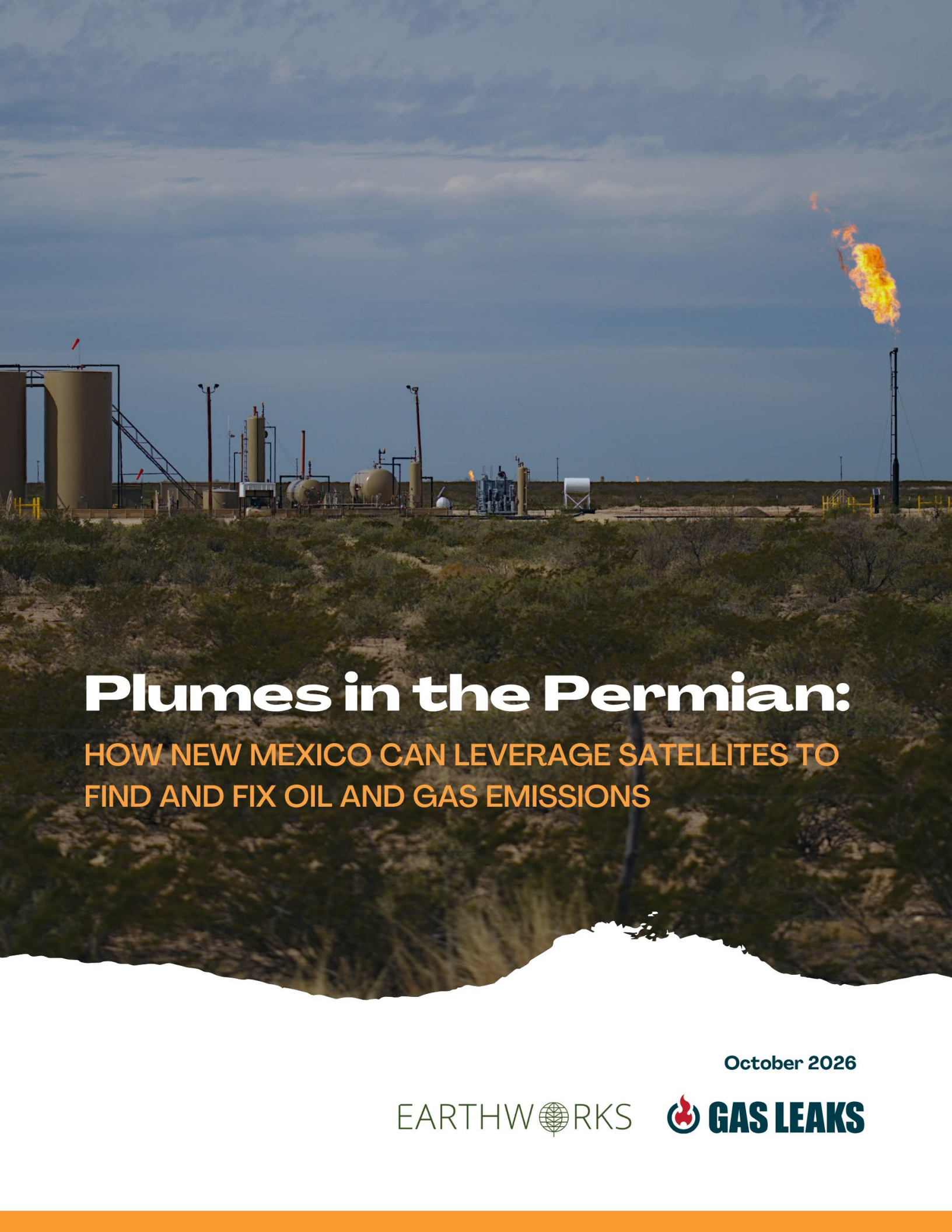




Plumes in the Permian:

HOW NEW MEXICO CAN LEVERAGE SATELLITES TO
FIND AND FIX OIL AND GAS EMISSIONS

October 2026

EARTHWORKS

 **GAS LEAKS**



Executive Summary

In 2021 and 2022, New Mexico led the country as it adopted new rules intended to slash air pollution from oil and gas operations, which banned routine gas venting and flaring and required operators to find and fix leaks. The implementation of these rules also established a commendable state program for data collection and reporting on operators' gas losses across various stages of production.

Studies have shown that emissions rates in New Mexico's Permian Basin are lower than those just across the border in Texas, in part, due to the adoption of these pioneering rules. However, there is some disagreement about the extent of the industry's real-world emissions performance as demonstrated in a recent study [released](#) by two for-profit companies and [touted](#) by the industry, as compared to more comprehensive independent [research](#).

As ground, aerial, and even space-based pollution observation data has become more readily available, researchers from Earthworks and Gas Leaks Project decided to undertake an analysis of the New Mexico Permian Basin. This investigation examined methane pollution incidents spanning January 1, 2025, through April 30, 2026, using publicly accessible [Carbon Mapper](#) data from satellites such as Planet Lab's [Tanager-1](#), ground-based optical gas imaging, and state reported emissions data.

Key findings include:

- 166 large methane pollution incidents (often referred to as super-emitter events) were identified and linked to 121 oil and gas facilities in the New Mexico Permian Basin.
- For 6 of the 121 facilities, on-the-ground evidence suggests longer-running emissions events.
- Midstream operations have an outsized emissions impact, accounting for 105 of the 166 methane pollution incidents.
- To an overwhelming extent these super-emitter events do not appear in the venting, flaring, and emissions data operators reported to the state.
 - Of the plumes in this dataset attributed to facilities that have air permits, only 2% overlap with excess emissions events reported to the state.
 - Of the plumes in this dataset attributed to facilities that reported venting and flaring data to the state, only 10% reported a significant gas venting or flaring event on the same day a super-emitter plume was observed at that location by satellite, while 47% of facilities that filed aggregate monthly gas venting and flaring data reported venting zero gas at these locations for the entire month.
- Unknown or unmitigated super-emitter events carry potentially significant health harms for local communities as well as oilfield workers servicing these operations. Even though much of the Permian Basin is sparsely populated, modeling by PSE Healthy Energy of 29 methane events over this same time period suggests that nearly 37,000 people in Eddy and Lea counties may have been at risk of unsafe benzene exposure.

Based on these findings, several recommendations are offered for New Mexico to enhance emissions mitigation and data accuracy, including: 1) provide deeper scrutiny of the midstream sector emissions; 2) use satellite detections to review permitting; 3) finalize rules to establish an effective state super-emitter program; and, 4) use satellite data to enforce and improve state reporting requirements.



Methods

DATA COLLECTION

Methane plume data was collected via Carbon Mapper¹ API endpoints in two forms: 1) as DBSCAN (Density-Based Spatial Clustering of Applications with Noise) “plume sources” and 2) individual plumes. Plume sources are made up of individual plumes, clustered using DBSCAN with an epsilon value of 250 meters – the default cluster distance determined by Carbon Mapper for Oil and Gas plume sources. Plume sources can be thought of as all of the plumes associated with a “facility.”

This report considered plume sources from Carbon Mapper’s database that met the following criteria:

- From the oil and gas sector (as defined by Carbon Mapper)
- Only methane based detections
- Located within the Permian Basin of New Mexico
- At least one plume detected between January 1, 2025, and April 30, 2026

Carbon Mapper’s database included 214 individual plumes from 154 plume sources under these criteria. Statistics and geospatial centroids for plume sources were calculated automatically based on Carbon Mapper API endpoint protocols and then used for facility attribution. The list of plumes, provided in Appendix A, was created based on public data available on the Carbon Mapper portal as of August 26, 2026.²

For more than a decade, Earthworks’ Field Investigation program has regularly worked with communities to protect their health and the climate, using specialized cameras that make visible the air pollution from oil and gas facilities that is normally invisible to the human eye.

An Earthworks certified thermographer conducted site surveys using an Environmental Protection Agency (EPA) and industry standard FLIR GF320³ optical gas imaging camera at six locations that corresponded with the plume sources from the Carbon Mapper data examined here and detected emissions at the following facilities:

- Avalon Compressor Station on [May 6, 2026](#)
- Carlsbad Gas Plant on [November 12, 2025](#) and [May 6, 2026](#)
- Hackberry Compressor Station on [November 12, 2025](#) and [May 6, 2026](#)
- Red Hills West 22 Federal Well Pad on [November 13, 2025](#)
- Red Hills Gas Plant on [November 13, 2025](#) and [May 7, 2026](#)
- Ross Ranch Compressor Station on [May 6, 2026](#)

FACILITY ATTRIBUTION

The 154 plume sources were geospatially cross-referenced with publicly available oil and gas facility databases. These included geospatial datasets from the EPA Facility Registry Service (EPA FRS), New Mexico Environment Department (NMED) Air Permit Map (APMAP), and the New Mexico Oil Conservation Division (NMOCD). From this combined dataset the team was able to identify likely source facilities (parent companies) for 121 plume sources (166 individual plumes).⁴

Attributions were first automatically detected via geospatial joins and then manually verified by three experts.

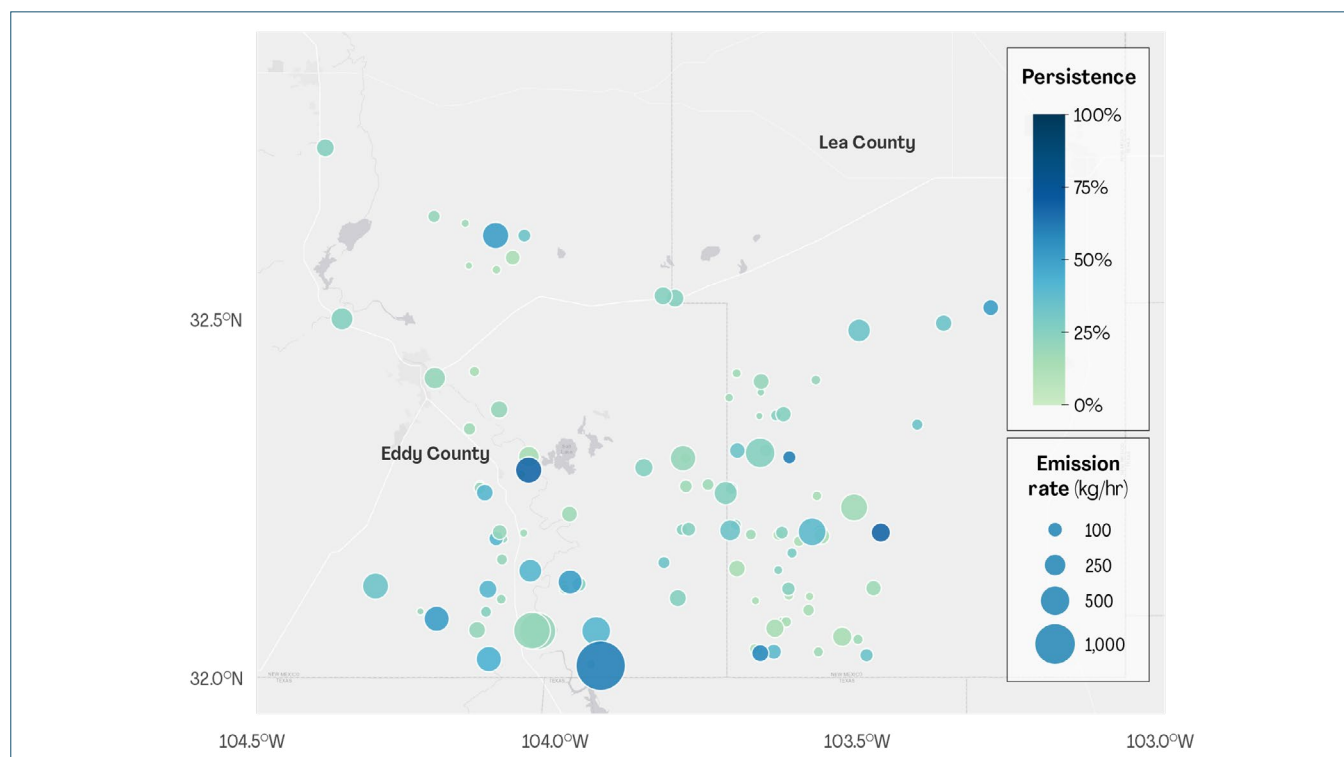
Plume Data and Attributed Facilities

This study identified 166 methane plumes from the Carbon Mapper portal and linked them to 121 oil and gas facilities in the New Mexico Permian Basin. At the time of analysis, emission rates for 29 plumes had not yet been quantified on the Carbon Mapper portal. The remaining 137 quantified plumes (Appendix A) meet the Environmental Protection Agency's (EPA) definition of a super-emitter event — a methane release of 100 kilograms per hour or greater. Fifty-five plumes were considered extreme point sources, with emission rates exceeding 500 kilograms per hour.

