

Message

**From:** Watkins, Gretchen H SERC-UPU [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/[REDACTED]]  
**Sent:** 12/19/2019 12:32:30 PM  
**To:** McMahon, Kevin M SEPCO-UPU/S [REDACTED@shell.com]; Johnson, Krista SHLOIL-GRA [REDACTED@shell.com]  
**CC:** Tyler, Kate P SEPCO-UPU [REDACTED@shell.com]; Powers, Marti D SHLOIL-ERUP/U [REDACTED@shell.com]  
**Subject:** RE: Methane Emissions - Permian with lunch

Kevin, would you please be on point to work with those copied here to pull all of this together? Then lets meet again in Jan top review. Thanks a bunch

Best Regards,

Gretchen

Gretchen H. Watkins  
President Shell Oil Company  
Executive Vice President Global Unconventionals  
Shell Oil Company

[REDACTED]  
**Email** : [REDACTED@shell.com]

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**From:** McMahon, Kevin M SEPCO-UPU/S <[REDACTED@shell.com]>  
**Sent:** Thursday, December 19, 2019 10:44 AM  
**To:** Watkins, Gretchen H SERC-UPU <[REDACTED@shell.com]>; Johnson, Krista SHLOIL-GRA <[REDACTED@shell.com]>  
**Cc:** Tyler, Kate P SEPCO-UPU <[REDACTED@shell.com]>; Powers, Marti D SHLOIL-ERUP/U <[REDACTED@Shell.Com]>  
**Subject:** RE: Methane Emissions - Permian with lunch

Gretchen,

Krista raises good questions. Some have clear path and others not as much.

Specifically, I think the paper needs to better define the dimensions (capability/scalability of current technology + installed kit) and tee up decision points to address the 'how do we know' and 'estimates vs measurements' questions.

Some of the other points you mention (overall plan, improvements, etc), reside in the assets green house gas / energy management plan, which is updated by the asset and my team.

I think it would be worth Krista joining for a challenge session before we bring this back in early Jan.

Thanks,

Kevin

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**From:** Watkins, Gretchen H SERC-UPU <[REDACTED@shell.com]>  
**Sent:** Wednesday, December 18, 2019 3:38 PM  
**To:** Johnson, Krista SHLOIL-GRA <[REDACTED@shell.com]>; McMahon, Kevin M SEPCO-UPU/S [REDACTED@shell.com]

**Cc:** Tyler, Kate P SEPCO-UPU <[REDACTED]@shell.com>; Powers, Marti D SHLOIL-ERUP/U <[REDACTED]@Shell.Com>  
**Subject:** RE: Methane Emissions - Permian with lunch

Good comments Krista.

Kevin, what are your thoughts here?

I'm missing an overall plan/view on our actuals, our plans to improve, our data, external reviews coming our way, scenario plans... I'd like to see this all pulled together. Thanks.

Best Regards,

Gretchen

Gretchen H. Watkins  
President Shell Oil Company  
Executive Vice President Global Unconventionals  
Shell Oil Company

[REDACTED]  
**Email**  [REDACTED]@shell.com

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**From:** Johnson, Krista SHLOIL-GRA <[REDACTED]@shell.com>  
**Sent:** Wednesday, December 18, 2019 8:16 AM  
**To:** Watkins, Gretchen H SERC-UPU <[REDACTED]@shell.com>  
**Cc:** Tyler, Kate P SEPCO-UPU <[REDACTED]@shell.com>; Powers, Marti D SHLOIL-ERUP/U <[REDACTED]@Shell.Com>  
**Subject:** FW: Methane Emissions - Permian with lunch

Gretchen –

Just sent the below to Kevin and the regulatory folks on my team who work with him on methane monitoring and mitigation. The paper his folks prepared is a good primer I think, but when I got to the last page on how we are measuring our emissions, we do not have actual data, we have estimates. I know this is an approved methodology. I know this is how EPA receives data. I also know this will not satisfy other stakeholders who will ask Shell and will ask you to demonstrate how we are walking our talk about reducing emissions. I don't recall how often Marti updates the US risk register but this one is racing to the upper right corner for me.

