PRIVATE EQUITY STAKEHOLDER PROJECT

Environmental Protection Agency
Administrator Michael S. Regan
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

January 31, 2022

RE: Docket ID No. EPA-HQ-OAR-2021-0317
Proposed Rule on Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources for the Oil and Natural Gas Sector

Dear Administrator Regan,

We write to commend the Environmental Protection Agency on its proposed Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources for the Oil and Natural Gas Sector. We support the proposed methane rules as part of fulfilling the Agency's mandate to protect public health and the environment, and suggest a few ways to strengthen them.

We write to share our views as the Private Equity Stakeholder Project, a non-profit that seeks to identify, engage, and connect stakeholders affected by private equity with the goal of engaging investors and empowering communities, working families, and others impacted by private equity investments.

We appreciate that the proposed rule takes important steps to significantly and quickly reduce methane and other harmful pollutants, with the notable inclusion of existing sources as well as new sources across the oil and gas industry. We are submitting a few suggestions on how the proposed rules could be strengthened to achieve the crucial objectives of rapidly reducing methane emissions and other harmful pollutants that disproportionally impact low-income communities.

The EPA is best positioned to achieve these goals, given that U.S. oil and gas production is the largest industrial source of methane pollution, emitting more methane than the total emissions of all greenhouse gases from 164 countries combined.[1]

It is notable that while the oil and gas industry features a range of owners, the share of private ownership is growing. Rystad Energy found that by May 2021, while publicly listed horizontal drillers have shrunk as a share of the industry, private operators have grown and broken records across various regions.[2]

A significant player among private operators are private equity firms that may hold dozens or even hundreds of portfolio companies, but whose holdings are typically shielded from public scrutiny due to exemptions

[1] https://www.epa.gov/newsreleases/us-sharply-cut-methane-pollution-threatens-climate-and-public-health
[2] https://www.rystadenergy.com/newsevents/news/newsletters/UsArchive/shale-newsletter-June-2021/

from public disclosure requirements under current financial regulations. This means investors and the public do not have a full accounting of private equity's fossil fuel holdings, let alone their environmental and community impacts.

In 2021, Private Equity Stakeholder Project analyzed the energy holdings of ten large private equity buyout firms. We found that these private equity firms, together, held 80 percent of their energy holdings in fossil fuel companies across the energy sector, including hundreds of companies engaged in exploration and production, pipelines and storage facilities, where methane emissions are acutely concentrated.[3] We also found that although some private equity firms or their portfolio companies in the oil and gas industry have made statements or claim to have adopted internal policies around emissions reductions, the lack of clear regulatory requirements and public disclosure leads to subjective, sometimes misleading rhetoric and flimsy internal policies.[4] The opacity of the private equity industry and its substantial investments across oil and gas production confirms that the EPA's proposed methane rules have an essential role for achieving emissions reductions.

We believe the proposed rules are cost effective and reasonable, and wholeheartedly underscore the EPA's assertion that the proposal would significantly reduce emissions, with benefits that far outweigh the costs of compliance.[5] In the following pages we examine the need for improved regulatory action, we review the growth of private equity within the energy sector and explore its associated concerns in several basins, including the Permian Basin, and suggest concrete steps to improve the EPA's methane rules to achieve the reductions needed to meet broader climate goals.

Regulatory Action is Timely and Urgent

Taking action to reduce methane emissions is both urgent and timely. In August, the Intergovernmental Panel on Climate Change (IPCC) released a report[6] that highlights the costs of inaction, details the devastating impacts of climate change around the world, and underscores that we are running out of time to tackle this crisis. Among the causes of this crisis, this alarming report identifies methane pollution as one of the key drivers of climate change.[7]

Speaking at the launch of the new IPCC report, UN Secretary General Antonio Guterres stated that "Unless there are immediate, rapid and large-scale reductions in greenhouse gas emissions, we will be unable to limit global heating to 1.5 degrees Celsius … The consequences will be catastrophic."[8]

The International Energy Agency's most recent report *Curtailing Methane Emissions from Fossil Fuel Operations* calculated that the world must cut methane emissions from oil and gas 75% by 2030 in order to stay on path with the International Panel on Climate Change's climate plan.[9] As lead contributor to the climate crisis, the United States has a responsibility to lead that effort.