The New Mexico Permian Basin spans Eddy and Lea counties, where oil and gas infrastructure is densely concentrated. Plume detections were roughly equal across both counties, with 82 observed in Eddy County and 84 in Lea County. However, the highest emission

rates were observed within Eddy County (Figure 1). [Ross Draw Compressor Station](#) is a notable example, recording emissions of 1,483.3 kilograms of methane per hour on [August 27, 2025](#); 905.6 kilograms per hour on [March 11, 2026](#); and 5,382.6 kilograms per hour on [April 22, 2026](#), with a [persistence rate of 60%](#). In this study, persistence rate refers to the fraction of times a methane source was actively emitting compared to the total number of observations by satellite, indicating how continuously a source emits. Note that persistence rate is calculated over the duration of the study period in this case. This single facility released at least 15,542.95 kilograms of methane in under a year, assuming each super-emitter event lasts a minimum of two hours. This estimate is quantified based on the latest research on super-emitter event duration in the New Mexico Permian Basin published in [Nature Communications](#).

Figure 1. Facility emissions across the New Mexico Permian Basin



TOP EMITTERS BY COMPANY

When emitting facilities are grouped by parent company, Energy Transfer accounts for the largest share of total emissions (21%), followed by Targa Resources Corporation (13%) and EOG Resources (10%) (Figure 2). In addition, Energy Transfer and Targa Resources rank at the top across emission and persistence rate metrics (Figure 2,3). Their subsidiaries exhibit the highest persistence rates in the dataset (up to 67%), indicating that Targa’s and Energy Transfer’s facilities appear to be emitting most of the time when observed via satellite (Figure 3b). Targa Resources also recorded the highest number of plume detections (29) among all parent companies, followed by Energy Transfer with 21 plumes (Figure 4). The relative significance of incidents from

these operators also appears consistent with a recent report from researchers at [UCLA’s Emmett Institute](#), which found that Energy Transfer ranked first and Targa Resources third among operators by total plume count across the Permian, Appalachian, and Haynesville basins. This combination of high persistence, high detection frequency, and a substantial share of total emissions suggests Energy Transfer and Targa as the most chronic and widespread super-emitters operating in the New Mexico Permian Basin. EOG Resources, Mewbourne, ONEOK Inc., and Phillips 66 follow as the next most significant super-emitting companies by recorded emissions and persistence rate (Figures 2, 3).

Figure 2. Total emissions by parent company

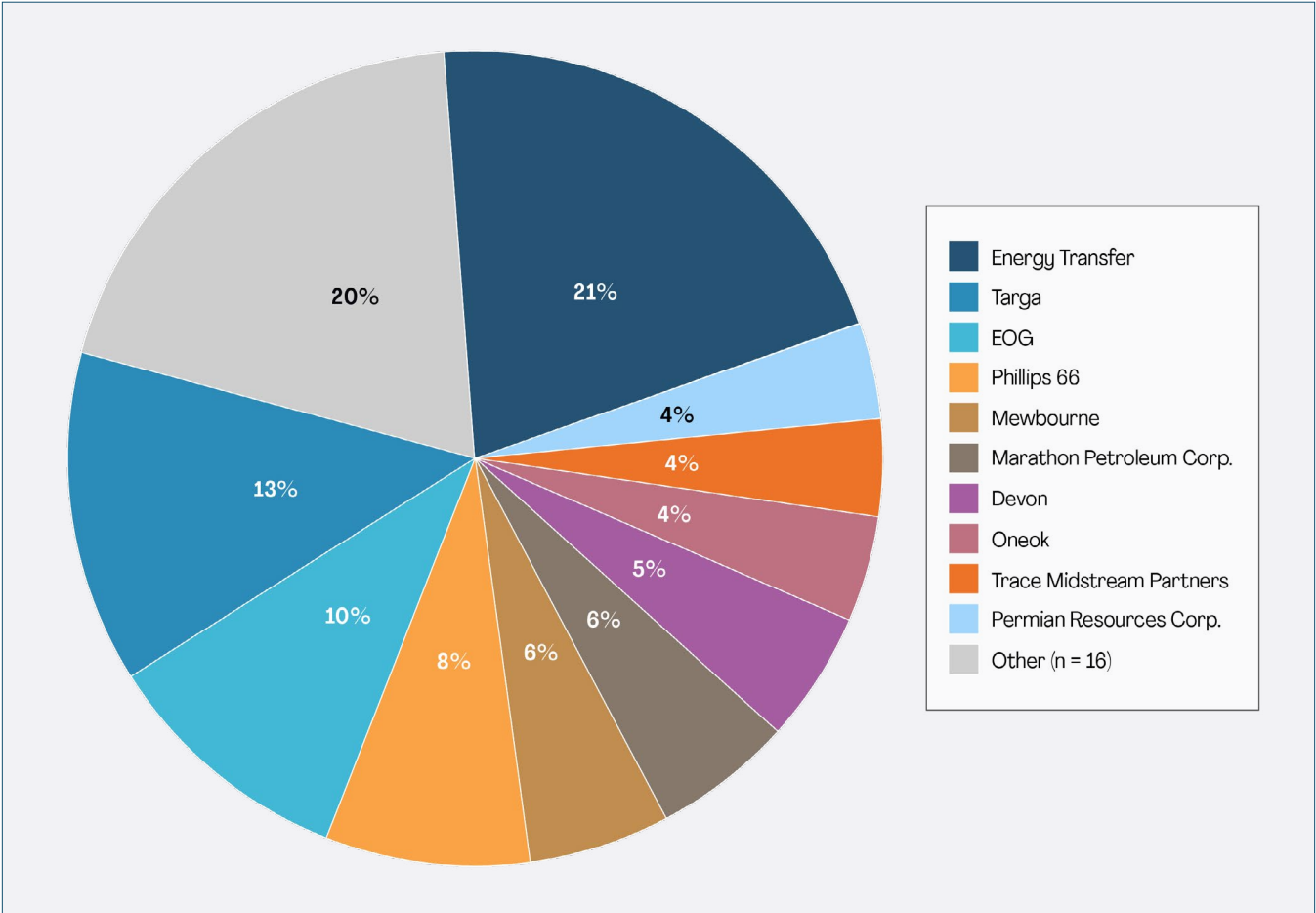


Figure 3a. Facility emission rate by parent company
Ordered by median emission

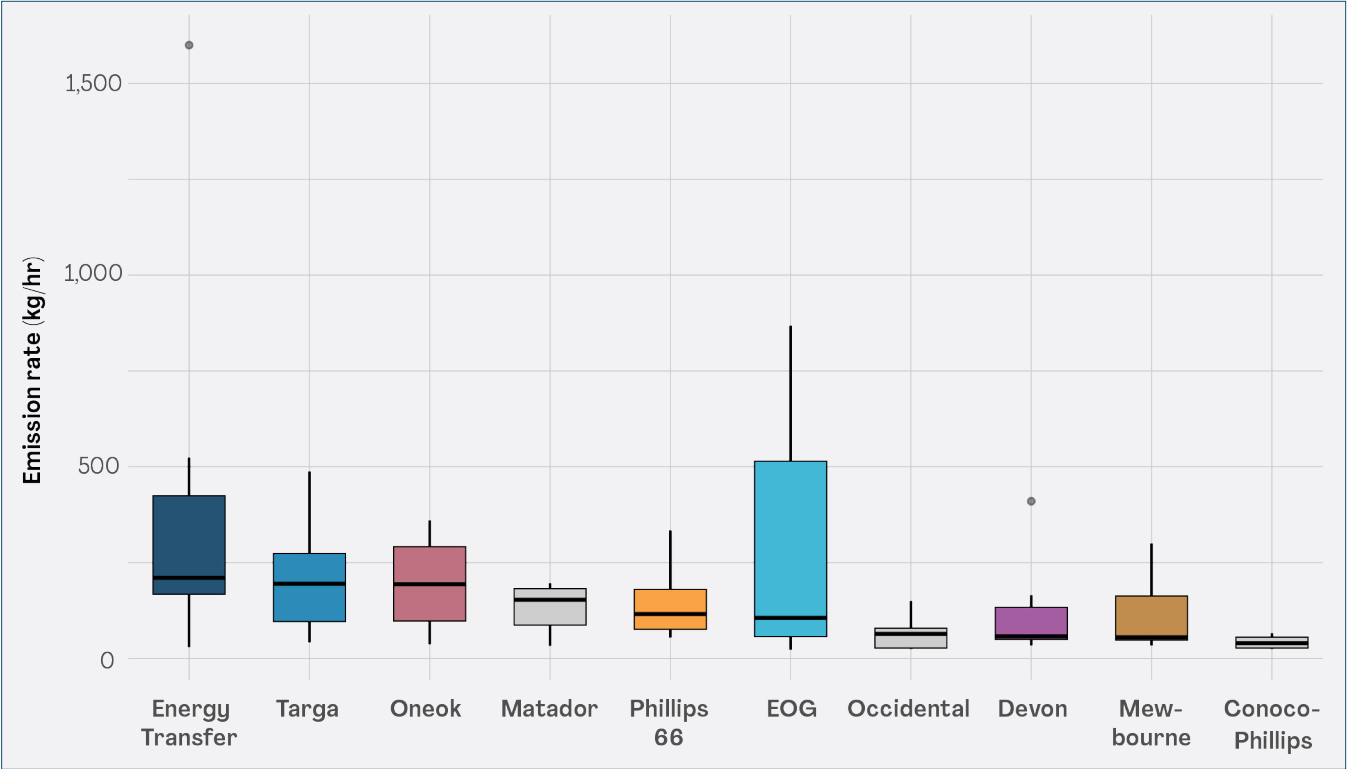


Figure 3b. Facility persistence by parent company
Ordered by median persistence

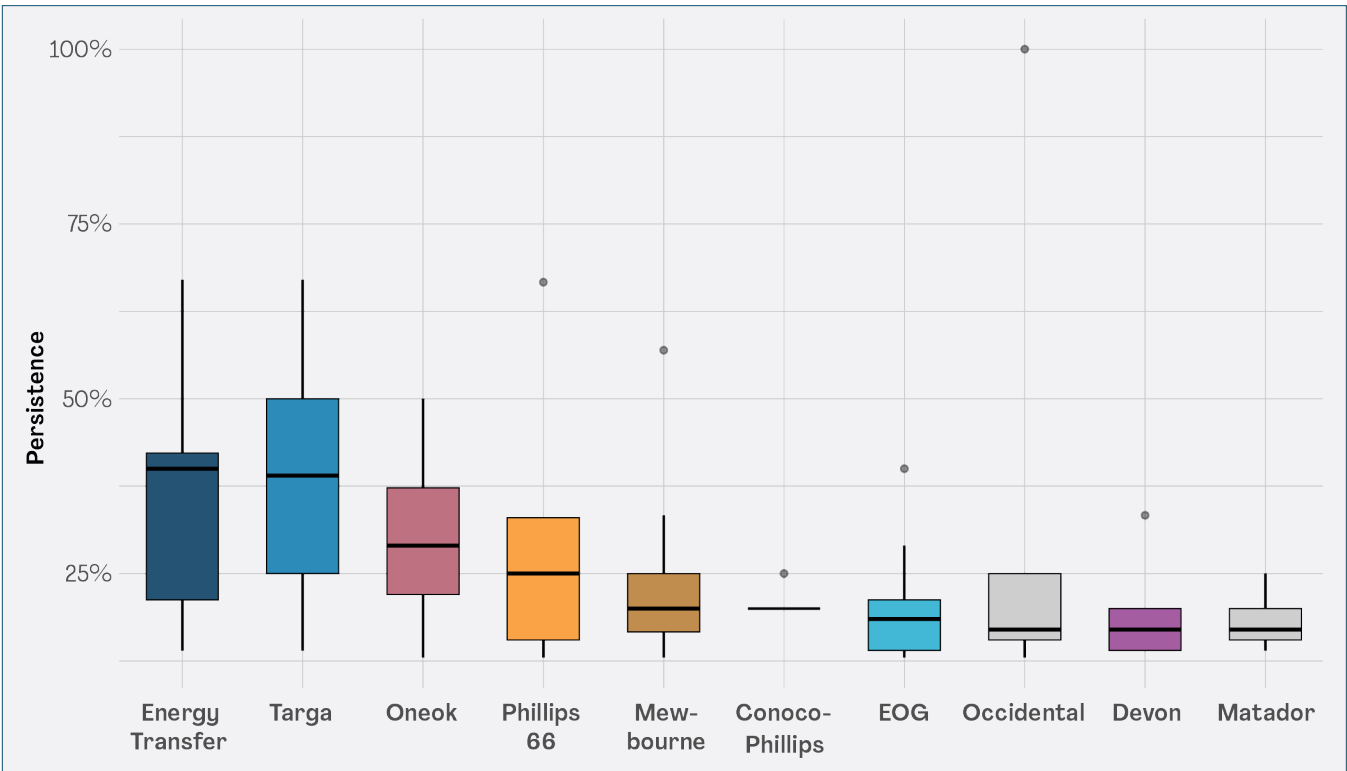
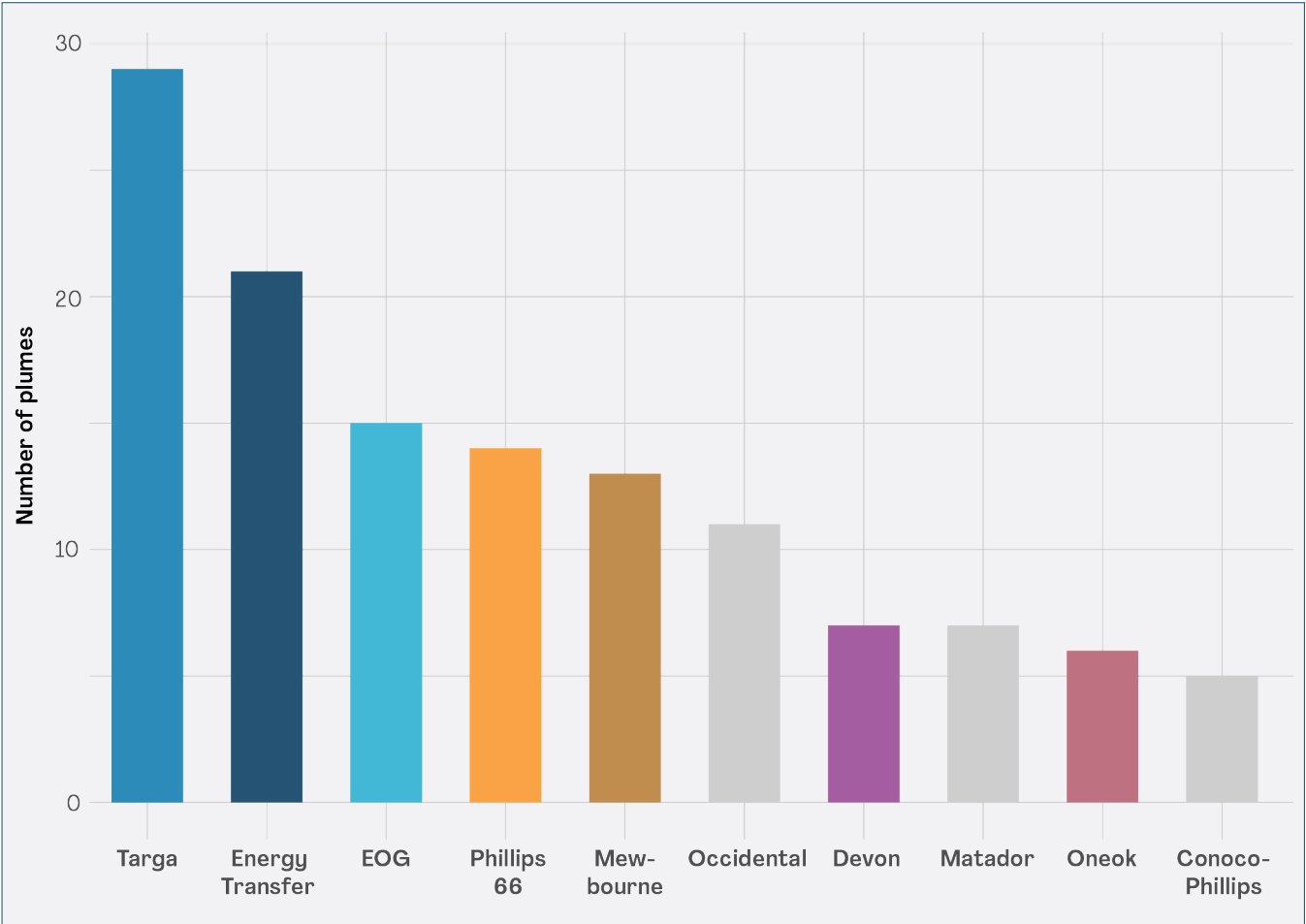


