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January 31, 2022

**40 CFR Parts 60
EPA-HQ-OAR-2021-0317**

Earthworks comments on the Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector

About Earthworks

Earthworks is a nonprofit organization dedicated to protecting communities and the environment from the adverse impacts of mineral and energy development while promoting sustainable solutions. Earthworks stands for clean air, water, and land, healthy communities, and corporate accountability. We work for solutions that protect both the Earth's resources and our communities.

Earthworks fulfills our mission by working with communities and grassroots groups to reform government policies, improve corporate practices, influence investment decisions, and encourage responsible materials sourcing and consumption. We expose the health, environmental, economic, social, and cultural impacts of mining and energy extraction through work informed by sound science.

Earthworks partners with local affected communities and national and international advocates to respond to and solve the growing threats to the earth's natural resources, clean water, biodiversity, special places, and communities from irresponsible mining, drilling, and digging.

For more than 25 years, Earthworks has been documenting the impacts of oil and gas operations nationwide through comprehensive research, involvement with frontline communities, and, more recently, with optical gas imaging (OGI) technology. We have a strong track record of credible, reliable work that we apply to advocate for energy policies and practices that protect health and the environment. Since late 2014, Earthworks Infrared Training Center (ITC)-certified staff have traveled the country exposing oil and gas air pollution using our infrared cameras. We have investigated over 1,954 oil and gas sites in 18 states as well as in Argentina, Colombia, the United Kingdom, Mexico, and Canada.

Earthworks collaborates with scientists, government agencies, regulators, and residents. All of our thermographers (OGI camera operators) receive the same training and certification through the ITC as the industry and regulators to do the same work of detecting and documenting pollution. Our thermographers have spent hundreds of hours in the field with FLIR GF320 cameras filming a wide range of pollution sources and reviewing OGI footage. Our thermographers and field staff review each video before publication in order to ensure that it

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shows concerning emissions. We submit the videos to regulators charged with conducting inspections and issuing violations, and discuss our findings with them whenever possible.

Earthworks has investigated 338 sites in Colorado since 2014, and 184 in 2021 alone. Last year Earthworks observed 102 emissions events there and filed 54 complaints with state regulators. Of those complaints, 14 prompted a regulator inspection of the site, 20 resulted in a corrective action such as equipment repair, and 0 resulted in a fine or violation being issued.

Earthworks has investigated 348 sites in New Mexico since 2014, and 145 in 2021 alone. Last year Earthworks observed 201 emissions events there and filed 41 complaints with state regulators. Of those complaints, 0 prompted a regulator inspection of the site, 0 resulted in a corrective action such as equipment repair, and 0 resulted in a fine or violation being issued.

Earthworks has investigated 185 sites in Pennsylvania since 2014, and 37 in 2021 alone. Last year Earthworks observed 29 emissions events there and filed 12 complaints with state regulators. Of those complaints, 10 prompted a regulator inspection of the site, 2 resulted in a corrective action such as equipment repair, and 0 resulted in a fine or violation being issued.

Earthworks has investigated 494 sites in Texas since 2014, and 171 in 2021 alone. Last year Earthworks observed 249 emissions events there and filed 86 complaints with state regulators. Of those complaints, 2 prompted a regulator inspection of the site, 1 resulted in a corrective action such as equipment repair, and 2 resulted in a fine or violation being issued.

The Climate Crisis

To head off climate catastrophe, fossil fuel production and consumption must decline steeply and rapidly. Fossil fuels pose risks at almost all stages: from the moment oil and gas are pulled from the ground to final consumption, these fuels threaten our health, environment, and climate. Technologies like hydraulic fracturing poison our water, cause air pollution, and scar our landscapes.

Pollution from existing fossil fuel facilities is already harming health and worsening the [climate crisis](#), and disproportionately impacting poor and otherwise marginalized communities. Methane pollution from wells, storage tanks, pipelines, and compressor stations is [under-reported](#), in part due to [inadequate rules and underfunded staff to enforce them](#), which the industry and their trade groups lobby for. Undocumented methane pollution could make energy from methane gas [dirtier than coal](#). While methane emissions reductions under the Clean Air Act are an

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important tool for harm reduction, the only real solution to the climate crisis is to halt fossil fuel extraction and begin a just transition by providing energy workers with family-sustaining jobs in the renewable sector.

