric compressors ☐ Use hot taps for in-service pipeline connections ☐ Replace wet compressor seals with dry seals

PROs you will be implementing	Please describe
PRO Reducing emissions when taking compressors off-line At what scale will this PRO be implemented? ☐ Company Wide ☐ Pilot Project ☒ Other as appropriate / cost effective	Implemented engine blow-down recovery system at pilot station. Have fitted two additional stations, with two more planned for 2012.
PRO Reduce pressure prior to blow down At what scale will this PRO be implemented? ☐ Company Wide ☒ Pilot Project ☐ Other	Developed process to determine when it is cost-effective to use pipeline pumpdown, and/or portable field compressors to reduce line pressure prior to blow down.
PRO Capped ESD tests At what scale will this PRO be implemented? ☐ Company Wide ☐ Pilot Project ☒ Other as appropriate for facility	At stations where implemented, capped ESD tests are conducted annually for four sequential years, with a full ESD test in year five.
PRO At what scale will this PRO be implemented? ☐ Company Wide ☐ Pilot Project ☐ Other	
PRO At what scale will this PRO be implemented? ☐ Company Wide ☐ Pilot Project ☐ Other	

A

OMB Control No. 2060-0328
Expires 07/31/2011

ELEMENT 3
Inventory Past Reductions

An inventory of past reductions will help to create a permanent record of your past efforts.

As a first step, many new partners find it useful to inventory and document past methane emission reduction efforts. The inventory process helps companies quantify the success of their past activities and target future emission reduction efforts. Historical emission reductions identified as part of the inventory process can be reported to the Gas STAR Program.

Will you inventory past activities to include in your annual report? ☒ Yes ☐ No

If yes, please describe your company's plans for reviewing past emission reduction activities.

1. We will review methane reductions documented in our process improvement projects.
2. We will inventory the number of occurrences in other practices, and multiply them by the methane savings per event, as calculated through other Partner Reported Opportunities.

The Natural Gas STAR Program thanks you for your time.

Please send completed forms to:

Regular Mail
The Natural Gas STAR Program
U.S. EPA (6207J)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Express/Overnight Mail
The Natural Gas STAR Program
U.S. EPA (6207J)
1310 L Street, NW
Washington, DC 20005

Questions? Please call Jerome Blackman: (202) 343-9630 or Fax (202) 343-2342

NaturalGas
EPA POLLUTION PREVENTER

Exhibit V

OMB Control No. 2060-0328
Expires 07/31/2011

Implementation Plan

Production Sector

Company Information

Plains Exploration & Production Company
717Texas Avenue, Suite 2100
Houston, TX 77002

If the information provided above is incorrect, please make corrections below.

Company Name:	Plains Exploration & Production Company
Gas Star Contact:	Curt Cranford
Position:	EH&S Advisor
Address:	717 Texas Avenue
City, State, Zip Code:	Houston, TX 77002
Telephone:	(713) 579-6581
Fax:	(713) 579-6558
Email:	ccranford@pxp.com

Implementation Plan Elements

ELEMENT 1 Best Management Practices (BMPs)
The following BMPs have been identified as significant opportunities to cost effectively reduce methane emissions from the production sector. They were selected based on their applicability to the industry, economic feasibility, and cost-effectiveness. There are 2 core BMPs for the production sector:

BMP 1 Identify and replace high-bleed pneumatic devices
BMP 2 Install flash tank separators on glycol dehydrators

For detailed information on these BMPs, please refer to the Lessons Learned publications on the Natural Gas STAR Web site: epa.gov/gasstar/tools/recommended.html.

ELEMENT 2 Partner Reported Opportunities (PROs)
Current partners have reported many processes and technologies that are considered "other Best Management Practices" by the program. New partners are encouraged to evaluate and report current and new practices or technologies that cost effectively reduce methane emissions. PROs are made available to all partners, and can be viewed at: epa.gov/gasstar/tools/recommended.html.

ELEMENT 3 Inventory Past Reductions
Partners are encouraged to report past methane emission reductions back to 1990. Accounting for these historical reductions will create a permanent record of your company's methane emission reduction efforts. More information is available in the Spring 1999 Natural Gas STAR Partner Update, which can be viewed at: epa.gov/gasstar/newsroom/partnerupdate.html.