Figure 4. Plume detections by parent company



TOP EMITTERS BY FACILITY TYPE (SECTOR)

When facilities are grouped by infrastructure type, compressor stations dominate both emission magnitude and detection frequency (Figures 5, 6). Compressors account for the majority of detected plumes (54%) and emitting facilities (45%), underscoring the urgency of targeted regulation for this infrastructure category. These findings agree with those of [Irakulis-Loitxate et al.](#), who investigated extreme methane emissions in the Permian basin and found that compressor stations accounted for 50% of emitting facilities.

Gathering and processing facilities post the second-highest median emissions and persistence rates after

compressor stations (Figure 5a,b). Tank batteries and oil and gas wells rank lower by median emissions and persistence rates but stand out for their spread: despite relatively few detections (14 and 37 facilities, respectively), both categories include high-emitting outliers reaching over 500 kilograms of methane per hour, indicating that when these facility types leak, the leaks can be substantial (Figure 5a). At the sector level, midstream infrastructure (compressor stations and gathering and processing facilities combined) exhibits higher persistence rates than upstream sources (Figure 6), suggesting that midstream leaks, once present, tend to be larger and can be episodic, intermittent, or continuous.⁵

Figure 5a. Facility emission rate by facility type
Ordered by median emission

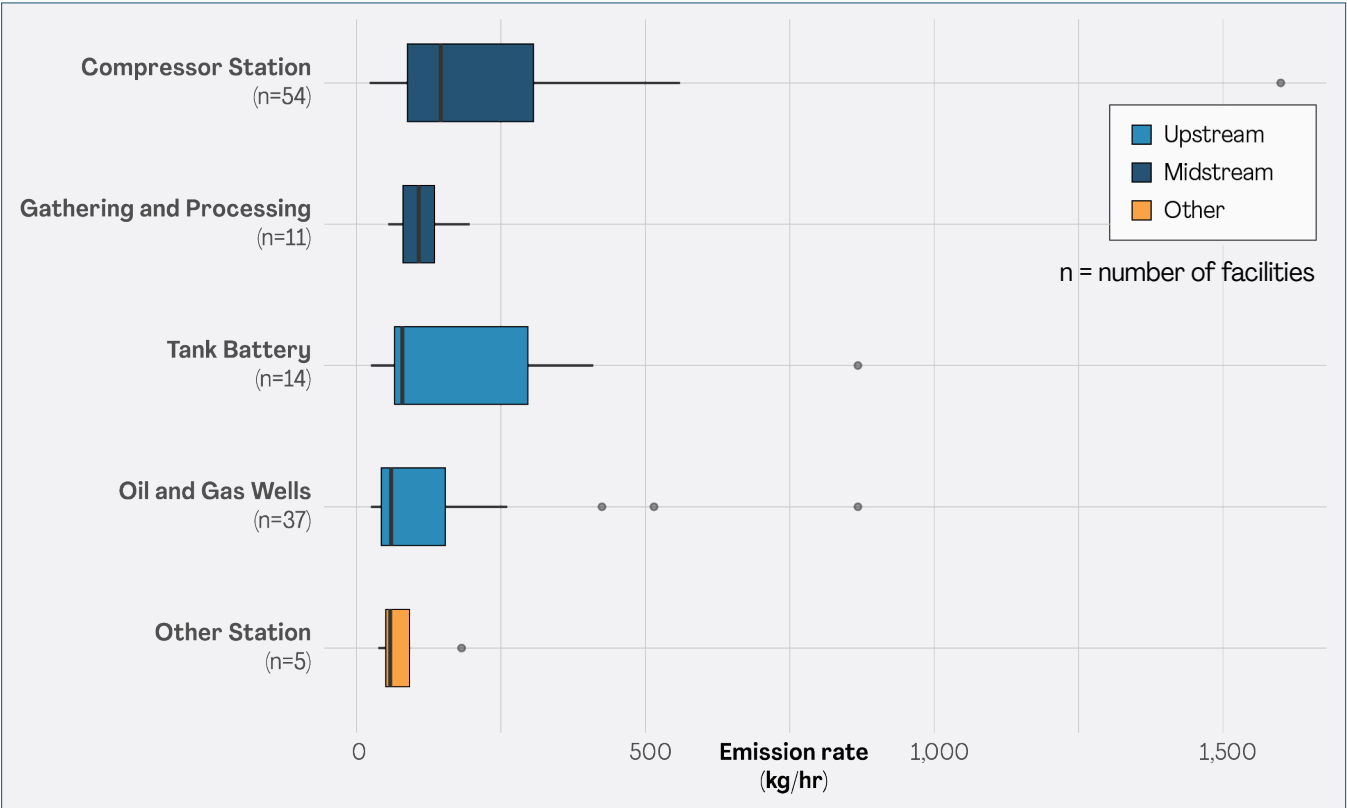


Figure 5b. Facility persistence by facility type
Ordered by median persistence

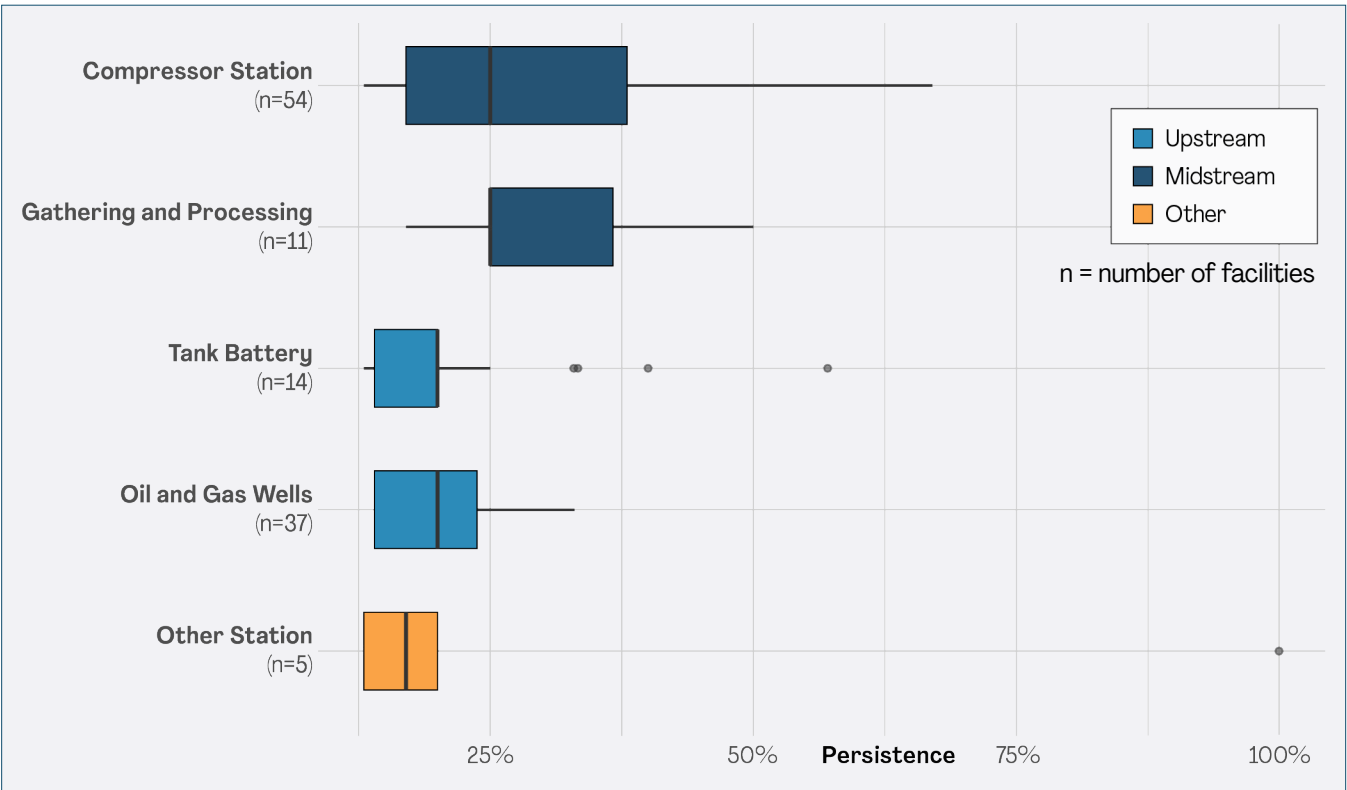
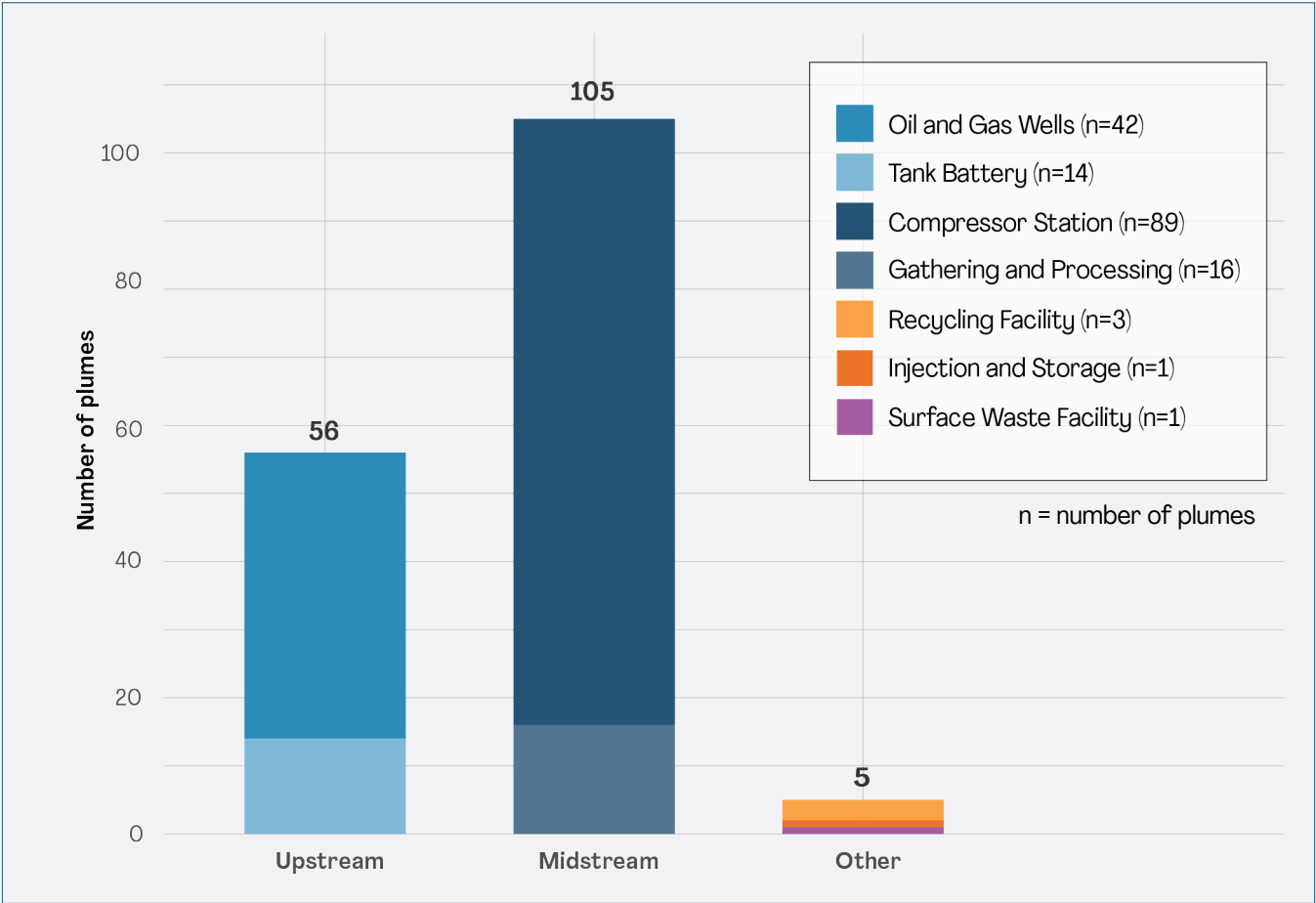