In May of 2021, the International Energy Agency (IEA), perhaps the most consulted international authority on energy, called for the [end of new fossil fuel development](#). In the judgment of the world's most significant independent energy authority, to hit the climate targets that consensus climate science has established are necessary to avoid catastrophic global warming, we cannot regulate new oil and gas extraction, and we must stop new oil and gas extraction. Strong and enforced methane regulations must be coupled with federal policies to manage the decline of oil and gas development. President Biden has several policy changes that he can make—without Congress—that could help move us away from dirty fossil fuels.

The President has the authority to declare a national climate emergency, which would grant him special powers. President Biden could use it to [reinstate the crude oil export ban](#) and make it easier for federal agencies to deny permits for new infrastructure intended to facilitate oil and gas exports, including export terminals and new pipelines.

The White House could also direct the Department of Interior to end permitting of oil and gas extraction on public lands managed by the federal government. Through the Bureau of Land Management and the Department of Agriculture's Forest Service, the federal government manages nearly 500 million surface acres and 700 million mineral subsurface acres on behalf of all Americans. [Ninety percent of that land in western states is open to oil and gas extraction](#) (western states are where the vast majority of public lands extraction occurs). On the campaign trail, candidate Biden [promised to end](#) oil and gas drilling on public lands, and he needs to begin a regulatory process to honor that commitment.

Merely reducing methane emissions from the oil and gas industry will not make drilling and fracking safe, or natural gas "clean." Fossil fuel development is inherently risky and puts communities and our planet in jeopardy, even beyond the harmful air pollution it produces. Despite the fact that oil and gas wastes often contain hazardous and even radioactive properties, it is exempt from our federal hazardous waste law, the Resource Conservation and Recovery Act (RCRA). And hydraulic fracturing poses a threat to drinking water resources because of the "Halliburton loophole" that exempts it from the Safe Drinking Water Act. An immediate shift to renewable energy is the only way we can protect our health, land, and water, as well as achieve climate justice.

Rules to cut methane emissions are an important first step on the road to what is truly needed to stave off climate catastrophe. A June 2021

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report from the Intergovernmental Panel on Climate Change (IPCC) underscores the urgent need for swift, protective action to reduce methane emissions. They identified methane pollution reduction from the oil and gas industry as a necessary step toward mitigating these harmful impacts and limiting warming to 1.5 degrees Celsius above pre-industrial temperatures. But, even with the best regulations in place, oil and gas facilities will continue to pollute, and continued reliance on these energy sources will put us on a path toward a dangerously warmer planet. We must couple strong methane regulations to control air pollution from oil and gas development with throwing the full weight of our resources behind decarbonizing our economy to address the climate crisis.

Communities and Public Health Impacted by Oil and Gas Air Pollution

[The Oil and Gas Threat Map](#) shows 12.6 million people living within a half mile radius of oil and gas extraction, processing or compressor stations. That includes 2.9 million at risk students in 9,000 schools suffering 750,000 asthma attacks and 500,000 lost school days per year.

Numerous peer-reviewed scientific studies have documented elevated levels of harmful air pollutants in and around areas with oil and gas production activity, and have shown that oil and gas facilities are the source of the excess pollution. Research that specifically deals with health indicates correlations between risks and/or prevalence of disease and proximity to facilities. The half mile “threat radius” was chosen because it is a very conservative estimate of the area within which elevated levels of toxic pollution are seen, and the distance within which health impacts have most clearly been correlated with the presence of oil and gas facilities. Variables include total population, race and ethnicity, number of children, number of schools, and student enrollment.