---

[3] https://pestakeholder.org/wp-content/uploads/2021/10/PESP_SpecialReport_ClimateCrisis_Oct2021_Final.pdf
[4] https://pestakeholder.org/wp-content/uploads/2021/10/PESP_SpecialReport_ClimateCrisis_Oct2021_Final.pdf
[5] https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry/epa-proposes-new-source-performance
[6] https://www.ipcc.ch/report/ar6/wg1/
[7] https://www.reuters.com/business/environment/save-planet-focus-cutting-methane-un-climate-report-2021-08-09/
[8] https://abcnews.go.com/International/wireStory/chief-urges-rapid-emission-cuts-curb-climate-change-80052019
[9] https://www.iea.org/reports/curtailing-methane-emissions-from-fossil-fuel-operations

Each year, the oil and gas industry releases 16 million metric tons of methane,[10] and without immediate action, methane pollution from the industry will continue to skyrocket.[11]

The potency of methane as a greenhouse gas that is over 86 times more powerful than carbon dioxide[12] makes it a major contributor to climate change. It is the main component of natural gas and it is released into the atmosphere throughout the entire oil and gas extraction and production process. These operations also pollute the places where people live, work, learn, and play with toxic volatile organic compounds (VOCs) and other hazardous substances that can cause respiratory illness, headaches, cancer, and a range of other health problems.

Methane pollution from oil and gas is underreported. Since the start of the fracking boom methane pollution has grown at an alarming rate and repeated studies show oil and gas production is to blame.[13] Direct-measurement-based, peer reviewed studies[14] show oil and gas companies emit more than two times what they report to the Environmental Protection Agency (EPA). These studies confirm fieldwork by researchers and organizations like Earthworks using industry-standard Optical Gas Imaging (OGI) cameras which has consistently shown methane pollution and industry and state regulators' failure to stop it.

Furthermore, when companies rush to extract oil, some forgo investments necessary to capture and sell gas and instead burn it as a waste product, emitting a host of climate and health-harming pollutants. The U.S., together with many other countries, has committed to eliminating routine flaring by 2030, and many international oil producers have endorsed this pledge. The Clean Air Task Force recommended an interim goal will be important to ensure near-term progress to eliminate flaring; an 80% reduction in flaring emissions is an appropriate interim target for 2025.[15]

Private Equity's Growing Presence

Private operators have grown significantly as a share of horizontal drilling in recent years. Rystad Energy found that in 2021:[16]

> "Private operators accounted for 48.6% of the country's total horizontal rig activity in May. This is a record high, and 13 percentage points more than the previous peak for this time of the year, set in May 2018. This same trend holds at a regional level across all major oil & gas basins. In the same month, private operators accounted for 67.3% of horizontal rig activity in the Haynesville, 47.1% in the Permian, 43.5% in the Appalachia and 38.5% in the other major oil regions of the Eagle Ford, Bakken and Niobrara combined. That's a record-high share in each of those basins."

[10] http://blogs.edf.org/energyexchange/files/2021/05/2019_EDF-CH4-Estimate.pdf
[11] http://blogs.edf.org/energyexchange/files/2021/05/2019_EDF-CH4-Estimate.pdf
[12] https://www.scientificamerican.com/article/how-bad-of-a-greenhouse-gas-is-methane/
[13] https://www.nationalgeographic.com/environment/article/fracking-boom-tied-to-methane-spike-in-earths-atmosphere
[14] https://acp.copernicus.org/articles/21/4339/2021/
[15] https://cdn.catf.us/wp-content/uploads/2020/04/21092556/Path_to_65pc_OG_reduction-Dec2020_update.pdf (page 7)
[16] https://www.rystadenergy.com/newsevents/news/newsletters/UsArchive/shale-newsletter-June-2021/

Private equity firms continue to actively acquire oil and gas assets across the U.S., although the lack of routine disclosures makes quantifying the activity challenging. Recent reporting by the *Colorado Sun* found 42,000 ownership changes of oil wells across Colorado in the past five years, with private equity-backed companies frequently involved in both sides of transactions.[17] For example, the reporting found that across Colorado's Western Slope, private equity-owned operators have acquired 12,000 wells.[18] These include Laramie Energy (whose backers include Avista Capital) 1,500 wells acquired in 2015;[19] Caerus Oil and Gas's 2017 acquisition of over 3,000 wells[20] backed by Oaktree Capital; and TEP Rocky Mountain backed by Kayne Anderson and Warburg Pincus.[21] TEP Rocky Mountain is an affiliate of Terra Energy, that acquired 6,300 Western Slope wells from four other operators (including some from a 2020 bankruptcy of the prior operator), according to the *Sun.*[22]