Figure 6. Plume detections by facility type



TOTAL EMISSION ESTIMATE

This analysis identified 121 super-emitting sources, 27 of which were observed emitting repeatedly during the study interval. Assuming each super-emitter event lasts a minimum of two hours, the total emissions estimate from these facilities is at least 180,692.7 kilograms of methane per hour (or 0.18 gigagrams). When converted to carbon dioxide equivalent, these methane emissions equal those from 3,300 gasoline-powered passenger vehicles driven for a year.⁶ These estimates are extremely conservative, given the fact that each observation represents only a snapshot in time and that different satellites have different site revisit intervals. Yet they still reveal how methane emissions in the region are being significantly overlooked.

Some oil and gas facilities likely emit for [hours to days](#) at a time, with prior studies finding emissions from regional

[well pads](#) and [gas gathering](#) facilities are several times higher than EPA estimates and total emissions that remain [several times higher](#) than industry goals. This assumption is supported by a recent peer-reviewed [study](#), which included aerial surveys with the Global Airborne Observatory from April 30 to May 17, 2024, across the New Mexico Permian Basin, quantifying total regional methane emissions during only 18 days at [5.98–14.7](#) gigagrams. Together, these findings suggest that satellite-based monitoring, while effective at flagging individual super-emitters, likely captures [only a fraction](#) of the methane being released across the basin. Rigorous regulatory oversight, paired with frequent, wide-area monitoring, is essential for detecting and mitigating super-emitter events.

Discussion

HEALTH RISKS OF UNMITIGATED EMISSIONS EVENTS

Methane is not only a powerful driver of climate change but also a great danger to human health considering methane leaks also often contain other volatile organic compounds (VOCs) as co-pollutants. Research shows methane emissions from the oil and gas industry are commonly accompanied by hazardous air pollutants such as [benzene, toluene, ethylbenzene, xylene, and hexane](#), while methane is also a major contributor to the formation of ground-level ozone. Long-term exposure to these pollutants increases the risk of [chronic respiratory illnesses like asthma, cardiovascular disease, and cancer](#).

A recent [study](#) that conducted extensive air quality research in the Permian's Delaware Basin revealed "extraordinarily high levels of air pollution and air toxics such as benzene" overwhelmingly due to regional oil and gas activity, concluding:

"The results paint a rather bleak picture of the upstream oil and gas air quality impacts, particularly concerning two issues: (1) the creation of an ozone problem where there previously was none, and (2) the re-emergence of high atmospheric benzene levels, which had previously been effectively reduced via EPA regulations limiting benzene in gasoline."

Further, Eddy and Lea counties both recently received [F grades for ozone pollution](#) from the American Lung Association's 2026 State of the Air report. Eddy County in particular experienced the worst average number of unhealthy air days of any county in the state – 28 days per year.

In addition to contributing to unhealthy regional air quality, super-emitter events can also pose acute health harms to nearby communities as well as safety risks to onsite workers. To better understand and visualize these

risks, scientists at [PSE Healthy Energy](#) paired Carbon Mapper's methane emission data with a detailed [gas composition database](#) to create the [Methane Risk Map](#). This interactive tool models the health risk of methane emission events by estimating the concentrations of the hazardous air pollutants co-emitted with methane and then displays where those concentrations were high enough to pose a health risk to people.

PSE's Methane Risk Map modeling finds that across 29⁷ methane pollution events between January 1, 2025 and April 30, 2026, nearly 37,000 people in Eddy and Lea counties may have been at risk of unsafe benzene exposure based on the Office of Environmental Health Hazard Assessment (OEHHA) Reference Exposure Level.⁸

[One](#) of the most striking events in the PSE modeling occurred just outside Carlsbad, at the [Barney CTB](#) facility operated by Permian Resources, where a gas leak was picked up by the Tanager-1 satellite on [February 7, 2025](#). This event released roughly 1,400 kilograms of methane per hour. According to PSE's Methane Risk Map, the resulting benzene concentrations co-emitted with methane exceeded OEHHA health benchmarks across an area of 139 square miles near the methane source, blanketing much of Carlsbad and affecting more than 36,000 people, including 15 childcare centers and 21 schools. PSE's modeling showed benzene concentrations reaching 188,619 parts per billion in some of the affected area, more than 23,577 times the OEHHA health benchmark.

Despite the scale of exposure the modeling revealed, New Mexico's Environment Department confirmed that [Permian Resources never disclosed the release](#) on its own, even though both the methane and the hazardous pollutants released with it were [required](#) to be reported within [24 hours](#) under state and federal law. Permian Resources did not file anything until eight months after the leak, and only after [reporting](#) from Hunterbrook, an investigative news outlet, prompted regulators

to start asking questions; the company stayed silent when reporters sought comment directly. When the company finally filed its emissions reports eight months later, it [pointed to an internal slip-up](#): crews had spotted the leaking valve early on, but the fix never escalated through Permian's own maintenance protocol. Permian's paperwork still left out key chemicals, such as [benzene, ethylbenzene, toluene, or xylene](#).

The silence has damaged residents' trust just as Permian Resources moves to grow its footprint in Carlsbad, [seeking approval](#) for ten new oil wells and a tank battery inside city limits despite community objections. "Nobody around here expects perfection. But we do expect honesty," resident Brittany Dye told [Hunterbrook](#), adding that without truthful reporting, families "can't make informed decisions regarding the health of ourselves, and more importantly, our children." [Michelle Miano](#), who directs the Environmental Protection Division at the state's Environment Department, said her agency has little way to catch these releases on its own: "We're completely under-resourced." This is just one example of a super-emitting event that shows how a single leak can affect tens of thousands of people. It likely would never have come to light without pressure from Hunterbrook and independent data from Carbon Mapper and PSE Healthy Energy, underscoring how important it is to have rigorous oversight of state-reported emissions.

SATELLITE DATA VERSUS OPERATOR REPORTED EMISSIONS

In New Mexico, industrial facilities with the potential to emit significant amounts of pollutants into the air, like oil and gas operations, power plants, refineries, and landfills, are required to receive air permits from the [New Mexico Environment Department](#) (NMED).

Air permits specify the site's emissions performance expectations for controlling and minimizing the release of various harmful pollutants, a process designed to ensure state and federal requirements for health and environmental protection are met. In addition to keeping the public safe, these rules also exist to create a level

playing field, seeking to prevent any companies from attempting to gain a competitive advantage by polluting significantly more than their competitors.

As noted in the section above, numerous health-damaging compounds including VOCs and nitrogen dioxide are co-emitted with methane during gas releases from oil and gas sites. Air permits directly specify total emissions rate or volume thresholds for many of these co-emitted criteria air pollutants.

Emitting these criteria air pollutants in greater amounts than the quantity or rate specified in an air quality permit results in an excess that is a violation and may be subject to an enforcement action. Whether due to malfunctions, startups, shutdowns, or maintenance, if a facility exceeds its permitted emission limits, the company responsible must file an initial [excess emissions report](#) with NMED no later than a day after discovering the incident, followed by a final report within 10 days after the incident has ended detailing the cause, total emissions released, and corrective actions taken.

While many of these methane plumes examined in this report reveal extremely large pollution events, from just the satellite observation data included in this analysis it is not possible to definitively conclude how many of these observed super-emitter plumes may have revealed incidents exceeding the excess emissions thresholds for their respective facilities. In addition to likely variations in site or equipment-specific ratios of criteria air pollutants co-emitted with methane during these events, satellite observation data also effectively captures only a single moment in time.⁹ The total duration of a particular emissions event – e.g., an hour, a day, a week, or even longer – is unclear until a satellite or airplane makes another pass or a site inspection is performed.

However, for the list of methane plumes examined in this report (see Appendix A), 127 (77%) were attributed to facilities that have received air permits from NMED. Comparing those methane plumes with annual excess emissions [report summaries](#) provided publicly by the agency, only 2 of the 127 (2%) overlap with incidents

reported to NMED as potential excess emissions events. These two events were both reported by Chevron as related to the Salado Draw 23 compressor station and tank battery. Chevron noted in its report that it had verified the detected events were “permitted fugitive emissions” and therefore they believed these did not constitute excess emissions.

Given these findings, and considering even more satellite data will [soon become publicly available](#), it would be helpful to have more consistency between the units of measurement, and what is measured, between regulators and common methane detection technologies.

“Transparency of self-reported emissions data, in conjunction with our regulatory efforts to curb excess methane emissions in the oil and gas industry, is essential to understanding air quality impacts in communities around the state. Compliance with permits and air quality regulations is not optional – it is expected by the communities in which these facilities operate and by NMED.”

–NMED Cabinet Secretary James Kenney,
[October 15, 2019](#)

Digging further into the extent to which these emissions events were reported to the state, this analysis also cross-referenced the satellite observational data with gas venting and flaring records reported to New Mexico’s Oil Conservation Division (OCD).

OCD regulates oil and gas production in the state and has strict rules banning routine gas venting and flaring. Beyond limiting potential health and environmental harms, preventing the waste of these natural resources also boosts the state’s ability to collect royalty and severance taxes intended to benefit all New Mexicans.

Since May 2021, oil and gas companies in New Mexico have been required to report all significant venting and flaring events to OCD, which are [defined](#) as a single event that exceeds 50 thousand cubic feet (mcf) and results

from an emergency or malfunction or lasts more than 8 hours in any 24-hour period.¹⁰

Furthermore, upstream oil and gas operators in New Mexico have also been required since April 2022 to aggregate and report monthly data on their total gas venting and flaring for their wells and other production facilities and equipment like tank batteries, compressor stations, and flare stacks.¹¹

As noted above, the list of methane plumes examined in this report appear near a mix of upstream and midstream oil and gas facilities. Some midstream facilities like interstate pipeline compressor stations and gas plants are non-jurisdictional to OCD’s reporting requirements.

Of the 166 observed methane plumes in this dataset, 92 appear in close proximity to facilities reporting data to OCD.¹² However, operators for only 9 of those 92 plumes (10%) reported a gas venting or flaring event occurring at these facilities on the same day a methane super-emitter incident was observed at that location by satellite.

The 50 mcf threshold for reporting a venting/flaring incident is equivalent to approximately 1,000 kilograms of methane. For the 83 plumes where facilities did not report a venting or flaring event to OCD, 8 (10%) were observed emitting at an estimated rate that would surpass the threshold in less than one hour, and another 9 at a rate that would surpass that level in less than two hours.

Additionally, of the 166 observed methane plumes in this dataset, 79 appear in close proximity to facilities reporting aggregate monthly venting and flaring data to OCD. For 37 of these 79 plumes (47%), operators reported to OCD zero gas venting at the attributed facilities for the entire month that satellite data observed a plume at those locations.