Improvements Needed to the Rule in Order to Curb Methane Pollution

Methane, the principal component of natural gas, is over 80 times more potent than carbon dioxide over a 20 year time period. The best science shows that methane pollution from oil and gas facilities in the United States is far worse than current, self-reported estimates suggest. Recent studies found methane emissions levels to be [60% greater than currently estimated](#) by the Environmental Protection Agency (EPA). In addition, as noted above, smog-causing Volatile Organic Compounds (VOCs) and toxic Hazardous Air Pollutants (HAPs), including cancer-causing agents, are released in significant quantities throughout the oil and gas development process, through transmission to end use, even if that end use is overseas. Ozone smog from oil and gas industry pollution is associated with 1.1 million summertime asthma attacks in children, and over 9 million people face a cancer risk that exceeds EPA’s one-in-a-million threshold level of concern due to emissions from oil and gas facilities.

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Until we manage the decline of fossil fuels and transition to a cleaner, more equitable energy system, the EPA must:

1. Strengthen monitoring requirements to require frequent leak detection and repair inspections at all wells. The 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 the 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. Thus, the 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. The EPA’s proposal does not go far enough to address pollution from flaring, and 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. The EPA must eliminate flaring except in emergency situations and must also ensure that flares are operating properly and are frequently inspected to ensure they are lit and operating at maximum efficiency.
3. Require monitoring and plugging of abandoned wells that are leaking methane. According to the Reuters investigation, which conducted a comprehensive review of all available data in 2020, 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.

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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. Where the EPA has proposed protective standards, such as rules eliminating the use of intentionally-polluting pneumatic controllers and requiring a transition to zero-emitting solutions, it is critical that the Agency follows through and finalizes strong rules. 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 the problem is only getting worse. Oil and gas infrastructure is also next to or nearby some of our most treasured natural and cultural sites on public lands, areas that are warming at nearly twice the rate of the rest of the country and experiencing dramatic impacts from a changing climate. There is no time to waste, and we cannot miss out on this opportunity to create the strongest standards possible to limit pollution from the oil and gas industry.

Community Monitoring

Earthworks supports the EPA's proposal to develop a community monitoring program where citizen groups and other third parties can make emissions data available to the EPA, owners and operators, and the general public. This data could then be used by the EPA to implement the previously mentioned regulations and achieve greater emission reductions. The EPA has ample authority to solicit and rely on third-party data in implementing Section 111.

Earthworks trained thermographers and support staff file our OGI evidence with the proper regulatory state agencies as regulatory complaints on an ongoing basis. Unfortunately, our complaints, which always include documented evidence from a FLIR 320 GasFinder camera, often do not result in any action taken to limit air pollution and protect the public.

Currently, state regulatory and enforcement agencies are inconsistent and insufficient in how they respond to public complaints about methane and air pollution. Limited budgets mean that most agencies that regulate the oil and gas industry are underfunded and short-staffed, and rarely have enough employees to adequately enforce our state and federal clean air laws.

Even state regulators admit that they do not currently have the resources to adequately protect the public from oil and gas pollution. "One hundred percent, we are not where we need to be to hold the industry accountable," said James Kenney, New Mexico Environment Department Secretary in a [January 22 news article](#). "I have more violations than I have staff to work on them," he continued. "That's a huge struggle and point of frustration."

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The EPA should create clear, uncomplicated community monitoring guidelines that allow 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.

We urge the EPA to adopt final regulations that:

- Allow community members, nonprofit organizations, and other entities to report emissions using detection techniques approved by the EPA;
- Give the EPA the opportunity to review the data, and determine the responsible operator;
- Allow information gathered by community members, nonprofit organizations, and other public entities using detection techniques approved by the EPA to trigger a regulatory consequence for the operator or otherwise inform enforcement action;
- Allow operators an opportunity to fix the leak as required by regulation; and
- Make reported emissions and enforcement violations publicly available in an accessible, easy-to-use format on the EPA's webpage or another similar accessible and open to the public webpage.

Concern About Nontransparent Voluntary Emissions Monitoring Programs

While we support the inclusion of communities in monitoring for pollution and alerting the EPA of significant events we have serious concerns about the growing use of voluntary emissions monitoring programs (like Project Canary or Rocky Mountain Institute's MiQ Program). These private companies, hired by oil and gas companies, provide unregulated services with serious potential to misrepresent pollution levels at oil and gas facilities and should not replace civil servants working on behalf of the public to protect our air, land, water, and quality of life.