The Implementation Plan is designed to be a dynamic tool for Natural Gas STAR Partners to plan their program activities. As company priorities and plans shift over time, the Implementation Plan may be revised or updated by submitting a new form to the program.

Received 3/18/2010

OMB Control No. 2060-0328
Expires 07/31/2011

ELEMENT 1
Best Management Practices

BMP 1
Identify and Replace High-Bleed Pneumatic Devices

Pneumatic devices used to control and monitor gas and liquid flows and levels in dehydrators and separators, temperature in dehydrator regenerators, and pressure in flash tanks emit large amounts of methane into the atmosphere. Replacing these with low- or no-bleed devices reduces or eliminates emissions and improves safety.

Estimated Reduction Potential
124 Mcf/year/device

Will you be implementing this BMP? ☐ *Yes* xx *No*

If no, why?

☐ *Not cost effective*
xx *May consider at a later date*
☐ *Other* _____

Please describe: Will evaluate for new installations

If yes, at what scale will you be implementing this BMP?

☐ *Company Wide*
☐ *Pilot Project*
☐ *Other*

Please describe: _____

Activity Summary

Number of high-bleed pneumatic devices in system? _____

Number of high-bleed pneumatic devices to be replaced? _____

Replacement Schedule

Number of high-bleed pneumatic devices to be replaced by the end of:

Year 1: _____ *Year 2:* _____ *Year 3:* _____ *Year 4:* _____

Additional Information on Anticipated Plans and Projects

If additional space is needed, please continue on the back.

OMB Control No. 2060-0328
Expires 07/31/2011

BMP 2
Install Flash Tank Separators on Glycol Dehydrators

Installing a flash tank separator in a glycol dehydrator facilitates the removal of methane and natural gas liquids from the glycol stream. The recovered gas can be put back into the pipeline, used as a fuel on-site, or flared.	*Estimated Reduction Potential 170 scf/MMcf of throughput*

Will you be implementing this BMP? ☐ Yes xx No

If no, why?

- ☐ Not cost effective
- xx May consider at a later date
- ☐ Other _____

Please describe: Will evaluate for new installations.

If yes, at what scale will you be implementing this BMP?

- ☐ Company Wide
- ☐ Pilot Project
- ☐ Other _____

Please describe: _____

Activity Summary

Number of glycol dehydrators currently equipped with flash tank separators ____

Number of glycol dehydrators suitable for flash tank installation? ____

Replacement Schedule

Number of flash tank separators to be installed by the end of:

Year 1: ____ Year 2: ____ Year 3: ____ Year 4: ____

Additional Information on Anticipated Plans and Projects

If additional space is needed, please continue on the back.

OMB Control No. 2060-0328
Expires 07/31/2011

ELEMENT 1 Best Management Practices (BMPs) continued

The following BMPs have been identified as opportunities to cost effectively reduce methane emissions from the production sector. They were selected based on their applicability to the company, economic feasibility, and cost-effectiveness. At this time PXP is only looking at our non-California facilities for the STAR program. The 5 BMPs selected by PXP are:

BMP #1: Optimize Dehydration of Natural Gas Operations
Current gas dehydration operations will be evaluated for methane reduction opportunities in the following areas;

- *Optimization of glycol circulation rates,*
- *Flash tank separator (FTS) installation,*
- *Replacement of gas driven pumps with electric pumps, and*
- *Replacement of current glycol unit with desiccant dehydrator.*

BMP #2 – Installation of Plunger Lift Systems
All producing wells will be screened for beneficial installation of plunger lift systems.

BMP #3 – Convert Gas-Driven Pumps to Electrical Pumps
Operations with Gas-driven pumps will be assessed to determined cases for installation of electrical pumps.

BMP #4 – Consolidate Crude Oil and Produced Water Storage Tanks
Existing tank batteries will be evaluated for consolidation opportunities.

BMP #5 – Usage of Foaming Agents
All producing wells will be screened for use of foaming agents to reduce emissions.