DOCUMENTING PERSISTENT MIDSTREAM POLLUTION: TARGA AS A CASE STUDY

This analysis finds, Targa ranks first or second among New Mexico Permian Basin operators on nearly every measure examined: second on emission rate by facility (Figure 3a), second on persistence rate (Figure 3b), first on total number of plumes detected (Figure 4), and second on total emissions (Figure 2). During this study period, the satellite data revealed 29 plumes (21 out of 29 were super-emitter events; 8 out of 29 were not yet quantified), which were then attributed to Targa's facilities. In addition, Targa accounts for 13% of all regional emissions observed by Carbon Mapper (Figure 2), second only to Energy Transfer's 21% share.

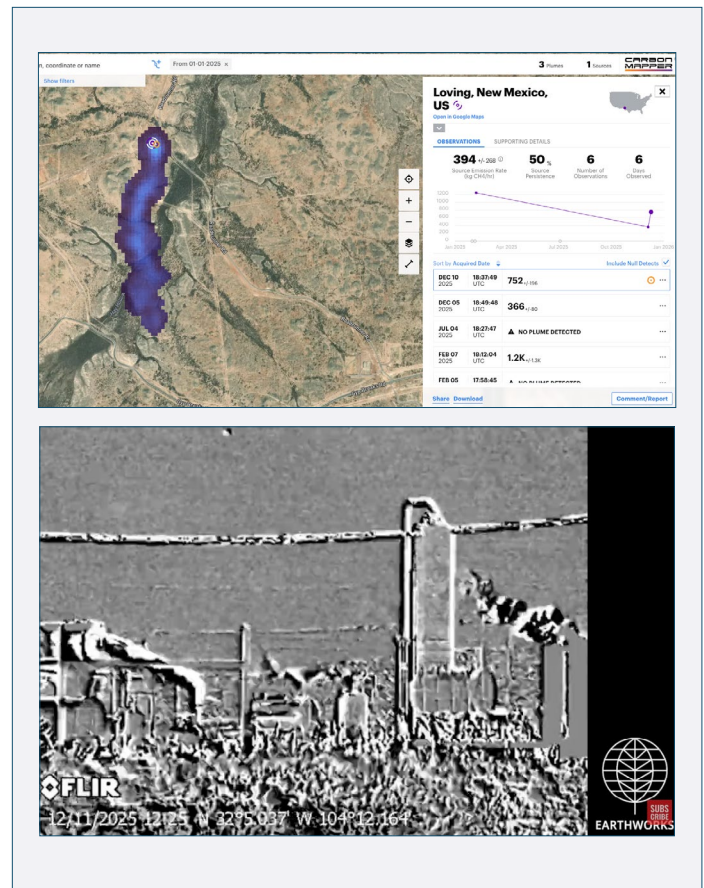
The evidence of routine midstream pollution events, and their potential persistence, doesn't come only from the sky.

In November 2025, field investigators from Earthworks surveyed Targa midstream sites, as well as those of other operators, using an optical gas imaging (OGI) camera with timing that lined up relatively closely with independent satellite data observations.

At Targa's Hackberry Compressor Station in Eddy County, OGI footage documented a pollution event on [November 12](#). Just weeks later, the Tanager satellite recorded two plumes attributable to the facility, on [December 5](#) and [December 10](#), releasing methane at rates of 366 and 752 kilograms per hour respectively. Taken together, three separate observations within one month – one on the ground and two from the sky – showed the Hackberry facility emitting every single time it was checked. That kind of persistence points to the possibility of an emission event that could have lasted for days or even weeks. Yet, cross-referencing these locations and dates with data reported to NMED, no excess emissions reports appeared to have been filed for the Hackberry Compressor Station over this entire time period. As noted above, this analysis cannot definitively conclude from these data points alone whether any

of these events may have revealed criteria pollutant exceedances. This leaves the public in the dark: do the observed emissions at this location represent permissible operations or an issue that could be addressed more quickly through the use of additional monitoring and oversight?

Figure 7. Emissions at Targa's Hackberry Compressor Station



Similarly, at Targa's Red Hills Gas Plant in Lea County, methane plumes were observed by satellite on [October 3, 15, and 31, 2025](#). When Earthworks visited the site two weeks later on [November 13](#), uncombusted hydrocarbon emissions were documented at two different flare stacks. According to NMED excess emissions reporting, the Red Hill Gas Plant filed reports for emissions events starting and ending on October 1, 7, and 25 as well as November 4, 6-9, 10-11, and 14.¹³

MEWBOURNE RED HILLS WEST 22 FEDERAL AS A CASE STUDY

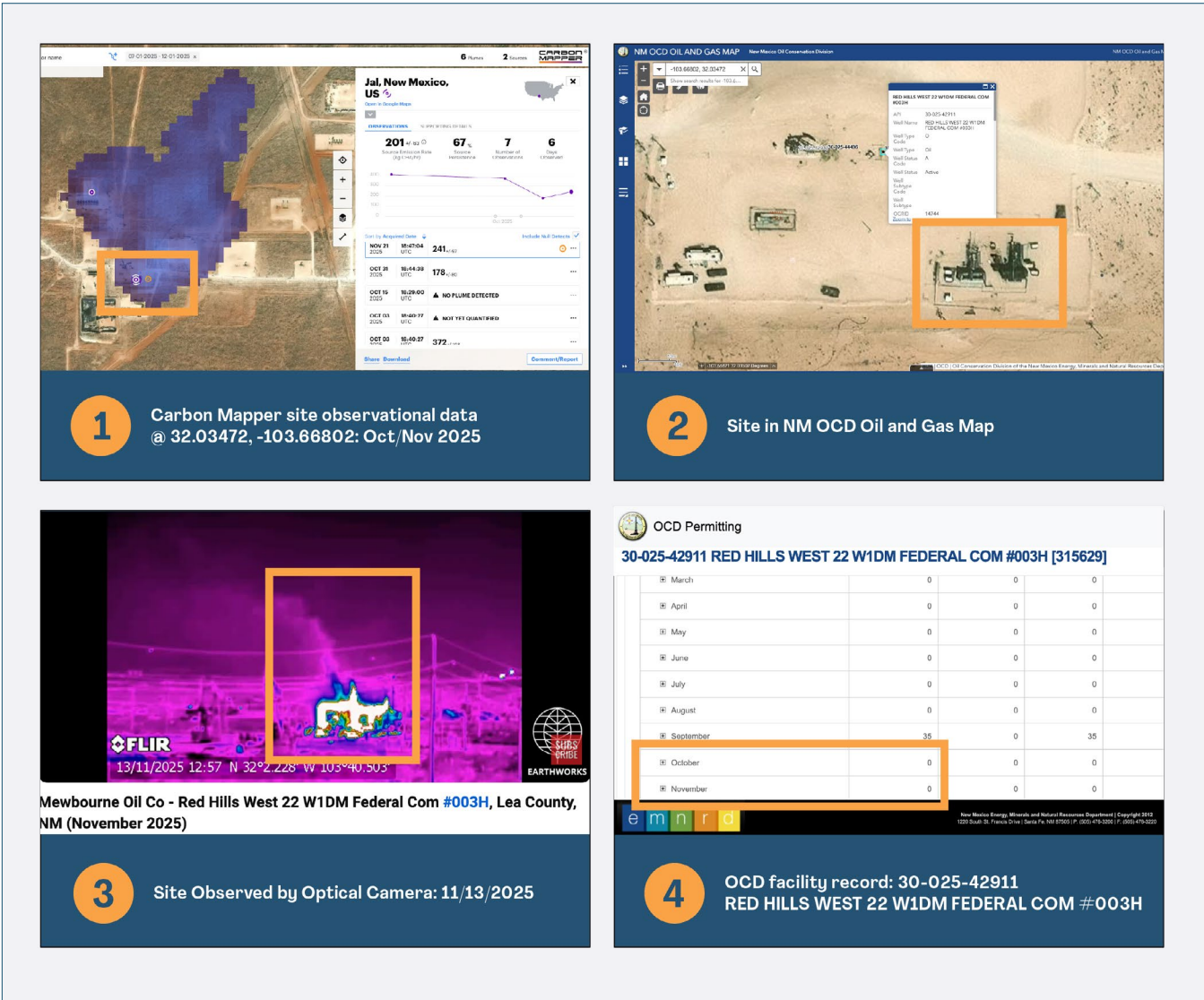
Another oil and gas facility included in this analysis is Mewbourne Oil Company’s Red Hills West 22 Federal well pad.

Over the course of the past year-and-a-half examined in this report, the Tanager-1 satellite observed this location six times, with Carbon Mapper data showing super-emitter [plumes](#) on four occasions: July 11, October 3 and 31, and November 21, 2025 (with null observations¹⁴ recorded on September 26 and October 15). According

to this data, the origin of each of these plumes falls in the southeast corner of the well pad, in the vicinity of two compressor units.

In addition, on November 16, 2025, between the October 31 and November 21 satellite observations, an Earthworks’ certified thermographer documented [a significant leak coming from those same compressor units](#) at the southeast corner of the pad. Given multiple positive observations over this time frame, there is good reason to believe this facility may have been “leaking” considerable amounts of gas for weeks – or longer.

Figure 8. Emissions at Mewbourne’s Red Hills West 22 Federal Well Pad



For this well site, however, the company reported zero significant venting or flaring incidents from the start of 2025 through the end of January 2026.¹⁵ While it appears that reports of no venting at this site were inaccurate, as detailed in the section above, this is just one of dozens of examples from the dataset investigated in this analysis where OCD has not received information about venting and flaring at apparent OCD-jurisdictional locations where super-emitter plumes were documented by third-party sources.

However, OCD records for this Mewbourne facility also show that months after the multiple satellite detections, the company reported it discovered and repaired a valve problem on a leaking compressor at this site on February 17 and 18, 2026. This raises perhaps a bigger question: had an equipment failure gone unnoticed or unrepaired at this site that could have been quickly remedied with better monitoring and oversight?

Carbon Mapper [calculated](#) the methane emissions rates observed at this site from July through November, which average approximately 200 kilograms per hour (inclusive of the two null observations). If gas continued to leak at this average rate for seven months (mid-July 2025 when the first satellite detections occurred through mid-February 2026 when Mewbourne reported it fixed the valve), it would amount to about 146 metric tons or 7,850 thousand cubic feet of methane per month. At today's wholesale prices, this totals nearly \$190,000 in lost product over that seven month time period.¹⁶

This is not just lost revenue for an oil company. Since this well is on federally owned lands, the federal government and New Mexico split a 12.5% royalty on the value of what gets produced from it, potentially costing New Mexicans thousands of dollars in lost revenue for schools, infrastructure investments, tax cuts, or other uses. While this is just one example, the cost of wasted resources can add up quickly given there are more than [70,000 active oil and gas wells](#) across the state.

Figure 9. Mewbourne Gas Venting/Flaring Report for February 17, 2026

Received by OCD: 3/4/2026 8:29:13 AM

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS (continued)

Operator: MEWBORNE OIL CO
P.O. Box 9279
NORMAN, NM 86440

Dispatch: 147164
Action Number: 610000
Action Type: 60-1026 venting and/or flaring (C-126)

QUESTIONS

Date(s) and Time(s)

Date vent or flare was discovered or commenced: 02/17/2026

Time vent or flare was discovered or commenced: 12:00 AM

Time vent or flare was terminated: 01:30 PM

Cumulative hours during this event: 1.5

Measured or Estimated Volume of Vent or Flared Natural Gas

Natural Gas Vent (MG) Details

Volume: Equipment Failure (Volume Natural Gas Vent) Released: 87 MG (Recommended: 0 MG) 11 MG 87 MG

Natural Gas Flared (MG) Details

Not answered

Other Released Details

Not answered

Additional details for Measured or Estimated Volume(s). Please specify

Volume calculated

Is this a gas only submission (i.e. only significant total volume reported)

Yes, according to reported volumes this appears to be a "gas only" report.

Venting or Flaring Resulting from Downstream Activity

Was this vent or flare a result of downstream activity

No

Was notification of downstream activity received by this operator

Not answered

Downstream (O&G) that would have notified this operator

Not answered

Identify specific cause of downstream activity to complete this report, if known

Not answered

Please explain reason for why this event was beyond this operator's control

Compressor leaking.

Steps taken to limit the duration and magnitude of vent or flare

Repaired compressor.

Corrective actions taken to eliminate the cause and recurrence of vent or flare

Continued routine prevention maintenance and daily operational inspections

Released to Imaging: 3/5/2026 8:31:45 AM

Plumes in the Permian

16



Conclusions and Recommendations

Satellite and aerial coverage of the New Mexico Permian Basin from January 1, 2025, to April 30, 2026 revealed 214¹⁷ large-scale methane emissions events. Many of these appear near the operations of companies that market their product as “clean” methane gas both domestically and abroad. The data tells a very different story, in fact, there are examples of methane super-emitter events that may have persisted for weeks to months. There are also concerning signals in the midstream sector that show emissions along the supply chain could be far higher than previously recognized.