Current monitoring programs boast the ability to provide real time empirical emissions data but many use monitors which are built to read ambient air conditions and provide *qualitative* data not the *quantitative* data which the EPA uses to assess violations of air permits. According to air monitoring programs submitted by companies to the Colorado Department of Public Health and Environment, monitors are set up hundreds of feet from the source and seven feet from the ground, raising serious questions about the understanding of methane pollution migration. We have collected footage of methane for half a decade and this footage consistently shows methane rising as it moves from sources

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that are commonly tens of feet in the air to begin with. This means there is a very low chance they would pick up even large events, and almost certainly would not pick up small but persistent releases.

Even if placed properly in the path of methane pollution these monitors cannot be relied upon for accurate data without frequent calibration and still may suffer from malfunctions with the slightest changes in weather. Are companies going to pay for that frequent maintenance? With this level of maintenance it would likely be more cost effective and accurate to perform Leak Detection And Radar (LDAR) with OGI cameras.

Ambient air monitoring is important to understand impacts to community health; however, only monitors that provide quantitative measurements are useful for indicating issues with point source pollution. There are technologies that may provide more accurate and quantitative measurements but they have yet to be proposed by the industry as a solution. One example is continuous fixed OGI cameras with automatic detection technology, such as those used in many refineries. These cameras are manufactured by FLIR, a highly accredited company which the EPA is familiar with, and others. The EPA should explore the use of these as well as satellite imagery and aircraft equipped with OGI cameras, all of which provide reliable, quantitative data which the EPA requires to make informed decisions about pollution events.

Case study: Colorado

Earthworks has been conducting OGI fieldwork in Colorado for years and tracking the progress of an evolving oil and gas regulatory framework as new rules are adopted and implemented. Following the 2020 adoption of extensive new rules and regulations by the Colorado Oil and Gas Conservation Commission (COGCC) and Air Quality Control Commission, our field findings in 2021 are as follows:

- Earthworks conducted 266 investigations of 184 oil and gas facilities and filed 54 complaints with the Air Pollution Control Division (APCD)
- These complaints document a range of pollution events including:
 - 18 instances of malfunctioning flares and combustors
 - Front Range: <https://youtu.be/22igtyhBJyg>
 - Western Colorado: https://youtu.be/7xS_M2NyaGA
 - 25 instances of emissions from tanks due to allowable venting, operator malpractice or negligence, leaks and/or malfunctions, or failed repairs
 - Front Range: <https://youtu.be/mANVthr0NDg>
 - Western Slope: <https://youtu.be/29Ugqu7UPTk>
 - Multiple instances of intense pollution from new well pads both during pre-production and production
 - Preproduction: <https://youtu.be/XRUlpgugseE>

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- Production: <https://youtu.be/PtiFe89ELLS>
- Pollution from low-emitting sites, as well as from inactive and orphaned sites
 - Uncontrolled emissions from low-emitting site: <https://youtu.be/0hLP-biKvTY>
 - Leak at low emitting site: <https://youtu.be/pnXKtKw-F5o>
 - Inactive site: <https://youtu.be/V8QscCoe0Xk>
 - Orphaned site: <https://youtu.be/qQVFWlluDZQ>

In summation, our fieldwork demonstrates that despite adopting stricter oil and gas regulations in Colorado, pollution from the industry is still pervasive and persistent. Pollution events are not simply isolated incidents but are often symptomatic of ongoing issues that we document repeatedly on separate days at the same facilities. Faced with facilities that are a chronic source of emissions, our findings also illustrate that Colorado's enforcement system is ineffective at curbing this pollution and holding operators accountable for continued violations. A quick overview of our findings at the Prospect Energy Krause MSSU Tank Battery in Larimer County will expand on this point:

- Earthworks was first alerted to possible pollution issues at a tank battery on this site by a local resident who lives 1200 ft from the facility. The resident had complained to Earthworks that they had been smelling odors and experiencing headaches and nausea. We first filmed the site on [January 27, 2021](#) and detected emissions from produced water tanks on the site.
- We filed a complaint with APCD and they investigated on March 3rd. They confirmed a leak from the produced water tanks as well as emissions from the thief hatches on a pair of crude oil tanks on site. We filmed the site again the very next day [on March 4th](#) while the operator was patching the produced water tanks. We did not see any emissions from the produced water tanks but did identify the same emissions that APCD noticed on the crude oil tank thief hatches.
- We filmed the site again a few weeks later on March 31st to confirm that repairs had been completed and documented continued emission from the crude oil tank thief hatches. This prompted our second complaint to APCD, a second investigation by APCD staff, and repairs were completed on the thief hatches.
- In August, residents reached out to us once more about odors from the site and we returned to film the site [on September 2nd](#), finding emissions from the produced water tanks that had been patched in March. We filed our third complaint, and APCD staff conducted yet another investigation alongside Larimer County staff. The operator reportedly made repairs on September 17th.
- When we returned to film the site [on September 30th](#), we continued to document emissions from the same produced water tanks. We returned to the site [on November 6th](#) and filmed



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emissions once again from the produced water tanks. We submitted our fourth complaint to APCD, the APCD investigated, and the operator was given a notice of violation and ordered to replace the produced water tanks.

Colorado has adopted rules and regulations that are intended to protect health and environment from oil and gas pollution. Yet, from late August to December of last year we documented OGI evidence of ongoing pollution from a facility with an immediate history of pollution issues, and residents suffered months of health impacts before any action was taken to address this pollution. For the residents who live near this facility and many more like them across Colorado it is clear that when put to the test, Colorado's enforcement system still struggles to functionally implement its nation-leading rule and regulations.

Case Study: Pennsylvania

Our fieldwork in Pennsylvania underscores the critical need for frequent monitoring of emissions from even the smallest and oldest oil and gas wells. While we have conducted fieldwork in Pennsylvania for many years, one need only look at our findings from 2021 to appreciate the need for regular LDAR at smaller oil and gas well sites.

Allegheny National Forest is home to thousands of small, leak-prone wells. During fieldwork conducted in June 2021, Earthworks found gas leaking from nearly every one of the small, rusty wells that we visited. Leaks often emanated from cracks in decaying casing and joints [directly at the wellhead](#). We also found tanks consistently in poor condition, [venting continuously](#), and with no Department Environmental Protection (DEP) inspection in many years. The Allegheny National Forest is full of these kinds of [well pads](#), and the sour smell of leaking hydrocarbons has become part of the experience of visiting the park.

However, these smaller wells aren't all located in the middle of a remote forest. In November 2021, Earthworks visited a number of smaller wells in a suburban area of southwestern Pennsylvania. A community park in Monroeville, Pennsylvania is home to not only baseball fields and basketball courts, but also a number of small gas wells. One of these wells, situated right [next to a children's soccer field](#), was continuously emitting methane pollution into the air. A few towns over, we saw methane leaking continuously from a small gas well behind an elementary school. The last time this well had been inspected by DEP was 1998, until Earthworks filed a complaint following our visit.

Why are so many of these smaller wells left in disrepair, with little to no oversight? Due to their small size, Pennsylvania has exempted them from basic LDAR requirements. However, Earthworks fieldwork and research demonstrates that treating small wells differently from large wells is a grave mistake for three reasons:



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1. Quantity of emissions. These small wells are the source of [over 50% of the state's oil and gas methane pollution](#). Accepting anything less than the strictest LDAR requirements means allowing more than half of the oil and gas industry's methane pollution to vent into the atmosphere in Pennsylvania.
2. Age of equipment. Most smaller wells are decades old, so their equipment is not in the prime condition of newer, larger well pads. In our fieldwork, we have found that smaller wells are often neglected and in poor condition. These wells must be monitored closely as they continue to age, since wear and tear can lead to leaky equipment. Recent evidence from the University of Cincinnati demonstrates that many of these small wells actually [leak more methane than they produce](#) in a given year. Older, smaller wells warrant at least as much inspection as their newer, larger counterparts.
3. Company size. Many of the companies that own small wells earn millions in revenue and can afford regular and frequent LDAR. In Pennsylvania, [just ten operators generated 60% of production](#) from small wells in 2019, each of them raking in between \$5 and \$48 million in revenue. They are not "mom and pop" shops, and their profits come with a responsibility to keep residents and our planet safe.