Other examples of recent private equity acquisitions include KKR merging its Independence Energy with Contango Oil & Gas Co to create a consolidation-focused oil and gas company with an enterprise value of about $5.7 billion,[23] with assets across the central and southern states.[24] The new company subsequently acquired Wyoming drilling assets in the Wind River Basin from ConocoPhillips.[25]

Separately, Warburg Pincus-owned Citizen Energy acquired a portfolio of oil and gas production assets located around Tulsa, Oklahoma, which planned to increase production by approximately 8,000 barrels of oil equivalent per day.[26]

Ensign Natural Resources, backed by Warburg Pincus and Kayne Anderson Capital Advisors,[27] took over Eagle Ford shale upstream asset from Reliance Industries.[28]

As private equity firms continue to acquire growing swaths of the oil and gas industry, EPA regulations are among the only tools available to ensure reporting on and mitigation of emissions. The following section provides a deeper analysis of private equity's footprint in the Permian Basin and highlights several associated concerns.

---

[17] https://coloradosun.com/2022/01/19/colorado-oil-and-gas-wells-are-constantly-changing-hands-some-risk-becoming-costly-orphans-along-the-way/
[18] https://coloradosun.com/2022/01/19/colorado-oil-and-gas-wells-are-constantly-changing-hands-some-risk-becoming-costly-orphans-along-the-way/
[19] https://www.laramie-energy.com/about/
[20] https://www.ogj.com/general-interest/article/17289127/caerus-to-buy-encanas-piceance-assets-for-735-million
[21] ://www.hartenergy.com/companies/terra-energy-partners-llc
[22] https://coloradosun.com/2022/01/19/colorado-oil-and-gas-wells-are-constantly-changing-hands-some-risk-becoming-costly-orphans-along-the-way/
[23] https://www.reuters.com/business/energy/kkrs-independence-contango-merge-2021-06-08/
[24] https://contango.com/operations
[25] https://www.houstonchronicle.com/business/energy/article/ConocoPhillips-to-sell-Wyoming-natural-gas-wells-16300941.php
[26] https://www.businesswire.com/news/home/20211011005686/en/Citizen-Energy-Expands-Mid-Continent-Footprint-with-Gas-Rich-Bolt-On-Acquisition
[27] https://ensignnr.com/about-us/
[28] https://www.prnewswire.com/news-releases/ensign-natural-resources-announces-purchase-of-eagle-ford-shale-acreage-301418140.html

Private Equity: Examples from the Permian Basin

In the past decade, the Permian Basin, in west Texas and southeast New Mexico, has become one of the world's most prolific oil and gas fields,[29] and as such, a major source of methane plumes.[30]

The Environmental Defense Fund (EDF) reported that satellite data reveals the Permian is the nation's highest methane-emitting oil and gas basin.[31] In a journal article published in April 2020, scientists found that as much as 3.7 percent of the gas production in the Permian Basin is being vented and leaked into the atmosphere – this is 60 percent higher than the national average leakage rate.[32] Methane is a toxic byproduct of the Permian Basin's oil boom and negatively impacts the health of people living nearby.

As the U.S. grapples with escalating deadly and costly climate-induced disasters,[33] oil and gas production in the Permian Basin is expected to grow substantially.[34] But a growing percentage of those assets are expected to be managed by private operators, such as private equity firms, which includes assets the current EPA rules refer to as "low emitting wells."

A review of drilling permits suggests that the market share of private operators in the Permian is likely to increase. Rystad's top-30 private operators list, based on the number of approved new horizontal drill permits between January and May 2021, is dominated by Permian-focused producers,[35] including private equity-backed operators such as Tap Rock (backed by NGP Capital),[36] CrownQuest (backed by Lime Rock Partners),[37] and Spur Energy Partners (backed by KKR).[38]

The Environmental Defense Fund's (EDF) 2021 Permian Methane Analysis Project (PermianMAP) collected data to map methane emissions using various technologies including aircraft, methane sensors installed in towers across the study area, on-the-ground mobile detection units and satellite data.[39] This

---

[29] https://www.msn.com/en-us/money/markets/permian-to-break-daily-oil-production-record-in-january/ar-AAS1feF

[30] https://www.reuters.com/markets/commodities/high-rates-methane-spewing-us-permian-oilfield-operations-report-2021-12-14/

[31] https://permianmap.org/

[32] Yuzhong Zhang et al., "Quantifying Methane Emissions from the Largest Oil-Producing Basin in the United States from Space," *Science Advances*, April 2020, https://doi.org/10.1126/sciadv.aaz5120.