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Expires 07/31/2011

ELEMENT 2

Partner Reported Opportunities (PROs)

[redacted]

Your company may take advantage of additional technologies or practices to reduce methane emissions. These can be reported to Natural Gas STAR as PROs. Following is a list of some of the PROs that have been reported by other Gas STAR partners, which may be applicable to your operations (for more information on these PROs, please view: epa.gov/gasstar/tools/recommended.html*).*

- φ Install Vapor Recovery Units (VRUs)
- φ Perform reduced emissions completions
- φ Install electronic safety devices
- φ Install instrument air systems
- φ Eliminate unnecessary equipment and/or systems
- φ Install plunger lifts in gas wells

[redacted]

PRO *Reduction of Operating Pressures* At what scale will you be implementing this BMP? ☐ Company Wide ☐ Pilot Project xx Other Will implement at non-California locations.	*All producing wells will be screened for opportunities to reduce emissions through reducing operation pressures.*
PRO *Installation of Vapor Recovery Units on Tank Batteries* At what scale will you be implementing this BMP? ☐ Company Wide ☐ Pilot Project xx Other Will implement at non-California locations.	*All tank batteries will be screened for opportunities for installation of vapor recovery units.*
PRO _____ At what scale will you be implementing this BMP? ☐ Company Wide ☐ **Pilot Project** ☐ Other _____	
PRO _____ At what scale will you be implementing this BMP? ☐ Company Wide ☐ Pilot Project ☐ Other _____	

OMB Control No. 2060-0328
Expires 07/31/2011

ELEMENT 3
Inventory Past Reductions

[redacted]

As a first step, many new partners find it useful to inventory and document past methane emission reduction efforts. The inventory process helps companies quantify the success of their past activities and target future emission reduction efforts. Historical emission reductions identified as part of the inventory process can be reported to the Gas STAR Program.

Will you inventory past activities to include in your annual report? xx Yes ☐ No

If yes, please describe your company's plans for reviewing past emission reduction activities.

Past reduction activities are as follows:

Methane Reduction Practice	Cases	Estimated Methane Reduction
Plunger lift installed on producing wells		
➢ *2009*	*157*	*662,196 Mcf*
➢ *2008*	*149*	*629,086 Mcf*
➢ *2007*	*141*	*595,976 Mcf*
➢ *2006*	*133*	*562,866 Mcf*
➢ *2005*	*126*	*525,757 Mcf*
Total Reduction 2005-2009		*2,975,881 Mcf*
Consolidation of production tanks (2009)	*12 Tanks*	*12,000 Mcf*
Use of foaming agents (reduction of 2520 Mcf/yr/well)	*140*	*352,800 Mcf/yr*
Total Reduction 2005-2009		*1,764,000 Mcf*
Total Reduction 2005-2009		***4,751,881 Mcf***

The Natural Gas STAR Program thanks you for your time.

Please send completed forms to:

Regular Mail
The Natural Gas STAR Program
U.S. EPA (6207J)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Express/Overnight Mail
The Natural Gas STAR Program
U.S. EPA (6207J)
1310 L Street, NW
Washington, DC 20005

Questions? Please call Roger Fernandez: (202) 343-9086 or Fax (202) 343-2202

Exhibit W

Mohamed Al Elew <malelew@revealnews.org>

Update on FOIA No. EPA-2022-000018 and EPA-2022-000019

1 message

Hopkins, Daniel <Hopkins.Daniel@epa.gov> Mon, Dec 6, 2021 at 9:07 AM
To: Mohamed Al Elew <malelew@revealnews.org>
Cc: "Atkinson, Ephraim" <Atkinson.Ephraim@epa.gov>

Hello Mohamed,

I wanted to give a status update on these two FOIAs and summarize next steps.

Summary of what has happened so far:

- We released the previously released implementation plans and annual reports to you via FOIA online.
- If you are interested in narrowing the request to specific partners, sectors, or timeframe, please let us know.

Next steps:

- EPA is searching for implementation plans and annual reports consistent with your FOIA request.
- After responsive documents are identified, we will contact natural gas star partners to see if they claim CBI on responsive records, find the correct decision making official within the partner organization to make CBI claims, apply reactions/withhold records in accordance with the CBI claim, and then prepare a final response. The estimated competition date for the FOIA is **Friday, April 1, 2022**. We will produce interim releases of information when possible.

Moving forward, Efi Atkinson (Atkinson.Ephraim@epa.gov, 202 564 7318) will be the primary POC for this FOIA. Please contact him with any questions or concerns you have with your FOIA requests.

Thanks,

Daniel J. Hopkins

U.S. Environmental Protection Agency

Office of Air and Radiation, Office of Atmospheric Programs

Office of Program Management Operations

Got a question? Check out PMO's SharePoint site.

T: 202-564-8626