It doesn't need to be this way. While not every plume spotted by satellite will be actionable, experience with rapid notification programs elsewhere has already created numerous success stories, helping minimize unnecessary waste, health-harming air pollution, and damage to the climate. In 2025, California launched its Satellite Methane Program, and between May 2025 and August 2026 its use of satellite data led to successfully addressing [46 large emissions events](#), with oil and gas responses [visible](#) via a public dashboard. Internationally, the UN Environment Programme's Methane Alert and Response System ([MARS](#)) has [enabled the mitigation of over 40 major emission events](#). Without the ability to compel responses, however, MARS data reveals the vast majority of oil and gas companies are not still responding even when they are notified of events, documenting just a [12%](#) response-rate in 2025.

Claims regarding methane emissions by industry and companies operating in New Mexico should likewise not be accepted without further investigation or without noted exceptions. As satellite observations grow, so too will the data available to show the source and quantity of emissions across this critical region.

Our recommendations on improving data accuracy and methane mitigation measures include:

- **DEEPER SCRUTINY AND STUDY OF THE MIDSTREAM SECTOR:**

Much of the focus around methane mitigation in the oil and gas sector has been on the upstream sector – the wells where oil and gas are extracted and the tank batteries where liquid products are held before transportation or disposal. Oil and gas companies self-reported ([and heavily criticized](#)) efforts to measure and reduce emissions center almost entirely on pollution at the well site.

However, the midstream sector (compressor stations and gathering and processing facilities) accounts for nearly two thirds of the plume detections (105 out of 166 attributed plumes) in this report. This is a significant finding given that there are [nearly one million wells](#) in the U.S. vs [5,121 compressor stations in the U.S. and Canada](#) and [~500 U.S. gas processing facilities](#) according to the U.S. Energy Information Administration. In other words, the number of plumes detected from the midstream sector is significantly higher than that of the upstream sector (Figure 6). Furthermore, the persistence and emissions rates are also higher in the midstream sector than the upstream sector (Figure 5a, b).

We believe this points to a need for greater attention to mitigation in the midstream sector, which could include stricter requirements such as: upgrading from gas-burning engines to electric motors on compressors, mandates for capture during maintenance events, and more frequent leak detection and repair (LDAR) inspections. Permitting of these facilities should be heavily weighed against the understanding that they are outsized emitters – which means addressing emissions from these facilities will have an outsized and positive impact on public health, air quality, and climate goals.

- **USE SATELLITE DETECTIONS TO REVIEW PERMITTING:**

Currently, permitting of oil and gas infrastructure is dependent on operator reported Potential to Emit (PTE). Operators submit PTE estimates¹⁸ during the permitting process to determine the permitting level that the facility requires. The higher the PTE, the more stringent the permit.

But these PTE estimates are just that – estimates – and actual methane and VOC emissions are known to be [greater than what operators report](#). This report showed major discrepancies in detected plumes that were never reported to New Mexico state regulators despite requirements to do so. Therefore, it is likely that many facilities are emitting more than their PTE would suggest and more than their permit would allow.

We recommend using satellite detection as a means to realign submitted PTE numbers with actual emissions to properly permit oil and gas facilities. This can be done by allowing verified satellite detections to trigger permit review and, if warranted based on plume rate and frequency, reevaluation of PTE estimates.

• NM SUPER EMITTER PROGRAM:

In August 2026, staff at the New Mexico Environment Department submitted a petition to create a new methane [abatement rule \(EIB 26-78\(R\)\)](#), which would include a Super Emitter Program to reduce large, uncontrolled releases of methane from permitted facilities.

This program, if approved by the Environmental Improvement Board (EIB), will allow third parties like Carbon Mapper and other satellite operators to qualify as reporters and identify super emitter events of over 50 kilograms per hour and report them directly to NMED. NMED would then notify the operators of any facility within 50 meters of the reported event, and the operator would then be required to identify and repair the leak, and report back to NMED the cause of the emission event and all subsequent actions taken.

We applaud NMED for proposing this pioneering rule and urge EIB to approve it.

• REGULATORS SHOULD USE SATELLITES TO ENFORCE AND IMPROVE EXISTING STATE REPORTING REQUIREMENTS OF LARGE-SCALE EMISSIONS EVENTS:

Both New Mexico's Oil and Gas Conservation Division and the Environmental Department require that operators report large scale emissions events. However, this cross-referenced analysis of satellite plumes and reported emissions shows that many of these events were not reported. This has a number of implications including inaccurate state reporting of emissions, under reporting of emissions by operators to the public and shareholders, and, in some cases, loss of revenue from fines and permitting.

We believe that there are four primary reasons for the lack of reporting:

1. Inconsistent units of measurement, and what is measured, between regulators and common methane detection technologies: OCD uses thresholds in thousand cubic feet of gas, NMED uses tons of hazardous air pollutants, while many methane detection technologies read in emissions rates such as kilograms of methane per hour. Because of this it becomes very easy for companies to claim that even super emitter events do not qualify for reporting because the total emissions (rate x time) are below the threshold. The length of time for an individual plume is nearly impossible for any third party – including a regulator – to quickly verify. For that reason we recommend that state regulators, in permit documentation, either change to or include a conversion for thresholds of kilograms per hour, much like the proposed NMED Super Emitter Program does.
2. Lack of accountability by operators: In some cases, operators agree emissions events happened and fall above the thresholds but argue whether it was their responsibility or an adjacent operator. In these cases, we believe that site inspections should be performed and should provide a definitive answer.

3. Lack of capacity: Operators with assets stretched across vast areas often lack the staffing to properly monitor and maintain those assets. Similarly, state agencies are under resourced to provide continual oversight over tens of thousands of oil and gas facilities. In this scenario satellites provide a solution by helping operators and relevant state agencies to find and fix issues faster.
4. Operators just do not believe that state regulators will catch them: As shown in this report, satellite data and OGI are increasingly providing solutions to this problem.



Endnotes

1. For more information on the details of the Carbon Mapper emissions monitoring system, including instrument design, detection thresholds, and independent controlled released testing results, see [Riley Duren, et al. \(2025\)](#).
2. The data could change over time as Carbon Mapper includes additional observations on their portal.
3. For more information about the FLIR GF320 camera, see this [product description](#).
4. Because the attribution method utilized in this report relies on publicly available datasets, it may produce inaccurate matches in certain cases. Operators are invited to contact authors with corrections where warranted. Please send such requests to klarina@earthworksaction.org.
5. While there is broad consensus in core oil and gas industry sector definitions (e.g. upstream includes exploration and production, midstream includes transportation and storage, and downstream includes refining, petrochemicals, and distribution to end-users), there can also be some variation in the practical application of such definitions (e.g. PSE Healthy Energy's Methane Risk Map utilizes the EPA Greenhouse Gas Reporting Program Facility Definitions, which can be found [here](#)).
6. The methane emissions conversion estimate was calculated as follows: $(180,697.2 \text{ [kg CH}_4 \text{ emitted]} \times 84 \text{ [20-year Global Warming potential of CH}_4 \text{, Climate Change Connection]}) / 4,600 \text{ [kg CO}_2\text{e emitted per passenger vehicle per year, EPA]} = 3,300 \text{ [gasoline-powered passenger vehicles' worth of annual emissions]}$.
7. Of these 29 methane events, 19 have been attributed to oil and gas facilities and included in this study, while the remaining 10 out of 29 events were not attributed.
8. State of California, Office of Environmental Health Hazard Assessment. "Acute, 8-hour, and Chronic Reference Exposure Level (REL) Summary." <https://oehha.ca.gov/air/general-info/oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary>
9. Satellites like Tanager are [capable](#) of detecting methane (as well as carbon dioxide and [ammonia](#)), though they are not directly observing criteria pollutants. Operators however typically submit gas composition analysis in the permitting process, providing a site-specific measurement of the component ratio of inlet gas including hydrocarbons like methane, ethane, and propane, other inert gases like carbon dioxide and nitrogen, as well as VOCs like benzene.
10. These incidents are reported to OCD via their form C-129.

11. These data are reported to OCD through their form C-115B filings.
12. While the Tanager satellite can geolocate the origin of methane plumes within an accuracy range between [30-50 meters](#), these plumes were cross-referenced with all OCD venting and flaring data by an operator at each facility location, as detailed in Appendix A.
13. In December 2024, NMED hit Targa's Red Hills plant with a [record \\$47.8 million fine](#), the largest in state history, for releasing nearly 2 million pounds of various pollutants over its permit. That single facility accounted for "[35% of all excess emissions reports filed in the state that year](#)." Rather than accepting the penalty, Targa has spent that time fighting the NMED's decision, filing 35 lawsuits that cost the state [\\$225,000 in staff time](#) as of March, 2026.
14. Null observation means the satellite did not detect a methane emission plume at that time at that location. The Tanager-1 satellite has a 90% probability of detection of emission events of at least 90 kg/hr. See Carbon Mapper's [Tanager Methane Performance Specifications](#) for more info.
15. According to a review of New Mexico Oil Conservation Division C-129 reporting. Moreover, the company reported zero gas venting or flaring for the wells at this location for the entire month of November 2025, according to form C-115B data.
16. Value of lost product calculated using GHGSAT's [Methane Emissions Calculator](#).
17. The number 214 refers to all oil and gas sector emissions events listed in Carbon Mapper's methane plume portal as of August 26, 2026.
18. PTE is typically broken down into two categories: minor sources and major sources. Minor sources only have to account for critical air pollutants (CAPs) and hazardous air pollutants (HAPs) – neither of which explicitly include methane. However, major sources have to account for methane in the form of CO₂e under the EPA [OOOOB/c](#) revisions for new sources.

Appendix

APPENDIX A: TABLE OF PLUMES

Due to space restrictions, the data provided here is an abridged version.

The complete dataset is accessible at: www.biggaspolluters.org/nm-permian-plumes-report/

Parent Company	Satellite Detection Data			Company Facility Data		Potential Health Risks	Operator Reported Excess Emissions to NMED				OGI Video
	Plume Event Link from Carbon Mapper	Date Acquired	Plume Emissions Rate (kg CH ₄ /hr)	Operator	Facility Name	Methane Risk Map Link	Company reported large report venting and flaring event on day of incident (filing of a C-129 report)?	Venting and flaring reported to OCD in incident month (as reported from C-115B submissions)	NMED Air Permitted Facility?	Excess emissions event reported to NMED (Yes/No)	Earthworks Pollution (2025-Present)
BTA OIL PRODUCERS, LLC	Link	10/3/25	[Not yet quantified]	BTA OIL PRODUCERS, LLC	MESA BRONCO CTB	--	No	Yes		NO	NO
	Link	10/15/25	302 +/- 100	BTA OIL PRODUCERS, LLC	Mesa 1-12 WELL PAD	--	No	Yes		NO	NO
	Link	10/31/25	422 +/- 104	BTA OIL PRODUCERS, LLC	MESA 8105 JV P WELL PAD	--	No	No		NO	NO
CHEVRON CORP.	Link	1/29/25	257 +/- 67	CHEVRON USA INC	Dagger Lake Section 4 Compressor Station	--	No	Yes	Yes	NO	NO
	Link	7/11/25	[Not yet quantified]	CHEVRON USA INC	SALADO DRAW 23 COMPRESSOR STATION & TANK BATTERY	--	No	Yes		NO	
	Link	11/21/25	193 +/- 75	CHEVRON USA INC	SALADO DRAW 23 COMPRESSOR STATION & TANK BATTERY	--	No	Yes	Yes	YES	NO
	Link	11/26/25	521 +/- 246	CHEVRON USA INC	SALADO DRAW 23 COMPRESSOR STATION & TANK BATTERY	--	No	Yes		YES	
CONOCOPHILLIPS	Link	2/5/25	[Not yet quantified]	COG OPERATING LLC	DAISY 24 STATE COM #501H WELL PAD	--	No	No		NO	NO
	Link	12/5/25	123 +/- 57	COG OPERATING LLC	JACK FEDERAL #003H WELL PAD	--	No	No		NO	NO
	Link	2/5/25	260 +/- 119	COG OPERATING LLC	MYOX 21 STATE COM #051H WELL PAD	--	No	Yes	Yes	NO	NO
	Link	2/7/25	265 +/- 229	COG OPERATING LLC	MYOX 31 STATE COM #603H WELL PAD	--	No	Yes		NO	NO
	Link	11/26/25	138 +/- 83	MARATHON OIL PERMIAN LLC	FRIZZLE FRY FED 127 TB	--	No	Yes	Yes	NO	NO