[33] https://www.pbs.org/newshour/science/2021-came-close-to-tying-the-record-for-billion-dollar-disasters

[34] Oil Change International, Earthworks, and Center for International Environmental Law, "The Permian Basin Climate Bomb Video Transcript," Permian Climate Bomb, 2021, https://www.permianclimatebomb.org/chapter-1-video-transcript.

[35] Rystad Energy, "Private Operators May Soon Account for More than 50% of US Onshore Rig Activity," Rystad Energy, June 2021, https://www.rystadenergy.com/newsevents/news/newsletters/UsArchive/shale-newsletter-June-2021/.

[36] Tap Rock Resources, "Capital Partner - NGP Energy Capital Management," Tap Rock Resources, January 6, 2022, https://www.taprk.com/capital-partner.

[37] http://crownquest.com/operations/

[38] BusinessWire, "KKR and Spur Energy Partners Form Partnership to Pursue Oil and Gas Opportunities," May 14, 2019, https://www.businesswire.com/news/home/20190514005284/en/KKR-Spur-Energy-Partners-Form-Partnership-Pursue; Spur Energy Partners, "KKR," Spur Energy Partners, January 6, 2022, https://www.spurenergy.com/kkr.

[39] https://permianmap.org/our-research

research provides important insights into methane emissions that may not otherwise have been accurately tracked or reported.

We analyzed the operators in the PermianMAP sample and found that nearly 34 percent of the upstream and midstream operators surveilled by EDF are either owned by private equity firms or have joint ventures with them (See Appendix 1).[40] Private equity investments take different forms, with examples in the data set of private operators with private equity ownership, and other examples of publicly listed oil and gas companies that have entered into joint ventures with private equity firms enabling further oil and gas activity. Together these private equity-backed operators emit nearly 38 percent of the methane detected in the sample.

We also learned that private equity backed operators in the sample emit higher rates of methane than their non-private equity-backed counterparts. The average emission rate of private equity-backed operators in the summer of 2021 was 3,507 kilograms/hour – over 15 percent higher than non-private equity-backed operators.[41]

Some of these operators with private equity backing from Figure 1 below are among the worst methane polluters. For instance, flyovers of the largest polluter in the sample's operations, Targa Resources, which had a joint venture with Stonepeak Infrastructure Partners,[42] detected methane plumes totaling over 22,000 kg/hr. These large emission rates are not one-off events. Rather, these totals represent persistent detections of methane emissions as 62 percent of the flyovers over Targa Resources' operations detected methane emissions. Methane emissions were detected in over 50 percent of the flyovers for other private equity-backed operators such as Navitas Midstream (64 percent),[43] and Enlink Midstream (48 percent).[44]

---

[40] EDF's Summer 2021 PermianMAP data includes 71 operators in the Permian sub-basins Delaware and Midland. In our analysis, we only included those operators that experienced three or more flyovers to document emissions. Thus, the total sample size is 64 operators, from which 23 are private equity-backed and 41 are not private equity-backed. From this sample of 64 operators, the top 10 methane polluters are shown in Figure 1.

[41] Environmental Defense Fund, "Methodology for EDF's Permian Methane Analysis Project (PermianMAP)," PermianMAP, November 17, 2021, https://www.edf.org/sites/default/files/documents/PermianMapMethodology_1.pdf; Also based on PESP's analysis of Environmental Defense Fund's Permian MAP summer 2021 data. https://permianmap.org/

[42] Stonepeak Partners, "Targa Resources Corp. – JV Co.," January 6, 2022, https://stonepeakpartners.com/investments/targa-resources-jvco/. $960 million joint venture was announced in 2018, and covered midstream pipeline assets originating in the Permian, https://www.globenewswire.com/news-release/2018/02/06/1333964/14074/en/Targa-Resources-Announces-1-1-Billion-of-Development-Joint-Ventures-with-Stonepeak-Infrastructure-Partners.html

[43] Navitas was formed by private equity firm Warburg Pincus in 2014 https://www.navitas-midstream.com/about/. Based on PESP's analysis of Environmental Defense Fund's Permian MAP summer 2021 data. https://permianmap.org/

[44] Enlink Midstream lists Global Infrastructure Partners as a strategic partner (https://www.enlink.com/our-company/), and announced a $3 billion acquisition in 2018 (https://investors.enlink.com/news-and-presentations/press-releases/2018/18-07-2018-201352010).