Earthworks fieldwork in Pennsylvania leaves no room for doubt: small oil and gas wells make a significant contribution to methane emissions and should not be held to a lower standard than their larger, newer counterparts. Frequent LDAR is needed at these aging well sites in order to protect our communities and our climate.

Case study: Texas

Earthworks started our OGI program in Texas in 2014. We have conducted well over 1,000 individual site inspections and submitted 282 complaints with OGI video as evidence to the Texas Commission on Environmental Quality (TCEQ), and additional complaints to the Railroad Commission of Texas and the Occupational Safety and Health Administration (OSHA). Using Public Information Requests to obtain the full investigation report, we have assembled case studies and reports that show an alarming failure to protect public health and safety and local environments. This failure has global implications with the rapidly expanding Permian Basin that is known as a [Climate Bomb](#). Below are a few of our findings:

- In 2015, Earthworks sent [case studies from the Eagle Ford Shale](#) (EFS) to the EPA. Two recent field trips to that region show many of the same sites with ongoing pollution despite having vapor recovery systems in place. (Note: EFS OGI video recorded by Earthworks contractor, Tim Doty, former regulator for TCEQ.)

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- Marathon Oil, Sugarhorn Central Facility
 - [09/09/2021](#)
 - [09/16/2021](#)
- Marathon Oil, East Karnes Commingle
 - [09/08-09/2021](#)
 - [09/16/2021](#)
- Earthworks first recorded OGI videos in the Permian Basin in 2016. One example from that year is the [Energy Transfer Hoban Gin Compressor Station Case Study](#). Earthworks documented emissions at this small site starting on [October 12, 2016](#) and in [15 additional investigations](#), with our most recent visit in 2020.
- In March 2017, we documented [an unlit flare](#) that was venting uncombusted hydrocarbons at the Primexx Armstrong site. From March 2017 until March 2021, we [documented the flare](#) unlit on seven separate site visits. In total we have monitored 12 different Primexx sites from 2017 until December 2021, and found emissions on 63 separate visits. Some of the sites had no air permit from TCEQ and some did not have the H9 permit required to produce hydrogen sulfide gas, although all sites are in a known hydrogen sulfide field. These sites are very close to residents and one family, [Sue and Jim Franklin](#), had to move away for health reasons. Callon Energy recently purchased these sites and there has been no improvement in operations. Three additional case studies follow:
 - Primexx [Meeker-Canadian 108-109W No. 1H Case Study](#);
 - Primexx [Red Unit](#); and
 - Primexx [Meeker Canadian 10H](#).
- We recorded [a dramatic vapor recovery failure](#) at Apache Corp Cheyenne Central Processing Facility in March 2018. The emissions continued for the three days our thermographer in the area. She submitted a complaint with evidence to the TCEQ (who [later investigated](#)) and to the [EPA](#). In a phone call to the EPA, she learned that the event was allowed to continue for three months until a new piece of equipment arrived. There was no violation and the emissions were never reported to the emissions database. Despite vapor recovery and new equipment, there are tank emissions, excessive combustion emissions and the incomplete combustion from the flare. The tiny town of Balmorhea is only about 2 miles from this site.
- MDC Texas Operator operates over 50 sites in the Permian Basin TCEQ Region 7.
 - Seattle Slew [Case Study](#);
 - War Admiral 24 [Case Study](#); and
 - American Pharoah [Case Study](#).
- Diamondback Energy is not considered an oil Major, but they are a big operator in the Permian Basin. They are another operator that can't seem to keep flares lit and properly operating despite the promises on their company website. They also have problems with pressure relief valves on tanks. Their relationship with TCEQ is



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troubling (see below): they claim flares are lit and properly operating despite video evidence to the contrary. They make nonsensical technical claims about OGI video submissions, and even used LDAR tests conducted 3 days before we document egregious pollution—including unlit flares—as a pass to suggest the obvious pollution didn't occur. And the TCEQ seemingly accepts their responses no matter how nonsensical when they should know better.