Best,  
Krista

Krista Johnson  
Head, US Government Relations

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**From:** Johnson, Krista SHLOIL-GRA  
**Sent:** Wednesday, December 18, 2019 9:08 AM  
**To:** McMahon, Kevin M SEPCO-UPU/S <[REDACTED]@shell.com>; Morello, Brad SEPCO-GRA

[REDACTED]@Shell.com>; Francis, Dick E SEPCO-GRA [REDACTED]@shell.com>

**Subject:** RE: Methane Emissions - Permian with lunch

Kevin –

Thank you for sharing Lisa's emission overview. As I said in our meeting, I think it, and maybe not so much the piece that ER started working on, is the best starting place for us in terms of what we should be thinking about as our story.

I have a couple of questions on Lisa's document and unfortunately can't edit it so will try to identify where in the piece I'm talking about as I go.

In the first set of bullets, marked "Internal" The first bullet references the OOPs and the requirement that we do an LDAR survey annually. I am happy this is still in the OOPs and am happy to see it here as well – but was on a call the other day where Helen Forde said we will not be doing LDAR globally. I assume there is a disconnect somewhere – We continue to use the OOPs externally as proof points of Shell commitment so if someone is deciding that we are stepping away from them without a more full conversation about the impacts of that I would be concerned.

Still in "Internal" – second bullet. Really like the reference to EP and the report which is a publicly available document-good. One bit that has us exposed in the context of the EP is that 65% of EP members have eliminated HB pneumatics; many of them much smaller operators and some of those with many more wells than we have. As I understand it our raw number of them has gone up over the time of our membership. Pneumatics are well understood to be the "low hanging fruit" of emission reduction and our own information shows that we can make the most progress by addressing them. We will need to be able to explain our journey on this one.

In "External" – second bullet about Super Stallion – we hire an external contractor to run Method 21 – why? Is there a regulatory requirement for a certified 3<sup>rd</sup> party contractor/engineer a la OOOOa? Could we train a subset of our pumpers to do this as part of a periodic field inspection creating an efficiency and a development opportunity?

My next comments aren't until page 4 – pages 2 and 3 are great.

On page 4 – in the chart I underlined several iterations of "estimated" "assumes" "lab analytical data" "fugitive component emission factor". Basically, my question in all cases for all sources is: How do we KNOW what our emission number is if we are not measuring it? How do we KNOW that we are at 0.2% More to the point, if we are counting kit and multiplying by a factor of some kind, how will we know we are at zero, which is the number some, including the Energy and Commerce Committee, are identifying as our target?

My point is, while the current surveys being conducted don't have results with numbers (they have heat maps or videos) and we are probably in a position or close to one where we can describe a program of monitoring and maintenance which is protective of the environment, I don't know that we are ready for the broader conversation which is happening around us.

Best,  
Krista

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**From:** McMahon, Kevin M SEPCO-UPU/S [REDACTED]@shell.com>

**Sent:** Monday, December 16, 2019 12:46 PM

**To:** Watkins, Gretchen H SERC-UPU [REDACTED]@shell.com>; Gerges, Amir NAM SEPCO-UPU/M [REDACTED]@shell.com>; Powers, Marti D SHLOIL-ERUP/U [REDACTED]@Shell.Com>; Johnson, Krista SHLOIL-GRA [REDACTED]@shell.com>

**Cc:** Tyler, Kate P SEPCO-UPU [REDACTED]@shell.com>

**Subject:** RE: Methane Emissions - Permian with lunch

Team,

Please see the attached summary paper. We will discuss this and introduce the concept of participating in EDF Core Users Group.

kevin

-----Original Appointment-----

**From:** Zientek, Kim G SHLOIL-UP/CCUS <[REDACTED]@shell.com> **On Behalf Of** Watkins, Gretchen H SERC-UPU

**Sent:** Friday, December 6, 2019 5:19 PM

**To:** Watkins, Gretchen H SERC-UPU; McMahon, Kevin M SEPCO-UPU/S; Gerges, Amir NAM SEPCO-UPU/M; Powers, Marti D SHLOIL-ERUP/U; Johnson, Krista SHLOIL-GRA

**Cc:** Tyler, Kate P SEPCO-UPU

**Subject:** Methane Emissions - Permian with lunch

**When:** Monday, December 16, 2019 12:00 PM-12:45 PM (UTC-06:00) Central Time (US & Canada).

**Where:** WCK E-860 / Skype

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