January 31, 2022

The Honorable Michael S. Regan
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20004
[By email]

Re: Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review Docket Number EPA-HQ-OAR-2021-0317 FRL-8510-02-OAR

Dear Administrator Regan,

In the name of the 24 health organizations signed below, our tens of thousands of health professional and concerned citizen members, and the populations we serve, we welcome the U.S. Environmental Protection Agency (EPA)'s proposed Clean Air Act rule designed to significantly reduce methane emissions and emissions of other health-harming air pollutants from the oil and natural gas industry. The proposed New Source Performance Standards updates and emissions guidelines would lead to highly necessary reductions in greenhouse gases, slowing the acceleration of climate change and protecting human health in the U.S. and worldwide. These changes would also protect the health of people working in and living near oil and gas operations from other dangerous air pollutants. We appreciate that this rule includes, for the first time, reductions from existing oil and gas wells. This is a valuable step forward.

While we applaud the rule's intent and a number of its provisions, it does not go far enough to provide adequate protection to frontline communities, public health, or the climate. We call on EPA to strengthen this rule in four regards. Our recommendations, below, would strengthen EPA's effort to slow climate change while conveying immediate health benefits by reducing air pollution. Our recommendations draw on recent scientific studies that clearly document the need for and value of stronger protections. Therefore, we call on EPA to take the following steps:

- Strengthen monitoring requirements to require all wells to be subject to frequent leak detection and repair inspections.
- Prohibit the routine flaring of associated gas at oil and gas sites.
- Engage frontline communities and other observers in documenting pollution and emissions.
- Address methane's climate impact utilizing the all-important 20-year timeframe.

These steps would significantly increase the public health benefits of the proposed rule.

1. Strengthen monitoring requirements to require all wells to be subject to frequent leak detection and repair inspections.

Considerable amounts of methane leak from oil and gas wells, driving up atmospheric methane levels and exacerbating climate change. Quantifying that leakage has proven difficult, with academic studies estimating average leaks from active gas wellsites (encompassing production, gathering, and processing) at rates ranging from 1.9 percent[i] to nearly 10 percent.[ii] Regardless of the uncertainty over the precise amount, the problem of methane leakage from oil and gas wells is significant, and EPA is right in calling for meaningful steps to identify those leaks and repair them.

Not all wells contribute equally to methane leakage. Marginal wells near the end of their lifespans—so-called stripper wells—appear to represent a disproportionately large source of methane emissions relative to their production, according to a study published in 2020.[iii] The study found that stripper wells typically are not profitable to operate but because the cost of decommissioning them can be greater than the cost of keeping them running they are kept online or at the ready, sometimes leaking more gas than what is intentionally extracted, captured, and used. An estimated 700,000 of these low-producing, marginal wells exist in the United States.

While many stripper wells have low emissions, a few emit at much higher levels. On the face of it, this would seem to make high-emitting stripper wells an ideal target for regulation. However, researchers have found it difficult to predict which wells are going to be "super-emitters." Furthermore, where emissions are intermittent, accurate measurement would require continuous, site-specific monitoring, which is not a realistic prospect given the number of possible leak sites and the time and cost required to deploy enough inspectors and equipment. Thus, a broadly applicable regimen of monitoring and repair is necessary, with small wells and large ones subject to regular leak inspection and requirements for repair. Any proposal that would exempt wells whose operators calculate low levels of emissions would be misguided.

In addition to removing the one-time inspection requirement, EPA must strengthen the rule to ensure that small wells are included in frequent regular inspection and repair requirements. At a minimum EPA must ensure that sites with estimated emissions between 3 and 8 tons per year are subject to the same frequency of inspection as those with estimated emissions above 8 tons per year.

2. Prohibit the routine venting and flaring of gas at oil and gas sites.

We support EPA's proposal to prohibit routine venting. However, we are concerned that the proposal permits unnecessary flaring of associated gas. Flaring of associated gas is a widely used practice for disposing of methane that comes to the surface where infrastructure is not in place to capture and transport it. As a result, the gas is simply burned off as waste. The practice is particularly common at oil wells, which may not bother to build the infrastructure to capture gas. The boom in domestic oil production enabled by fracking caused natural gas flaring to proliferate; in the Eagle Ford Shale region of south Texas, for example, from 2012 to 2016, 82 percent of flares were linked to oil wells, and nine out of ten of these were fracking wells.[iv]

Gas flaring contributes to climate change. A 2017 study of emissions from gas flares in North Dakota found that incomplete combustion from flaring was responsible for 20 percent of the total emissions of methane and ethane from the Bakken shale fields.[v] (Ethane is a very short-lived greenhouse gas, staying in the atmosphere only a matter of months.) These emissions are a significant problem, given that a 2020 study ranked the United States as one of the world's top nations for flaring.[vi] While gas flaring across major US oil basins dipped to a multi-year low during 2020 perhaps as a result of the Covid-19 pandemic,[vii] it may be expected to pick up as the industry rebounds.