From our analysis, four of the top ten methane polluters profiled in EDF's data are private equity-backed (see Figure 1).[45]

Figure 1: Top Methane Polluters

	Operator	Total CH4 Emission Rate (kg/hr)	Private Equity Firm
1	Targa Resources	22,408.97	Stonepeak Infrastructure Partners
2	Energy Transfer Company	18,184.75	NA
3	Navitas Midstream	16,943.45	Warburg Pincus
4	EOG Resources	10,732.04	NA
5	Occidental Petroleum	10,712.66	NA
6	ConocoPhillips	10,480.22	NA
7	Pioneer Natural Resources	9,176.15	NA
8	Devon Energy Production	8,107.47	Quantum Energy
9	Western Midstream Partners	7,131.97	NA
10	Enlink Midstream	7,017.97	Global Infrastructure Partners

Note: The rankings are determined by the total methane emission rates detected by operator, from EDF's PermianMAP data.

Private equity-backed operators have a track record of releasing problematic levels of methane into the atmosphere. In the Environmental Defense Fund's analysis of 2018 flaring data, it learned that private equity firm NGP Capital's Steward Energy II[46] was the 60th largest Permian natural gas producer, but it was the fourth largest flarer by volume. Steward flared more natural gas than XTO Energy, despite XTO having produced more than 10 times the amount of natural gas as Steward. Steward was found to flare approximately 65 percent of all the gas it produces – meaning that about two-thirds of the natural gas Steward extracts from the ground is flared – further damaging the environment and nearby communities.[47]

[45] EDF's Summer 2021 PermianMAP data includes 71 operators in the Permian sub-basins Delaware and Midland. In our analysis, we only included those operators that experienced three or more flyovers to document emissions. Thus, the total sample size is 64 operators, from which 23 are private equity-backed and 41 are not private equity-backed. From this sample of 64 operators, the top 10 methane polluters are shown in Figure 1.
Devon has a partnership with Quantum Energy in the Permian: https://www.globenewswire.com/news-release/2019/11/06/1942509/0/en/QL-Capital-Partners-Enters-into-Partnership-with-Devon-Energy-to-Fund-Delaware-Basin-Gas-Gathering-Infrastructure.html

[46] Steward Energy, "History," January 6, 2022, https://stewardenergy.net/about-steward/.
[47] Colin Leyden, "New Permian Data Show How Worst Offenders Prevent Progress on Flaring," Texas Clean Air Matters - Environmental Defense Fund, August 14, 2019, https://blogs.edf.org/texascleanairmatters/2019/08/14/new-permian-data-show-how-worst-offenders-prevent-progress-on-flaring/.

Strengthening the EPA's proposed methane rule

While the EPA's proposed methane safeguards are an important step in the right direction, they do not go far enough, and must be strengthened in order to protect communities on the frontlines of oil and gas development and confront the climate crisis head-on. PESP agrees with Earthworks' recommendation that the EPA must strengthen their proposed rule to protect public health and the climate, through a supplemental rulemaking or other action. The incursion of private operators and private equity-backed operators increases the urgency of stronger safeguards.

PESP shares the recommendations from many NGOs working in the field in urging the EPA to do the following:

1. Strengthen its monitoring requirements to require frequent leak detection and repair inspections at all wells. EPA has recognized in its proposal that a "low production" exemption is not appropriate. However, under the current proposal, operators that calculate lower potential emissions (less than 3 tons per year of methane) could avoid all monitoring after just one initial inspection. Rigorous monitoring requirements that reduce emissions by 80 to 90 percent (consistent with EPA's estimates for quarterly to monthly inspections) must apply comprehensively across all facilities.

   This includes wells with a calculated potential to emit below 3 tons per year. These calculations are based on emission factors that very likely underrepresent the true extent of fugitives originating from these wells, and do not account for equipment failures or malfunctions that can lead to super-emitting events. Furthermore, marginal wells are mostly owned by larger companies[48] that have the capacity to ensure compliance. Thus, EPA should not provide special and more lenient requirements for these wells, but should mandate regular monitoring at all wells, regardless of their calculated potential to emit.