- Longfellow - [Site under audit privilege](#) - [Case Study](#);
- Misbehaving State Battery - [Case Study](#);
- State C-19-20 - [Case Study](#);
- Waler State Battery - [Case Study](#); and
- Desperado State C-19-21-18 - [Case Study](#)

Using TCEQ documentation obtained via a Public Information Request (PIR), Earthworks determined that investigators are very inconsistent with assigning complaint priorities, thus do not seem to be following established protocols. In 41 TCEQ Region 7 complaints from December 2017 to April 2020, there were nine instances of Priority 0 (respond in some other time frame), one instance of Priority 3, two instances of Priority 4, three instances of Priority 7, one instance of completing within 14 calendar days, two instances of completing within 30 working days, and 23 instances of no priority given. Though there were two instances of adverse health effects that were reported, these were assigned Priority 0, allowing the Agency to respond in some other time frame. In other words, adverse health effects experienced by members of the public were not deemed a high priority for a quicker response.

TCEQ Air Site Visit Questionnaires to industry is supposedly standard protocol approved by Office of Compliance and Enforcement (OCE) management, but was handed out only 56 percent during the 41 investigations. PIRs revealed that the TCEQ only received supporting technical data from the company five percent of the time, while companies successfully submitted nonsensical technical data almost 25 percent of the time without regional investigators either noticing and/or caring to notice issues. Companies failed to comply with the Agency request to submit the Questionnaire some 25 percent of the time. Of the Questionnaires submitted, 29 percent led to company maintenance of which Region 7 investigators only confirmed 25 percent of those.

Of these 41 investigations, companies did not have a required permit/under reported emissions on seven occasions. These instances included six missing permit-by-rules and one missing standard permit. On seven other occasions, it is unknown whether sites were unpermitted, or the Agency was non-compliant with PIRs. Though various emission, maintenance, and permitting issues were documented, there were 37 instances of no enforcement action (90 percent) and four instances of a notice of violation (NOV) or notice of enforcement (NOE).



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There is inconsistent use of OGI cameras and handheld monitoring instruments within the Agency. Of the 41 Region 7 investigations discussed here, ambient air survey instruments were taken out—not necessarily used—on 27 percent of the projects (no emissions were detected), required bump tests were performed on only three occasions, OGI cameras were checked out for 22 of the 41 investigations (with findings on four of those), there were zero passivated canister samples collected downwind of these sites, the TCEQ central headquarters followed up at none of these sites, and only one set of investigator field notes were documented.

Of 65 total complaints submitted to Region 7 from December 2017 to April 2020, only 41 investigations were performed. Many of them were marred by slow Agency response times; this was evidenced on most of the Region 7 investigations during this time frame. Though the OCE's policy is to provide quality customer service, regional office investigations apparently do not fit into this category.

Many regional investigations reflect a state agency that is not responsive to the public in a timely manner, documented by the time it takes from the initial completed investigation until the investigative report is completed and signed by management, and as evidenced by two investigations that took more than 14 months and another that took more than 13 months to complete. Though relevant PIRs responses for 2021 are still being analyzed by Earthworks at this time, early indications and knowledge seem to indicate that the TCEQ has recently made a practice of performing paper inspections on multiple occasions, rather than making field visits with state-funded monitoring tools.

Though some TCEQ regions are better than others, documentation shows inconsistency in following established policies and protocols, inconsistency in using (not just taking out) monitoring instruments, inconsistency in operating instruments according to protocols, and incompetence in detecting ongoing emissions for years at sites that have been rechecked by Earthworks after the TCEQ declares that it detects no emissions at the site. Perhaps the TCEQ's ability to adequately respond to environmental complaints is hampered by ineffective field visits negatively affected by the lack of proper respiratory protection for its employees. How is it possible that an NGO has technical skills that exceed that of TCEQ regional staff members that are purported to be knowledgeable and well trained on technical matters?

In Summary, Earthworks feels it is necessary to do our own monitoring due to the lack of services provided by Texas regulators. Earthworks has contracted with the TCEQ's retired OGI instructor and 17-year mobile monitoring manager to help devise an OGI monitoring strategy in Texas, and to establish OGI standards that meet or exceed those of the TCEQ. Despite these high standards, TCEQ regional office investigative responses range from occasionally sufficient to mostly failing.