Besides contributing to climate change, flaring also generates pollution that can have direct effects on the health of those working in or living near oil and gas operations. Air pollutants from flaring operations include VOCs, polycyclic aromatic hydrocarbons, carbon monoxide, toxic heavy metals and soot and include several carcinogens, notably benzene and formaldehyde. A study of flaring in the Eagle Ford Shale showed flaring to be the dominant source of exposure to nitrogen oxide air pollutants in an otherwise rural area,[viii] thus creating respiratory health risks.

Other health impacts associated with gas flaring include greater risk of preterm birth and problems associated with sleep disruption. A 2020 study of pregnant women living in the Eagle Ford Shale area of Texas found that exposure to oil and gas flaring was associated with a 50 percent increase in the risk of preterm birth.[ix] Preterm birth is a leading contributor in the United States to infant death. Gas flaring, along with the intense artificial lighting used during round-the-clock drilling and fracking operations, contributes to increased light pollution in rural areas. A 2021 study found that residents exposed to light pollution from oil and gas operations experienced increased levels of insufficient sleep.[x] Light pollution has long been linked to disruptions in melatonin levels and circadian rhythm, associated with depression, sleeping disorders, metabolic disease and cancer.[xi]

However, the experience of three oil- and gas-producing states indicates that the industry can drastically curtail flaring. The Alaska Oil and Gas Conservation Act prohibits waste of oil and natural gas, including the burning of from an oil or gas well, unless authorized by the Alaska Oil and Gas Conservation Commission or in the case of emergency or system testing.[xii] Colorado adopted a ban on routine flaring of gas in November 2020, authorizing only a limited option to flare under special conditions, with the approval of the Colorado Oil and Gas Conservation Commission and not for longer than 24 hours. [xiii] And just months later, in March 2021, the New Mexico Oil Conservation Commission finalized rules to eliminate venting and flaring at new and existing wells by April 2022.[xiv] Given these clear examples that a ban on flaring is feasible and viable, EPA should require that the rest of the nation follow suit.

3. Engage frontline communities and other observers in documenting pollution and emissions.

We call on EPA to encourage and collaborate with frontline communities and other community groups in documenting leaks, flaring and other problems associated with oil and gas operations, and to incorporate the emissions monitoring results generated by these groups.

Studies show that low-wealth, rural, and people of color communities bear the brunt of exposures to air pollution and toxics from fossil fuels.[xv, xvi] These patterns of disparities and environmental justice conditions have likewise been documented in regard to fracking and fracking infrastructure. In multiple parts of the country, oil and gas well pads and associated infrastructure are disproportionately sited in non-white, indigenous, or low-income communities.[xvii, xviii]

Studies provide evidence that race and socioeconomic status are both major factors, as the following examples indicate:

- A 2019 analysis of socio-demographic characteristics of people living close to drilling and fracking operations in the states of Colorado, Oklahoma, Pennsylvania, and Texas found strong evidence that people of color, especially African Americans, disproportionately live near fracking wells.[xix]
- A 2020 study found that Hispanic residents of the heavily drilled Eagle Ford area in south Texas were exposed to significantly more fracking-associated flaring than white residents.[xx]
- More than three-quarters of the new oil wells drilled in California between 2011 and 2018 were located in low-income communities and communities of color, according to a nonprofit organization's analysis of state data.[xxi]
- An economic study found that the people who benefitted economically the most from shale gas fracking in Denton, Texas lived all over the country, while Denton residents owned only one percent of the total value extracted. The study also found that the negative environmental impacts were borne by local people, most of whom had no voice in mineral-leasing decisions.[xxii]
- In West Virginia and Pennsylvania, a study found a higher concentration of drilling and fracking operations in impoverished communities. "The results demonstrate that

environmental injustice occurs in areas with unconventional wells in Pennsylvania with respect to the poor population."[xxiii] A separate analysis of census tract data in western Pennsylvania showed that among nearly 800 gas wells, only two were drilled in communities where home values exceeded $200,000.[xxiv]

The voices of people living in these and other frontline communities should be heard, and can be. In the process known as "citizen science," community members formulate research questions, collect data and interpret results. EPA recognizes the value of citizen science, noting that it "advance[s] social learning, empowerment, and collective action" and that "EPA supports these initiatives through a range of resources including funding, technical support, and tools."[xxv] We call on EPA to incorporate emissions monitoring results and other indications of problems associated with oil and gas wells that are collected by community members. This action will help to identify problems quickly and allow EPA to require that they be fixed promptly. It will also help to bring relief to communities that for too long have shouldered a disproportionate share of the burdens and harms to health associated with oil and gas extraction.