2. Eliminate routine flaring. EPA's proposal does not go far enough to address pollution from flaring. EPA's final rule must prohibit the practice of routine flaring at oil and gas sites. When companies rush to extract oil, some forgo investments necessary to capture and sell gas and instead burn it as a waste product, emitting a host of climate and health-harming pollutants. Flaring is a wasteful practice and a large source of methane, carbon dioxide, nitrogen oxides, VOCs, and HAPs. Capturing natural gas that would otherwise be vented or flared reduces significant amounts of pollution and even generates revenue for operators. EPA must eliminate flaring except in emergency situations. EPA must also ensure that flares are operating properly and are frequently inspected to ensure they are lit and operating at maximum efficiency.

3. Incorporate community monitoring that allows frontline communities and other observers to engage with regulators when there is documented evidence of pollution or ongoing emissions. EPA should accept evidence presented by communities, as well as monitoring results from third parties. This will help the agency enforce comprehensive rules on the millions of wells and other emission sources in the oil and gas sector and prioritize fixing major leaks that are harming nearby communities more quickly.

[48] http://blogs.edf.org/energyexchange/files/2021/11/MarginalWellFactsheet2021v2.pdf

4. Require monitoring and plugging of abandoned wells that are leaking methane. According to the *Reuters* investigation, which conducted a comprehensive review of the available data in 2020,[49] orphaned and abandoned wells in the United States were collectively responsible for emitting 281,000 tons of methane into the atmosphere in 2018. While orphaned wells no longer have an identifiable owner, abandoned wells are typically defined as an unproductive well with a known owner/operator. EPA should require twice-a-year monitoring at idle and unplugged wells, while also including a requirement for companies to submit comprehensive well closure plans in order to properly cap wells at their end of life.

These important gaps on critical issues must be addressed to ensure public health is prioritized, frontline communities are protected, and oil and gas companies are held accountable.

Methane pollution from the oil and gas sector is accelerating the pace of climate change and harming the health of our families and communities — and it is a problem that is only getting worse. There is no time to waste, and we cannot miss out on this opportunity to create the strongest standards possible to limit pollution from this industry.

We cannot miss out on this opportunity to cut methane pollution, safeguard public health, and act on climate. That means strengthening the proposed rules to finalize comprehensive methane safeguards that reign in methane emissions and flaring from oil and gas companies and hold polluters accountable.

EPA rules to cut methane are a crucial first step down the road to what is truly needed to stave off climate catastrophe. By using the full force of the Clean Air Act, the Clean Air Task Force has mapped how the EPA can cut methane pollution from the oil and gas industry 65% by 2025.[50]

To reign in the emissions driving climate change, additional steps must be taken to ensure a managed decline of fossil fuel extraction that centers frontline communities and industry workers to ensure a just transition.

Time to Act

We appreciate the opportunity to comment on the proposed methane rules. Methane emissions and other greenhouse gases from oil and gas operations are accelerating the pace of climate change and harming the health of our families and communities — and it's only getting worse.

Technology has given greater insights into the frequency of methane leaks and plumes, but mitigation and accountability has lagged.[51] Now is the time for the EPA to move forward with these important rules before it's too late.

---

[49] https://www.reuters.com/article/us-usa-drilling-abandoned-specialreport/special-report-millions-of-abandoned-oil-wells-are-leaking-methane-a-climate-menace-idUSKBN23N1NL

[50] https://www.catf.us/resource/reducing-methane-from-oil-and-gas/

[51] Examples of plumes in Oklahoma https://www.bloomberg.com/news/articles/2022-01-19/methane-cloud-spotted-near-oklahoma-natural-gas-pipelines?cmpid=BBD012022_GREENDAILY&utm_medium=email&utm_source=newsletter&utm_term=220120&utm_campaign=greendaily, Texas https://www.bloomberg.com/news/articles/2021-12-13/mysterious-methane-plumes-spotted-above-texas-oil-and-gas-fields, and New Mexico

We urge the EPA to enact the proposed rule to cut methane emissions, with additional measures of frequent monitoring of all wells, a prohibition on routine flaring and empowering frontline communities to conduct monitoring. These regulations are a crucial step toward keeping global temperature rise with in a 1.5 degree pathway, to ensure a livable future for all Americans and the broader global community.