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Case study: New Mexico

Earthworks has been documenting air pollution and emissions in the San Juan Basin, specifically the Lybrook Oilfield to document oil and gas sites in close proximity to residential areas as well as a local elementary school. Over the course of several site visits, we filed complaints with the New Mexico Environment Department (NMED) on behalf of the communities. Repeat visits to the same sites usually reveal continuous emissions. In September 2021, an underground leak was detected at an Epic Energy site, the leak was reported to the NMED 24hr Emergency line listed on the website on October 1, 2021, but no response was taken until an internal email was sent to OCD Director Adrienne Sandoval containing the info. The email was then forward to the operator who conducted a physical inspection with a 4 gas monitor and reported no found leak. FLIR footage was sent to Adrienne, who then forwarded the video to the operator. The well was eventually shut-in and excavated to further inspect underground. The official email reply we received stated that the Operator found a pin size hole measuring 0.08". About a week after the last email was received, the FLIR camera was taken back to the site to do a sweepover. No leaks were found on October 16, 2021.

In Northern NM at the Devil's Ranch, owned by Don Schreiber, Earthworks conducted three FLIR visits at several oil and gas sites in 2021. Each trip warranted a need for a complaint to the NMED, which was filed online. Leaks were consistent at repeat site visits. Emissions were found spewing from equipment found on-site, specifically valve boxes more than once. A Soil Vapor Extraction unit was found at one site and was not active even with a gas generator attached.

Relevant Earthworks Reports and Publications

- [Flaring in Texas: a comprehensive government failure](#), highlighting the extent to which observed gas flares in Texas lacked the required permits;
- [TX Hydrogen Sulfide report](#), highlighting the lack of oversight by the Texas Railroad Commission regarding the operation of "sour gas" wells which extract natural gas with high concentrations of hydrogen sulfide;
- [Comments to the Texas Railroad Commission on Venting and Flaring](#);
- [Letter to TCEQ](#) regarding Texas regulators allowing an unpermitted oil well to pollute for 10 months and counting;
- [Letter to TCEQ](#) regarding TCEQ's failure to comply with its own complaint policy;
- [Pollution on Purpose: Unlit flares in Texas](#);
- *Loud and Clear: What public regulatory complaints reveal about oversight of oil and gas pollution*, detailing Earthworks' experiences with fieldwork and complaints to showcase the failure of oil and

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gas regulatory oversight in [California](#), [Colorado](#), [Ohio](#), [New Mexico](#), [Pennsylvania](#), and [Texas](#);

- [Storymap of low-producing wells in Colorado](#); and
- [“An Oil Company Went Up in Flames, Burning Lenders and the Planet”](#) from Bloomberg News.

Relevant Field reports:

- [UPDATE: An end-of-year update on chronic pollution in Colorado](#)
- [A quite terrible update on pollution from stripper wells in Colorado \(and what you can do about it\)](#)
- [Close the Loophole in PA’s Proposed Rule for Oil & Gas Methane and VOCs](#)
- [Blogs on Texas’ failure to regulate](#)

Conclusion

Earthworks greatly appreciates the EPA’s commitment to reducing oil and gas sector methane emissions and generally supports the EPA’s proposed revisions to the new source performance standards for methane and VOCs for this source category, as well as the proposed emissions guidelines for states. We have focused our comments on where the EPA must further strengthen the proposal in order to meet the goal of achieving “action on a scale and at a speed commensurate with the need to avoid setting the world on a dangerous, potentially catastrophic climate trajectory as laid out in the Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis.

Earthworks’ field experience over the past six years, with four OGI cameras and five trained thermographers, has taught us that rules are only helpful to frontline communities if they are vigorously enforced. Pollution from the oil and gas industry is consistent across states and operators and it is easier to find a polluting well than one without emissions. All wells must receive regular leak detection and monitoring at frequent intervals—that is the only way that pollution events can be detected and repaired.

Frontline communities must be a part of the enforcement process. In order to fully achieve the climate and environmental justice goals laid out by this Administration, they must be able to meaningfully engage in the regulatory process, file complaints about emissions detected, and be taken seriously by regulators.