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**Lone Star Chapter**

Docket ID Number EPA-HQ-OAR-2010-0505

**Oil and Natural Gas Sector: Emission Standards for New and Modified Sources**

**Comments from Cyrus Reed, Lone Star Chapter of the Sierra Club**

November 2, 2015

**Past Time to Act on Methane**

The Lone Star Chapter of the Sierra Club appreciates the opportunity to submit comments on the rules proposed by EPA to reduce emissions of methane and associated volatile organic compounds from the production and processing as well as the transmission and storage facilities associated with oil and natural gas sector.

The Lone Star Chapter is the state chapter of the Sierra Club and we are supportive of comments also being submitted by the national Sierra Club which will provide a technical basis for our belief that while these rules are a needed first step, they could and should be strengthened. With over 20,000 members in Texas, the Lone Star Chapter of the Sierra Club is the state chapter with the largest historical and current oil and gas production. Many of our members either live within the immediate vicinity of oil and gas production, or live in cities like San Antonio and Dallas that suffer from high levels of ground-level ozone, part of which is directly due to the emissions from the oil and gas sector. Thus, we have reasons for submitting individual comments.

In addition, as we make clear in these comments, there are special reasons that EPA must act to adopt these new rules for the oil and natural gas sector since we have knowledge that without this requirement accomplished at the federal level, no state level action in Texas is likely to occur. Thus, Texans are counting on the EPA to adopt rules that will help mitigate the impacts of climate change by curbing dangerous methane pollution, while at the same time improving the health of workers and residents by reducing VOCs and hazardous air pollutants (HAPS) that are emitted alongside methane.

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## Why EPA Must Act in Texas

There are three main reasons why we here in Texas must act to cut down and eliminate our emissions of methane.

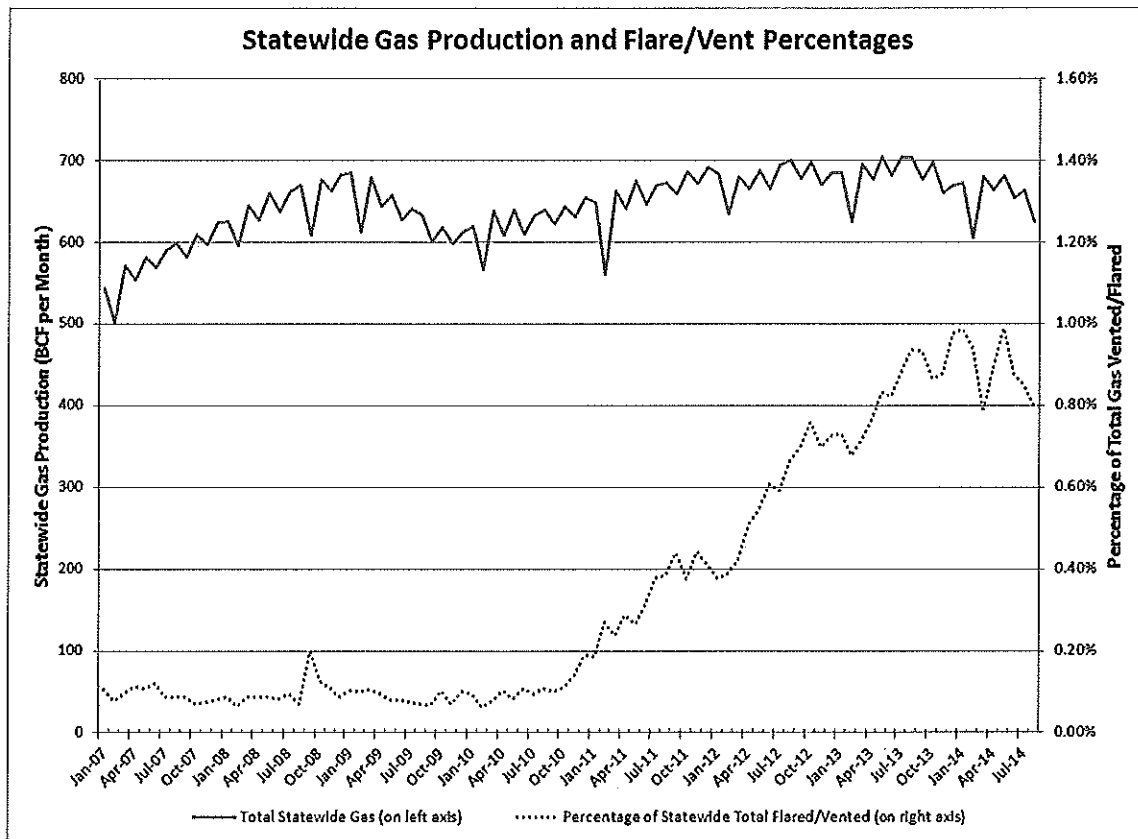
First, it is a valuable product that we are wasting. While we all might want to live in a world where we didn't depend upon natural gas for our transportation, electricity, heating and cooling and chemical needs, at least for the moment in 2015, we do depend on it. As such, we should at the very least assure that the gas we are fracking or getting out of the ground through more conventional means is not escaping into the air. This is true not only of gas that is directly being targeted, but also of natural gas that exists in oil deposits, which is usually flared or vented when developers drill for oil. We use methane and thus we should be using it for our economy and taxing it fully for our schools and state budgets. Letting it flare, or worse, vent, or losing it through blow-outs or fugitive emissions is not a good outcome.