Sincerely,

Alyssa Giachino
Research/Campaign Director on Climate
Private Equity Stakeholder Project

https://www.bloomberg.com/news/articles/2021-10-12/methane-plume-above-new-mexico-gas-wells-spotted-from-space

Appendix 1: Total Methane Pollution by Operator, from EDF's Summer 2021 PermianMAP

	Operator	Total CH4 Emission Rate (kg/hr)	Private Equity Firm
1	Targa	22,408.97	Stonepeak Infrastructure Partners
2	Energy Transfer Company	18,184.75	NA
3	Navitas Midstream	16,943.45	Warburg Pincus
4	EOG Resources	10,732.04	NA
5	Occidental Petroleum Company	10,712.66	NA
6	ConocoPhillips	10,480.22	NA
7	Pioneer Natural Resources USA	9,176.15	NA
8	Devon Energy Production	8,107.47	Quantum Energy
9	Western Midstream Partners	7,131.97	NA
10	Enlink Midstream	7,017.97	Global Infrastructure Partners
11	DCP Midstream Partners	6,809.48	NA
12	WTG Gas Processing	6,636.24	Stonepeak Infrastructure Partners; First Infrastructure Capital
13	Endeavor Energy Resources LP	5,556.69	NA
14	BP-BPX	5,260.04	NA
15	Catalyst Midstream	5,146.40	NA
16	Crownquest Operating LLC	3,964.35	NA
17	Royal Dutch Shell	3,922.28	NA
18	Enterprise Products	3,869.88	NA
19	Diamondback Energy Inc	3,445.65	Carlyle
20	Lario Oil and Gas	3,272.77	Concentric Equity Partners
21	Rosehill Operating Company	3,093.78	EIG Global Energy Partners
22	BTA Oil Producers LLC	2,621.75	NA
23	Cimarex Energy	2,284.85	NA
24	SM Energy	2,103.18	NA

25	Berkshire Hathaway Energy	2,062.47	NA
26	Murchison Oil and Gas	1,936.32	NA
27	Crestwood Equity Partners	1,737.61	NA
28	Ovintiv USA	1,588.17	NA
29	Mewbourne Oil	1,569.10	NA
30	Exxon Mobil-XTO	1,530.67	NA
31	Petroplex Energy	1,416.37	NA
32	Chevron USA	1,270.72	NA
33	Gateway Gathering and Marketing	1,251.36	NA
34	Apache Corporation	1,087.85	Kayne Anderson
35	Earthstone Operating	1,037.80	EnCap Investments
36	Hunt Oil	899.05	NA
37	Scout Energy Management	887.39	Scout Energy Partners
38	MPLX LP	793.23	NA
39	Lucid Energy	784.67	Riverstone
40	Eagleclaw Midstream	737.96	Blackstone Group; I Squared
41	Iskandia Energy Operating	626.16	NA
42	Arch Oil and Gas	485.87	NA
43	Summit Petroleum	326.96	NA
44	Daylight Petroleum	325.20	NA
45	Ranger 40 Petroleum	308.02	NA
46	Marathon Oil Corporation	306.99	NA
47	Rio Oil and Gas Permian	290.84	Quantum Energy
48	Atlantic Operating	286.79	NA
49	Black Swan Operating	265.85	EnCap Investments
50	Ring Energy	260.69	Carlyle Group
51	Enstor	226.61	ArcLight

52	Oneok Inc	215.61	NA
53	Cutbow Operating	173.00	NA
54	Burleson Petroleum	169.30	NA
55	Salt Creek Midstream LLC	166.84	Ares Management; ARM Energy
56	Santo Petroleum	162.75	NA
57	Boaz Energy Operating	156.03	NGP Capital
58	Petrolegacy Energy	134.76	EnCap Investments
59	El Paso Natural Gas (EPNG)	121.45	NA
60	Kimlar Oil	119.64	NA
61	Medallion Midstream LLC	107.54	Global Infrastructure Partners
62	Watusi Energy	107.35	NA
63	Walsh and Watts	105.85	NA
64	Matador Resources Company	84.57	Five Point Capital

EDF's Summer 2021 PermianMAP data includes 71 operators in the Permian sub-basins Delaware and Midland. In our analysis, we only included those operators that experienced three or more flyovers to document emissions. Thus, the total sample size is 64 operators, from which 23 are private equity-backed and 41 are not private equity-backed. From this sample of 64 operators, the top 10 methane polluters are shown in Figure 1.