Message

From: Watkins, Gretchen H SERC-UPU [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=40DF89A63613493BB9AEA81AFD1F8A38-USGWBD]

Sent: 8/9/2019 4:14:07 PM

To: Gerges, Amir NAM SEPCO-UPU/M [@shell.com]; McMahon, Kevin M SEPCO-UPU/S

@shell.com]

Subject: RE: INFO: Venting at Medora Well Pad MOC

Thanks for this, support your decision

Best Regards,

Gretchen

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

Email 🖃 :	@shell.com

From: Gerges, Amir NAM SEPCO-UPU/M < @shell.com>

Sent: Monday, July 29, 2019 5:20 PM

To: Watkins, Gretchen H SERC-UPU < @shell.com>; McMahon, Kevin M SEPCO-UPU/S

@shell.com>

Subject: INFO: Venting at Medora Well Pad MOC

Gretchen, Kevin,

I would like to bring to your attention the following MOC as I feel it is worth flagging to you from an NTR perspective:

Summary:

We have an opportunity to over produce the Medora well pad (4 wells) for a period of 60 days until a new multiphase pump comes on line in October. The process entails trucking the excess oil from Medora pad over August and September. To enable trucking, we will install additional manned flowback kit onsite. The FCF impact for 2019 is roughly \$1mln (incl. cost of trucking and additional FB kit).

Potential Issue:

We will be using open-top flowback tanks (standard in the Basin) for 60 days, which will increase methane venting for a period of 60 days. Closed-tanks have been considered, but in light of the learnings from the Appalachia incident, still being assimilated, we opted to stay with open-top.

Currently our GHG intensity for Q2 has been running at 0.06 vs target of 0.16 (UPU). This additional venting will increase the Asset's GHG for Q3 to about 0.069. I feel we have made huge strides in reducing our GHG intensities by >70% over the past 12 months, and we are 30% below our 'stretched target' of 0.1. We still have a potential exposure that NGOs (EDF) are monitoring the whole basin from the air for GHG emissions over the coming months, but open-top tanks are regulated and approved for 60 days after which we will need to cease or control emissions.

Conclusion:

At the IAP meeting today, we had a thorough discussion on risks and opportunities and agreed to accept the potential NTR given the limited impact on our overall annual GHG target. We also discussed further abatement opportunities in the future, including the commitment to increase Permian's green power purchase to 100% (from 50%) starting 2020. This will offset ALL our GHG emissions associated with power use for 2020 onwards.

I am attaching the MOC for your reference. Please let me know if you have any questions.

Regards, Amir

Amir Gerges, FEI CEng Vice President – Permian Shell Exploration & Production Co.