COTERRA ENERGY	Link	10/3/25	530 +/- 134	CIMAREX ENERGY CO.	CASCADE 29 FEDERAL #075H	--	No	Yes		NO	NO
	Link	3/23/26	211 +/- 122	COTERRA ENERGY OPERATING CO.	GOLDEN TEE CTB	--	Yes	Yes	Yes	NO	NO
	Link	1/29/25	[Not yet quantified]	AVANT OPERATING, LLC	LEA UNIT #013 (TANK BATTERY)	--	No	No		NO	NO
	Link	1/29/25	[Not yet quantified]	AVANT OPERATING, LLC	LEA UNIT WELL PAD	--	No	No		NO	NO
DEVON ENERGY CORP	Link	3/23/25	2052 +/- 1126	DEVON ENERGY PRODUCTION COMPANY, LP	FIJI 17 CTB 1	--	No	Yes	Yes	NO	NO
	Link	10/31/25	305 +/- 145	DEVON ENERGY PRODUCTION COMPANY, LP	GREEN WAVE 20 CTB 3	--	No	Yes		NO	NO
	Link	10/31/25	348 +/- 100	DEVON ENERGY PRODUCTION COMPANY, LP	JAYHAWK 7 6 FEDERAL FEE COM WELL PAD	--	No	Yes	Yes	NO	NO
	Link	10/31/25	238 +/- 114	DEVON ENERGY PRODUCTION COMPANY, LP	MARWARI 28 16 STATE FEDERAL COM WELL PAD	--	No	No		NO	NO
	Link	8/27/25	248 +/- 91	WPX ENERGY PERMIAN, LLC	STEEL GUITAR 35 26 FEDERAL COM #444H WELL PAD	--	No	No		NO	NO
	Link	10/31/25	342 +/- 126	DEVON ENERGY PRODUCTION COMPANY, LP	THISTLE UNIT #155H	--	No	No		NO	NO
	Link	1/29/25	1158 +/- 309	DEVON ENERGY PRODUCTION COMPANY, LP	TRIONYX 6 FEDERAL #008H	--	Yes	Yes		NO	NO
ENERGY TRANSFER LP	Link	12/5/25	[Not yet quantified]	ET GATHERING & PROCESSING LLC	AVALON COMPRESSOR STATION	--				NO	
	Link	12/10/25	[Not yet quantified]	ET GATHERING & PROCESSING LLC	AVALON COMPRESSOR STATION	--			Yes	NO	May 6, 2026
	Link	3/11/26	926 +/- 209	ET GATHERING & PROCESSING LLC	AVALON COMPRESSOR STATION	--				NO	
	Link	7/25/25	151 +/- 84	CRESTWOOD NEW MEXICO PIPELINE, LLC	BLACK RIVER COMPRESSOR STATION	Link		Yes		NO	NO
	Link	2/5/25	456 +/- 179	CRESTWOOD NEW MEXICO PIPELINE, LLC	CARLSBAD GAS PLANT	--				NO	
	Link	7/25/25	152 +/- 46	CRESTWOOD NEW MEXICO PIPELINE, LLC	CARLSBAD GAS PLANT	--		Yes		NO	November 12, 2025 / May 6, 2026
	Link	7/25/25	227 +/- 106	CRESTWOOD NEW MEXICO PIPELINE, LLC	CARLSBAD GAS PLANT	--				NO	
	Link	8/22/25	1588 +/- 282	ETC TEXAS PIPELINE LTD	DOMINATOR COMPRESSOR STATION	--		Yes		NO	NO
	Link	1/31/25	462 +/- 210	SENDERO CARLSBAD MIDSTREAM LLC	MOSAIC COMPRESSOR STATION	--				NO	
	Link	2/5/25	379 +/- 127	SENDERO CARLSBAD MIDSTREAM LLC	MOSAIC COMPRESSOR STATION	--			Yes	NO	NO
	Link	7/4/25	812 +/- 137	SENDERO CARLSBAD MIDSTREAM LLC	MOSAIC COMPRESSOR STATION	--				NO	
	Link	7/25/25	949 +/- 185	SENDERO CARLSBAD MIDSTREAM LLC	MOSAIC COMPRESSOR STATION	Link				NO	

ENERGY TRANSFER LP	Link	3/23/25	1652 +/- 555	ET GATHERING & PROCESSING LLC	ROSS RANCH COMPRESSOR STATION	--			Yes	NO	May 6, 2026
	Link	3/11/26	970 +/- 174	ET GATHERING & PROCESSING LLC	ROSS RANCH COMPRESSOR STATION	--				NO	
	Link	3/11/26	859 +/- 176	TRANSWESTERN PIPELINE COMPANY, LLC	STATION WT-1	--			Yes	NO	NO
	Link	2/7/25	851 +/- 840	ET GATHERING & PROCESSING LLC	WHITE CITY ROAD COMPRESSOR STATION	--			Yes	NO	NO
	Link	2/5/25	390 +/- 136	CRESTWOOD NEW MEXICO PIPELINE LLC	WILLOW LAKE GAS PLANT	--			Yes	NO	NO
	Link	7/25/25	217 +/- 58	CRESTWOOD NEW MEXICO PIPELINE LLC	WILLOW LAKE GAS PLANT	--				NO	
	Link	8/27/25	1483 +/- 207	ET GATHERING & PROCESSING LLC	ROSS DRAW COMPRESSOR STATION	--				NO	
	Link	3/11/26	906 +/- 216	ET GATHERING & PROCESSING LLC	ROSS DRAW COMPRESSOR STATION	--			Yes	NO	NO
	Link	4/22/26	5383 +/- 2581	ET GATHERING & PROCESSING LLC	ROSS DRAW COMPRESSOR STATION	--				NO	
ENTERPRISE PRODUCTS	Link	11/26/25	552 +/- 256	ENTERPRISE FIELD SERVICES, LLC	ENTERPRISE - OXY SAND DUNES NORTH COMPRESSOR STATION	--			Yes	NO	NO
	Link	3/11/26	817 +/- 140	ENTERPRISE FIELD SERVICES, LLC	MEWBOURNE FNR COMPRESSOR STATION	--			Yes	NO	NO
	Link	8/27/25	248 +/- 132	ENTERPRISE PRODUCTS OPERATING LLC	SOUTH EDDY CRYO PLANT	--			Yes	NO	NO
EOG RESOURCES, INC.	Link	7/11/25	201 +/- 104	EOG RESOURCES INC	BANDIT COMPRESSOR STATION	--	No	Yes	Yes	NO	NO
	Link	10/31/25	[Not yet quantified]	EOG RESOURCES INC	BANDIT COMPRESSOR STATION	--	No	Yes		NO	
	Link	1/29/25	494 +/- 107	EOG RESOURCES INC	BOA LGL FL OTHR SRFC WASTE	Link	Yes	Yes	Yes	NO	NO
	Link	1/29/25	373 +/- 87	EOG RESOURCES INC	BODACIOUS LOCALIZED GAS LIFT STATION	--	No	Yes	Yes	NO	NO
	Link	10/15/25	[Not yet quantified]	EOG RESOURCES INC	GEM 36 STATE CTB	--	Yes	Yes	Yes	NO	NO
	Link	11/5/25	836 +/- 96	EOG RESOURCES INC	GENIE COMPRESSOR STATION	--	No	Yes	Yes	NO	NO
	Link	2/5/25	4338 +/- 1042	EOG RESOURCES INC	GOLDEN GRAHAM 1 FEDERAL COM #729H	--	No	No		NO	NO
	Link	1/31/25	1287 +/- 378	EOG RESOURCES INC	GOLDEN GRAHAM 1 FEDERAL COM #728H	--	No	No		NO	NO
	Link	2/5/25	[Not yet quantified]	EOG RESOURCES INC	GOLDEN GRAHAM 1 FEDERAL COM #728H	--	No	No		NO	
	Link	12/10/25	550 +/- 165	EOG RESOURCES INC	GOLDEN GRAHAM 1 STATE COM CTB	--	Yes	Yes	Yes	NO	NO
	Link	7/11/25	163 +/- 104	EOG RESOURCES INC	MILKY WAY COMPRESSOR STATION	--	No	Yes	Yes	NO	NO
	Link	10/3/25	[Not yet quantified]	EOG RESOURCES INC	NEPTUNE 10 STATE COM EAST CTB	--	No	Yes	Yes	NO	NO
	Link	8/27/25	[Not yet quantified]	EOG RESOURCES INC	RIPPLE COMPRESSOR STATION	--	No	Yes	Yes	NO	NO

EOG RESOURCES, INC.	Link	1/29/25	356 +/- 107	EOG RESOURCES INC	VALOR COMPRESSOR STATION	Link	No	Yes	Yes	NO	NO
	Link	10/3/25	494 +/- 141	EOG RESOURCES INC	VALOR COMPRESSOR STATION	Link	No	Yes		NO	NO
EXXON MOBIL CORP.	Link	4/20/26	702 +/- 126	XTO ENERGY, INC	MAVERICK COMPRESSOR STATION	--	No	No	Yes	NO	NO
	Link	1/29/25	455 +/- 152	XTO PERMIAN OPERATING LLC.	POKER LAKE UNIT 16 TWR CVB	--	No	Yes		NO	NO
	Link	1/29/25	295 +/- 147	XTO PERMIAN OPERATING LLC.	POKER LAKE UNIT BATT 68-123-129	--	No	Yes		NO	NO
	Link	1/29/25	[Not yet quantified]	XTO ENERGY, INC	WILDCAT COMPRESSOR STATION	--	No	No	Yes	NO	NO
HARVARD PETROLEUM COMPANY, LLC	Link	11/26/25	429 +/- 80	HARVARD PETROLEUM COMPANY, LLC	PURE GOLD C-17 FED 4 BATTERY	--	No	No		NO	NO
	Link	7/11/25	251 +/- 69	HARVARD PETROLEUM COMPANY, LLC	SDE 31 FEDERAL CTB	--	No	Yes		NO	NO
	Link	7/11/25	[Not yet quantified]	HARVARD PETROLEUM COMPANY, LLC	Todd 27 11 CTB	--	No	Yes		NO	NO
JONAH ENERGY LLC	Link	11/21/25	1090 +/- 218	TAP ROCK OPERATING, LLC	JACKSON UNIT #821H	--	No	No		NO	NO
KINDER MORGAN INC.	Link	11/5/25	296 +/- 68	EL PASO NATURAL GAS COMPANY, LLC	EUNICE B&C COMPRESSOR STATION	--			Yes	NO	NO
MARATHON PETROLEUM CORP.	Link	3/23/25	2773 +/- 449	MARKWEST ENERGY PARTNERS LP	BELL LAKE SOUTH COMPRESSOR STATION	Link			Yes	NO	NO
	Link	7/11/25	2238 +/- 422	MARKWEST ENERGY WEST TEXAS GAS COMPANY, LLC	RED TANKS CS	--			Yes	NO	NO
MATADOR RESOURCES COMPANY	Link	1/31/25	909 +/- 479	MATADOR PRODUCTION COMPANY	ACE STERN VEGAS FACILITY	--	No	Yes	Yes	NO	NO
	Link	10/15/25	[Not yet quantified]	MATADOR PRODUCTION COMPANY	CHARLES LING NORTH TB	--	Yes	Yes	Yes	NO	NO
	Link	12/5/25	201 +/- 208	MATADOR PRODUCTION COMPANY	CHARLIE SWEENEY	--	No	Yes	Yes	NO	NO
	Link	1/31/25	[Not yet quantified]	MATADOR PRODUCTION COMPANY	HEYCO STATE #122H	--	No	Yes	Yes	NO	NO
	Link	12/12/25	521 +/- 192	LONGWOOD RB PIPELINE LLC	LONGWOOD - BOUGAINVILLE COMPRESSOR STATION	Link			Yes	NO	NO
	Link	8/27/25	783 +/- 145	PRONTO MIDSTREAM, LLC	MARLAN GAS PLANT	--			Yes	NO	NO
	Link	1/29/25	764 +/- 94	MATADOR PRODUCTION COMPANY	NINA CORTELL FEDERAL COM #121H	Link	Yes	Yes		NO	NO
MEWBOURNE OIL CO	Link	7/4/25	641 +/- 138	MEWBOURNE OIL CO	CREEDENCE 21 16 WOED STATE COM WELL PAD	--	No	Yes		NO	NO
	Link	12/5/25	320 +/- 126	MEWBOURNE OIL CO	GLOCK 17 16 B3MP FEDERAL COM #001H	--	No	No	Yes	NO	NO
	Link	7/25/25	238 +/- 72	MEWBOURNE OIL CO	LAYLA 26 35 FEE WELL PAD	Link	No	Yes	Yes	NO	NO
	Link	7/11/25	441 +/- 119	MEWBOURNE OIL CO	MEWBOURNE RED HILLS RECYCLING FACILITY	--				NO	NO
	Link	11/5/25	488 +/- 82	MEWBOURNE OIL CO	OSUDO 9 STATE COM #001	--	No	No		NO	NO