While natural gas can ever be considered a clean fuel because of its varied land, water and air impacts, it can be a cleaner fuel, and we should work to make it so. Similarly, the oil production process can be cleaner and less wasteful with regard to associated natural gas that is often produced alongside the oil deposits. The EPA proposed rules are a good first step on both fronts.

And here in Texas, we appear to be the king of waste. According to the records from the Railroad Commission of Texas, the number of permits exempting methane emissions from the normal requirement that all useful gas be captured has risen substantially. Thus, the total number of permits to flare went from about 1,000 three years ago to about 5,000 just last fiscal year.

<b>Fiscal Year</b>	<b>Number of Permits to Legally Flare</b>
FY 2009	158
FY 2010	306
FY 2011	651
FY 2012	1,963
FY 2013	3,012
FY 2014	5,207

According to the Railroad Commission, these permits alone have led to approximately one percent of all the gas in the state being flared on an annual basis. In certain counties like Webb, the amount of gas flared and vented is closer to 30 percent of all gas produced in that county. And this is not all the gas or methane being released.



In addition to these standard permits, some companies are seeking long-term extended permits that allow them to flare at multiple wells for more than two years. *Two years.* And the Railroad Commission is granting them. And that is not even considering the methane that comes from blow-outs and fugitive emissions. Thus, the likely emissions of methane in Texas are likely much higher than the estimates provided by the RRC.

The second main reason to reduce methane emissions in addition to the need to avoid wasting a product is this: methane can and is cooking our climate. While there are various metrics for quantifying its effect, there is uniform agreement that methane is a much more potent climate-disrupting gas than carbon dioxide. According to the most recent report by the International Panel on Climate Change, methane has 86 times the climate-forcing effect of carbon dioxide on a 20-year basis and 34 times the effect on a century-long basis. We can and must deal with climate change, and we can not do it without taking on methane. The oil and gas sector is by far the major contributor to methane emissions for which there exist readily available, cost-effective control techniques, and no state is more important to oil and gas production than Texas. In Texas, we produce more oil and gas than any other state and drill more wells than any other state. We have a responsibility to deal with our methane emissions and their impact on the climate.

Third, these gases – and other gases associated with oil and gas production, processing, transmission, and storage – have more immediate health impacts beyond their impact on the climate. Methane itself accelerates the production of dangerous ground-level ozone, and VOCs that are emitted alongside methane react in the atmosphere to form ozone and fine particulate matter. Methane is also emitted alongside hazardous air pollutants such as benzene. Thus, common-sense regulations to control methane will help reduce these other pollutants and reduce concentrations of ozone, particulate matter, and air toxics. Some of our cities do not currently comply with ozone standards designed to protect public health, and with EPA's recent revision of those standards, more of our cities will be out of compliance in the coming years. Cutting down on methane and associated emissions will help our cities comply and help protect our most vulnerable populations.