4. Address methane's climate impact utilizing the all-important 20-year timeframe.

Finally, we close with a request that applies well beyond the current rule. We ask EPA to acknowledge the extreme potency of methane's contribution to climate change by referencing its climate impact over a 20-year timeframe. It is true that after 100 years in the atmosphere, methane "traps about 30 times as much heat as carbon dioxide," as EPA says in your November 2, 2021 press release about the present rule.[xxvi] However, let us be clear: That grossly underestimates methane's impacts in the all-important next few years. The timeframe that is truly relevant is the 20-year timeframe – roughly the timeframe available to us to head off catastrophic climate change impacts. Over that timeframe, the Intergovernmental Panel on Climate Change (IPCC) tells us, methane is 86 times as potent as carbon dioxide.[xxvii] Please utilize this more relevant time frame in order to convey to the American people the true urgency of reducing methane emissions.

Separately but relatedly, we also want to encourage you to require that abandoned wells be monitored for methane leaks and, if found to be leaking, that they be plugged.

Abandoned oil and gas wells – those that are not productive and have not been properly plugged – are among the high-volume methane emitters. So too are "orphaned" wells, which are abandoned wells whose owners are bankrupt or cannot be found.

There are currently no federal regulations to require monitoring methane emissions from inactive and abandoned wells, although some states have their own requirements. Nor does the federal government currently govern the remediation of orphaned wells.[xxviii] States require oil and gas companies to put up bonds for well plugging prior to the onset of drilling, but the amounts of these bonds often fall dramatically short of the costs. In many cases, according to a California

news report, “companies have no incentive to spend more money, and essentially walk away, leaving the responsibility and costs to state and federal governments.”[xxix] As a consequence, as a journal article noted, “Government agencies responsible for well plugging often face funding shortfalls and many orphaned wells remain unplugged.”[xxx]

Studies have found high rates of methane leakage from abandoned wells. For example, a study of inactive wells in Pennsylvania estimated the number of abandoned wells in that state to be between 470,000 and 750,000, significantly higher than previous estimates. The study estimated that, overall, Pennsylvania’s abandoned wells contributed between five and eight percent of the state’s annual greenhouse gas emissions.[xxxi] A study of abandoned oil and gas wells in California found 124,000 abandoned wells. Based on measurements from a representative sampling of those wells, the study found that those with the highest leakage rates released enough methane to substantially impact the state’s methane budget.[xxxii]

At the same time, methane leakage from abandoned wells varies widely, with a few high emitters responsible for a disproportionately large share of the problem. A 2020 study by a research team from McGill University in Canada collected and analyzed data on methane emissions from almost 600 abandoned wells in the United States and Canada, then extrapolated a cumulative total. They concluded that 96 percent of cumulative emissions came from 10 percent of wells, with unplugged abandoned gas wells being the highest emitters. While noting uncertainty about the actual quantity of these emissions, given that few abandoned oil and gas wells have been measured for leakage, the study indicated that for the US, methane emissions from abandoned wells were 20 percent higher than previously estimated.[xxxiii]

Clearly, methane leakage from abandoned wells is a problem in need of a prompt and effective solution. Furthermore, oil and gas well owners should be held responsible for the prompt cleanup of their wells, and action should be taken promptly, as the risk of methane leaks increases as inactive wells age.

Strengthening monitoring requirements to require all wells to be subject to frequent leak detection and repair inspections, prohibiting the routine flaring of associated gas at oil and gas sites, engaging frontline communities and other observers in documenting pollution and emissions and addressing methane’s climate impact utilizing the all-important 20-year timeframe would strengthen EPA’s efforts to protect us from climate change and would convey immediate health benefits by reducing air pollution. Thank you.

Sincerely,

Allergy & Asthma Network
Alliance of Nurses for Healthy Environments
American Academy of Pediatrics
American Lung Association
American Psychological Association
American Public Health Association
Asthma and Allergy Foundation of America

Center for Climate Change and Health
Children's Environmental Health Network
Climate for Health
Climate Psychiatry Alliance
Health Care Without Harm
International Society for Environmental Epidemiology, North American Chapter
Medical Society Consortium on Climate and Health
Medical Students for a Sustainable Future
National Association of Pediatric Nurse Practitioners
National League for Nursing
Physicians for Social Responsibility
Physicians for Social Responsibility Pennsylvania
Physicians for Social Responsibility, Arizona Chapter
Physicians for Social Responsibility/Sacramento
Public Health Institute
San Francisco Bay Physicians for Social Responsibility
Texas Physicians for Social Responsibility
Oregon Physicians for Social Responsibility

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