MEWBOURNE OIL CO	Link	2/5/25	204 +/- 129	MEWBOURNE OIL CO	QUEEN 23 24 W0JI #002H	Link	No	No		NO	NO
	Link	7/11/25	412 +/- 91	MEWBOURNE OIL CO	RED HILLS WEST 22 FEDERAL WELL PAD	--	No	Yes		NO	November 13, 2025
	Link	10/3/25	[Not yet quantified]	MEWBOURNE OIL CO	RED HILLS WEST 22 FEDERAL WELL PAD	--	No	Yes		NO	
	Link	10/3/25	372 +/- 108	MEWBOURNE OIL CO	RED HILLS WEST 22 FEDERAL WELL PAD	--	No	Yes	Yes	NO	
	Link	10/31/25	178 +/- 80	MEWBOURNE OIL CO	RED HILLS WEST 22 FEDERAL WELL PAD	--	No	Yes		NO	
	Link	11/21/25	241 +/- 97	MEWBOURNE OIL CO	RED HILLS WEST 22 FEDERAL WELL PAD	--	No	Yes		NO	
	Link	10/31/25	333 +/- 88	MEWBOURNE OIL CO	SALADO DRAW 16 9 FEDERAL COM WELL PAD	--	No	Yes	Yes	NO	NO
	Link	3/18/26	1200 +/- 449	MEWBOURNE OIL COMPANY	STAGE FRIGHT A-11 CTB 2WN	--	No	No	Yes	NO	NO
OCCIDENTAL PETROLEUM CORP	Link	1/31/25	186 +/- 76	OXY USA WTP LIMITED PARTNERSHIP	BURTON FLATS FED CTB	--	No	No		NO	NO
	Link	11/26/25	472 +/- 65	OXY USA INC	CAL MON CGL COMPRESSOR STATION	--	No	Yes	Yes	NO	NO
	Link	1/29/25	560 +/- 114	OXY USA INC.	COVINGTON A FEDERAL NO1 BATTERY	--	No	Yes		NO	NO
	Link	1/29/25	256 +/- 94	OXY USA INC	MESA VERDE CTB	Link	Yes	Yes	Yes	NO	NO
	Link	3/23/26	[Not yet quantified]	OCCIDENTAL	NORTH HOBBS UNIT RCF AND WIB	--	No	Yes	Yes	NO	NO
	Link	7/11/25	[Not yet quantified]	DELAWARE BASIN MIDSTREAM LLC	PADUCA BREAKS CGF	--	No		Yes	NO	NO
	Link	11/21/25	177 +/- 80	DELAWARE BASIN MIDSTREAM LLC	SALADO DRAW COMPRESSOR STATION	--	No		Yes	NO	NO
	Link	1/29/25	258 +/- 96	OXY USA INC.	RED TANK 26 CENTRAL PROCESSING FACILITY	--	No	Yes		NO	NO
	Link	11/26/25	123 +/- 86	OXY USA INC	Red Tank 27 28 CTB	--	No	No	Yes	NO	NO
	Link	4/20/26	256 +/- 163	OXY USA INC	REGAL LAGER 31 19 FEDERAL COM #035H	--	No	No		NO	NO
ONEOK INC	Link	1/31/25	898 +/- 263	OXY USA Inc	SECTION 9 COMPRESSOR STATION	Link			Yes	NO	NO
	Link	1/29/25	296 +/- 42	DELAWARE G&P LLC	ALAMO COMPRESSOR STATION	Link	No		Yes	NO	NO
	Link	2/5/25	1069 +/- 252	DELAWARE G&P LLC	MACY J COMPRESSOR STATION	--	No		Yes	NO	NO
	Link	7/4/25	887 +/- 75	DELAWARE G&P LLC	MACY J COMPRESSOR STATION	--	No			NO	
	Link	7/25/25	202 +/- 51	DELAWARE G&P LLC	MACY J COMPRESSOR STATION	--	No			NO	
	Link	8/27/25	471 +/- 135	Delaware G&P LLC	RED RAIDER COMPRESSOR STATION	--	No		Yes	NO	NO
	Link	4/20/26	868 +/- 75	ONEOK DELAWARE GATHERING, L.L.C.	RICO COMPRESSOR STATION	--	No		Yes	NO	NO

PERMIAN RESOURCES CORP.	Link	2/7/25	1400 +/- 500	PERMIAN RESOURCES OPERATING, LLC	BARNEY CTB	Link	Yes	No	Yes	NO	NO
PERMIAN RESOURCES CORP.	Link	12/5/25	1829 +/- 753	EARTHSTONE OPERATING LLC	OVATION FEDERAL COM 1318 #222H	Link	No	Yes	Yes	NO	NO
PERMIAN RESOURCES CORP.	Link	3/18/26	207 +/- 85	PERMIAN RESOURCES OPERATING, LLC	WEAVER 27 STATE COM #122H	--	No	Yes		NO	NO
PHILLIPS 66	Link	11/26/25	520 +/- 85	DCP MIDSTREAM LP	ALISHA BOOSTER STATION	--	No			NO	NO
	Link	11/5/25	[Not yet quantified]	DCP OPERATING COMPANY LP	AMANDA BOOSTER STATION	--			Yes	NO	NO
	Link	3/23/26	[Not yet quantified]	DCP OPERATING COMPANY LP	AMANDA BOOSTER STATION	--				NO	
	Link	11/21/25	958 +/- 234	DCP MIDSTREAM LP	BERRY BOOSTER STATION	--			Yes	NO	NO
	Link	1/29/25	500 +/- 90	DCP OPERATING COMPANY LP	BONNYMAN COMPRESSOR STATION	--			Yes	NO	NO
	Link	11/26/25	361 +/- 84	DCP OPERATING COMPANY LP	BONNYMAN COMPRESSOR STATION	--				NO	
	Link	11/26/25	550 +/- 65	DCP OPERATING COMPANY LP	FERNANDEZ BOOSTER STATION	--			Yes	NO	NO
	Link	1/31/25	312 +/- 95	DCP MIDSTREAM LP	FITZ COMPRESSOR STATION	--	No		Yes	NO	NO
	Link	12/5/25	267 +/- 99	DCP MIDSTREAM LP	FITZ COMPRESSOR STATION	--	No			NO	
	Link	12/5/25	403 +/- 212	DCP OPERATING COMPANY LP	INDIAN FLATS BOOSTER STATION	--			Yes	NO	NO
	Link	2/5/25	1020 +/- 363	DCP MIDSTREAM LP	MAGNUM COMPRESSOR STATION GCP4-0913	--			Yes	NO	NO
	Link	4/20/26	1338 +/- 128	DCP OPERATING COMPANY LP	MURPHY BOOSTER STATION	--			Yes	NO	NO
	Link	8/27/25	329 +/- 114	DCP OPERATING COMPANY LP	PECOS RIVER TREATER	--			Yes	NO	NO
	Link	12/10/25	771 +/- 402	DCP OPERATING COMPANY LP	SHADOW BOOSTER STATION	--			Yes	NO	NO
RAYBAW Operating, LLC	Link	8/27/25	361 +/- 62	RAYBAW OPERATING, LLC	COOTER 16 STATE SYSTEM	--	No	No		NO	NO
	Link	7/4/25	336 +/- 68	RAYBAW OPERATING, LLC	NERMAL 4 STATE #001H	--	No	No		NO	NO
SAN MATEO MIDSTREAM	Link	7/25/25	399 +/- 89	SAN MATEO DLK BLACK RIVER MIDSTREAM LLC	BLACK RIVER GAS PROCESSING COMPLEX	--	No	Yes	Yes	NO	NO
SELECT WATER SOLUTIONS, LLC	Link	1/29/25	226 +/- 64	SELECT WATER SOLUTIONS, LLC	LOST TANK RECYCLING FACILITY AND AST CONTAINMENTS	--				NO	NO
SM ENERGY (CIVITAS)	Link	2/7/25	1274 +/- 1358	CIVITAS PERMIAN OPERATING, LLC	LUPINE BHJ STATE COM #001 WELL PAD	Link	No	Yes		NO	NO
TARGA RESOURCES CORP.	Link	1/29/25	358 +/- 73	LUCID ENERGY	ACHILLES COMPRESSOR STATION	--			Yes	NO	NO
	Link	10/31/25	556 +/- 123	LUCID ENERGY	ACHILLES COMPRESSOR STATION	--				NO	
	Link	1/29/25	108 +/- 68	TARGA NORTHERN DELAWARE LLC	BIG LIZARD COMPRESSOR STATION	--				NO	
	Link	3/23/25	[Not yet quantified]	TARGA NORTHERN DELAWARE LLC	BIG LIZARD COMPRESSOR STATION	--			Yes	NO	NO
	Link	7/11/25	221 +/- 65	TARGA NORTHERN DELAWARE LLC	BIG LIZARD COMPRESSOR STATION	--				NO	

TARGA RESOURCES CORP.	Link	1/31/25	[Not yet quantified]	TARGA NORTHERN DELAWARE LLC	CADILLAC COMPRESSOR STATION	--		Yes	NO	NO
	Link	2/5/25	813 +/- 187	TARGA NORTHERN DELAWARE LLC	CADILLAC COMPRESSOR STATION	--			NO	
	Link	7/11/25	388 +/- 96	TARGA NORTHERN DELAWARE, LLC.	FRAC CAT COMPRESSOR STATION	--	No		NO	
	Link	7/11/25	[Not yet quantified]	TARGA NORTHERN DELAWARE, LLC.	FRAC CAT COMPRESSOR STATION	--	No	Yes	NO	NO
	Link	2/7/25	1247 +/- 1330	TARGA NORTHERN DELAWARE, LLC.	HACKBERRY COMPRESSOR STATION	Link			NO	
	Link	12/5/25	366 +/- 80	TARGA NORTHERN DELAWARE, LLC.	HACKBERRY COMPRESSOR STATION	--		Yes	NO	November 12, 2025 / May 6, 2026
	Link	12/10/25	752 +/- 196	TARGA NORTHERN DELAWARE, LLC.	HACKBERRY COMPRESSOR STATION	--			NO	
	Link	10/31/25	1420 +/- 340	TARGA NORTHERN DELAWARE, LLC.	HARRIER	--		Yes	NO	NO
	Link	1/29/25	2184 +/- 318	LUCID ENERGY	HELIOS COMPRESSOR STATION	--			NO	
	Link	7/11/25	420 +/- 108	LUCID ENERGY	HELIOS COMPRESSOR STATION	--		Yes	NO	NO
	Link	10/31/25	[Not yet quantified]	LUCID ENERGY	HELIOS COMPRESSOR STATION	--			NO	
	Link	9/26/25	368 +/- 72	LUCID ENERGY DELAWARE, LLC	PIRATE STATE COMPRESSOR STATION	--			NO	
	Link	10/3/25	[Not yet quantified]	LUCID ENERGY DELAWARE, LLC	PIRATE STATE COMPRESSOR STATION	--		Yes	NO	NO
	Link	10/15/25	299 +/- 110	LUCID ENERGY DELAWARE, LLC	PIRATE STATE COMPRESSOR STATION	--			NO	
	Link	10/31/25	337 +/- 89	LUCID ENERGY DELAWARE, LLC	PIRATE STATE COMPRESSOR STATION	--			NO	
	Link	10/3/25	[Not yet quantified]	TARGA NORTHERN DELAWARE, LLC.	RED HILLS GAS PLANT	--			NO	
	Link	10/15/25	[Not yet quantified]	TARGA NORTHERN DELAWARE, LLC.	RED HILLS GAS PLANT	--		Yes	NO	November 13, 2026 / May 7, 2026
	Link	10/31/25	[Not yet quantified]	TARGA NORTHERN DELAWARE, LLC.	RED HILLS GAS PLANT	--			NO	
	Link	1/31/25	579 +/- 213	LUCID ENERGY DELAWARE, LLC	SALT DRAW COMPRESSOR STATION	Link		Yes	NO	NO
	Link	2/5/25	397 +/- 124	LUCID ENERGY DELAWARE, LLC	SALT DRAW COMPRESSOR STATION	Link			NO	
	Link	1/29/25	580 +/- 105	TARGA NORTHERN DELAWARE LLC	TITAN COMPRESSOR STATION	--		Yes	NO	NO
	Link	10/3/25	161 +/- 69	TARGA NORTHERN DELAWARE LLC	TITAN COMPRESSOR STATION	--			NO	
	Link	1/29/25	167 +/- 82	LUCID ENERGY DELAWARE, LLC	TWISTED SISTER COMPRESSOR STATION	--		Yes	NO	NO
	Link	7/11/25	172 +/- 51	LUCID ENERGY DELAWARE, LLC	TWISTED SISTER COMPRESSOR STATION	--			NO	

TRACE MIDSTREAM PARTNERS	Link	10/24/25	455 +/- 153	TRACE DELAWARE GATHERING, LLC	TEXANA COMPRESSOR STATION	--			Yes	NO	NO
	Link	12/5/25	1707 +/- 347	TRACE DELAWARE GATHERING, LLC	TEXANA COMPRESSOR STATION	--				NO	
	Link	12/12/25	876 +/- 188	TRACE DELAWARE GATHERING, LLC	TEXANA COMPRESSOR STATION	--				NO	
	Link	3/18/26	439 +/- 184	TRACE DELAWARE GATHERING, LLC	TEXANA COMPRESSOR STATION	--				NO	
V-F PETROLEUM INC	Link	12/12/25	433 +/- 120	V-F PETROLEUM INC	LIGHTFOOT 19 STATE COM #232H	--	No	No		NO	NO



This report was researched and written by Geoff Bromaghim of the Gas Leaks Project and Ekaterina Larina, Josh Eisenfeld, and Dakota Raynes of Earthworks. It was edited by Javi Garcia of Gas Leaks and Justin Wasser of Earthworks.

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BigGasPolluters.org is a product of a coalition including Earthworks and Gas Leaks Project. It was launched to provide credible, evidence-based information on the claims and actions of the fossil fuel industry. The campaign includes a database documenting reported methane emissions, commitments made to reduce methane, evidence of leakage events from Earthworks, and more information about the 100 largest oil and gas companies in the US. Our goal is simple: we want a world with as little pollution from oil and gas as possible.

October 2026