### **Texas Is Unlikely to Deal with Methane Emissions On Its Own**

There are three main regulators in Texas that could, in theory, develop a plan for Texas that could equal or even surpass EPA's proposed methane regulations. Unfortunately, unlike some other states such as Colorado, these bodies do not seem likely to take on the issue anytime soon.

First, the Railroad Commission (RRC) of Texas currently has the authority to revise its antiquated flaring and venting rules. In fact, back in 2012, then Commissioner David Porter actually called on the RRC to work with industry and other stakeholders to look at ways to reduce methane emissions and the use of flaring and venting. He called for best practices, for revising Rule 32 (the Flaring and Venting rule) and for potential incentive approaches. Not much appears to have happened since then.

On the surface, Rule 32 prohibits flaring and venting. In practice, however, it is full of exceptions, as the data above indicates. Thus, by law and rule, oil and gas operators are allowed to flare for 10 days while they complete a well. Rule 32 specifically exempts tank vapors, gas released during drilling operations prior to completion, gas released during completion or recompletion, gas purged from compressor cylinders during startup, blowdown gas, fugitive emissions and amine and reboiler emissions among others. Generally, under Rule 32, gas cannot be vented for more than 24-hours, but can be flared for a long time. Thus, an actual Flare Permit is generally good for 45 days and up to 180 days, as long as emissions are below 50 million cubic feet per day.

Interestingly, now that the EPA has proposed regulating methane, Porter – now officially the Chairman of the RRC – has called on the EPA to stay out our state and has referred to the rule as a “war” on fossil fuels. Apparently, Chairman Porter believes that trying to avoid wasting valuable product is part of a war.

Second, our Texas Commission on Environmental Quality did adopt some basic rules covering air emissions back in 2011 known as the Permit-by-Rules (PBR) for oil and gas facilities. However, the more recent version of this PBR only covers certain counties in the Barnett-Shale and were not extended statewide. In addition, these rules – as well as a statewide maintenance, start-up and shut-down (MSS) rule that covers the oil and gas industry – do not directly address methane emissions, and have very limited reporting and inspection requirements. And while they have some impact on VOC emissions, they are not nearly as strong as the EPA proposals. Moreover, TCEQ commissioners have publicly stated they have no intentions of regulating methane on their own. We cannot expect any further efforts from this agency on the methane front, so action from EPA is critical to secure emission reductions in Texas.

Finally, there is the Texas Legislature itself. This body does not meet again until 2017 and has thus far made clear that it has no actual plan to regulate methane emissions. On the contrary, back in 2011, the Legislature passed SB 1134, which added regulatory hurdles to any additional air emission regulations that might impact the oil and gas industry. The legislation, signed by former Governor Rick Perry, states that any air emission regulations can not be adopted statewide without a cost-benefit analysis, without adequate monitoring data to verify the problem, and only if worst-case modeling data is ignored. Because TCEQ lacks funding to satisfy these monitoring and modeling requirements, the Commission's hands are essentially tied for issuing further air emissions regulations on its own, even if it were inclined to do so.

More recently, the Legislature passed HB 40, signed by Governor Abbot, which prevents local governments from regulating oil and gas operations beyond what state agencies allow. Without this law in place, cities or counties might consider establishing leak detection and repair programs for oil and gas developers, or creating surface measures to cut down on methane emissions. The new law means that any such programs might be deemed in excess of state-level policy and therefore contrary to the statute, and would very likely face legal challenge by parties opposed to the new programs.

Simply put, here in Texas, our present political reality requires that EPA take action to achieve any meaningful reductions of methane and co-pollutants from oil and gas infrastructure. The Lone Star Chapter of the Sierra Club wishes there existed the necessary political will to deal with the real impacts of air emissions from oil and gas facilities, but the reality is, sadly, to the contrary.

### **The Rule Itself- We Need A Strong Standard**

The EPA proposal is a good first step to addressing methane pollution from the oil and gas industry. It represents the first-ever regulate methane regulations for this sector in the United States (although EPA's final 2012 rules for VOC emissions from the gas sector have helped reduce methane as well).

We appreciate that EPA's proposal would cover not only oil and gas production wells, but also some of the downstream components of the gas industry as well. We believe the rule, if finalized, would help also reduce smog-forming emissions by curbing VOC pollution, helping citizens in areas with high ozone concentrations such as Dallas, Austin and San Antonio. Still, EPA's proposal—which currently covers new, modified, and reconstructed sources, could be made much stronger by extending to existing sources in the oil and gas sector as well. Existing equipment is far and away the largest source of methane emissions in the sector. Analysts have projected that by 2018, over 90% of oil and gas sector emissions will come from that now exist (and therefore are not covered under EPA's proposal). We therefore strongly urge EPA to propose existing source standards as soon as possible for all of the same equipment covered in the proposal.

Furthermore, EPA must regulate the full spectrum of sources that emit methane. While the current proposal covers many sources, there are some key pieces of equipment that are left out. Recently, Clean Air Task Force, Sierra Club, and NRDC released a joint report called *Waste Not* that laid out a series of common-sense, cost-effective actions that could be taken to reduce methane emissions from the oil and gas sector by close to 50 percent. EPA should review these proposals, which include not only the emission reduction methods that EPA is requiring for new sources in its proposal, but also include emission reductions for oil and gas sources that are not covered under the proposal, including storage vessels, liquid unloading operations, intermittent-bleed pneumatic devices, and compressors at well sites. Controls for all of these pieces of equipment will help reduce methane, VOC, and air toxics emissions.

One key way in which EPA's proposal could better control methane emissions would be to require much broader and more specific leak detection and repair (LDAR) program. We know that Texas facilities have problems with equipment leaks because citizens have experienced them first hand, and Texas lacks even the most basic LDAR requirements for in-state facilities. We suggest monthly – or, at a minimum, quarterly-- required inspections, and the frequency of these surveys should remain constant, rather than variable. EPA's proposal would allow operators to reduce the frequency of inspections in the future if they find that the percentage of leaking equipment falls below certain thresholds. This would encourage bad operators to ignore or overlook leaks in order to qualify for less frequent inspections. EPA must remove this perverse incentive from the final rule. We also believe requiring use of the best equipment (such as gas infrared cameras) for both initial surveys *and* re-surveys could help reduce substantially methane and co-pollutant emissions from leaking equipment. Finally, while the proposal requires that operators repair leaks within 15 days of discovery, they allow up to six months for instances in which "safety" is not an issue. This is simply too long an exception. Instead, EPA should grant no more than 60 days for the safety exception. If operators have not removed the hazard by that point,

they should be required to shut-down operations at that point in order to repair the leak.

In addition, EPA must include in the final rule emission control requirements for storage tanks of all sizes at both wells and at gathering and boosting stations in the production segment. Similarly, while the rule covers reciprocal and centrifugal compressors downstream of gas wells, it ignores compressors at the wells themselves. Again, in Texas, with some 15,000 wells dug per year, controlling emissions from well-site compressors is vitally important. We further urge EPA to cover intermittent or snap-acting pneumatic controllers—which are significant sources of emissions—as well as liquids unloading operations. Control techniques for these sources are discussed in detail in *the Waste Not* report.

It is critical that EPA make clear that capturing gas and routing it to a process or to a pipeline for eventual sale is the first-order emissions control method, in contrast to flaring. More flaring is not needed in Texas, where we already combust (and hence waste) too much gas. Moreover, while preferable to venting, flaring is often done in ways that do not fully combust the product, leading to greater emissions of methane, VOCs, and air toxics. This practice also impacting nighttime skies and tarnishes the viewsheds and air quality of local communities. Gas should therefore be captured and routed to a process, rather than flared, unless there is a safety risk or there is no other technological option available.

Where gas must be flared, the rule should establish a minimum destruction efficiency of 98 percent, the recommendation of the Center for Sustainable Shale Development (CSSD) in a recent report. In this study, the CSSD recommends that when flaring is permitted during well completion, re-completions or workovers, the following requirements must apply:

- Raised/elevated flares or engineered combustion device with a reliable continuous ignition source.
- 98% destruction efficiency.
- Development well: flaring no more than 14-days (for life of well).
- Exploratory/Extension wells: flaring no more than 30-days (for life of well).

No visible emissions from flares except for periods not to exceed a total of five minutes during any two consecutive hours.

In addition, our understanding is that many of the additional requirements would only be applied in areas that contribute to ozone formation. EPA has also proposed control technique guidelines, or CTGs, for existing oil and gas equipment that contribute to ozone formation in areas designated “moderate” non-attainment or higher. States then use these CTGs as a presumptive standard when formulating the reasonably available control technology (RACT) requirements for their non-attainment implementation plans. Therefore, these CTGs will not apply across the entire state of Texas, but only to those areas in moderate non-attainment, which includes primarily the Dallas-Fort Worth Area,

although some other areas may also be designated at moderate non-attainment in the future based on EPA's new 70 ppb standard. While EPA's CTGs may have some eventual impact on ozone formation and result in controls at a narrow subset of Texas sources, far more is needed to combat methane and other emissions from existing oil and gas infrastructure. This is why an existing source rule is needed, and is needed now.

Again, our experience in Texas tells us that that "contributing" zone for ozone formation is not only the immediate near non-attainment and non-attainment areas within metropolitan areas, but can stretch for hundreds of miles. Thus, all the development of oil and gas in South Texas has been shown both by the Alamo Council of Governments but by many other scientific and monitored data to be contributing to ozone formation. Thus, emissions in Karnes County – well east of the San Antonio area – appear to be contributing to ozone formation in Bexar County. Indeed, San Antonio is not likely to comply with the new 70 parts per billion standard for ground-level ozone and we want to make sure the proposed rules apply widely to the state, and not to very narrow areas such as the immediate non-attainment areas of Dallas-Fort Worth and San Antonio.

Finally, we suggest that the description of the rule and the cost-benefit analysis fully account for the added benefits of the captured and useful product. This is a cost savings to industry since the product can then be sold instead of lost. Although EPA includes the cost savings from conserved gas in the production and processing segments, it does not account for savings in the transmission and storage segment, even society benefits from those savings. In addition, EPA should emphasize in its cost-benefit analysis the co-benefits of reduced ground-level ozone, particulate matter, and toxic air pollutants. Thus, as EPA and Texas assess how to reduce ozone and PM levels (as well as regional haze), this proposed rule will help achieve these ends, and the health benefits and reduced compliance costs through this rule should be calculated.

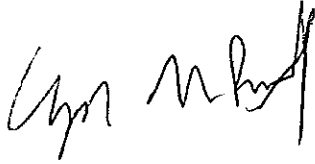
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The Lone Star Chapter of the Sierra Club supports EPA moving forward on new rules for methane and VOC emissions the oil and natural gas sector. We support the rule's coverage not only of upstream wells and associated equipment, but of downstream processing plants and transmission and storage infrastructure as well. We support extending the rules' coverage not only to new and modified infrastructure, but to existing infrastructure as well. Specific improvements are also needed in the rule to cover intermittent-bleed pneumatic controllers, storage tanks of all sizes, compressors at the wells themselves, and liquids unloading operations. Finally, the proposed LDAR program must be more robust and ensure that operators are not given any bad incentives to avoid finding and repairing leaks. The program should ensure that leaks are detected regularly and promptly fixed without any omissions.



The EPA is to be commended for proposing commonsense measures to reduce pollution. Here in Texas, because of the widespread political power of the oil and gas industry and inaction by our regulatory and political leaders, we need such measures to be implemented.

Sincerely,

A handwritten signature in black ink, appearing to read "Cyrus Reed". The signature is written in a cursive, somewhat stylized font.

Cyrus Reed  
Conservation Director  
Lone Star Chapter, Sierra Club