



February 13, 2023

The Honorable Michael S. Regan  
Administrator  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue NW  
Washington DC 20004

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:

The undersigned national health, medical, nursing and public health organizations write in support of strengthening the limits on harmful air pollution from new and existing oil and gas sources. We appreciate the U.S. Environmental Protection Agency (EPA)'s commitment to obtaining stakeholder input and for issuing a supplemental proposal that strengthens some provisions of its earlier proposal. We urge EPA to quickly strengthen and finalize this rule – no later than August 2023 – so that implementation can begin and communities can begin to see the benefits of the pollution reductions.

In the last public comment opportunity for this proposed rule, over 330 health professionals and 50 health organizations submitted comments urging EPA to significantly strengthen the proposal.<sup>1,2,3</sup> Health experts saw opportunities to improve the proposal by strengthening monitoring requirements to require all wells to be subject to frequent leak detection and repair inspections; prohibiting routine flaring; engaging frontline communities in activities to document and address pollution; requiring monitoring at abandoned wells and steps to plug them should leaks be found; and addressing methane's climate impact utilizing the 20-year timeframe.

Climate change is a health emergency, leading to more frequent and intense extreme weather events like flooding, excessive heat, drought and wildfires. It creates longer and more intense allergy seasons, increased risks from water-borne and vector-borne diseases like Lyme Disease, worsens air quality and damages mental health<sup>4</sup>. The methane that this rule addresses is a highly potent greenhouse gas with a heat-trapping capacity that is more than 80 times that of carbon dioxide over its first 20 years in the atmosphere. If we want to avoid catastrophic tipping points in the climate system, we must reduce emissions of methane and of other greenhouse gases dramatically and immediately.

Climate change is a health emergency, but it is also a health opportunity. Reducing climate pollution will result in immediate and long-term health benefits. Finalizing the strongest possible rule to limit pollution from the oil and gas sector would constitute a significant step forward towards a healthier future. Besides accelerating climate change, oil and gas production generates pollution that can have direct effects on the health of those working in or living near oil and gas operations. Air pollutants emitted alongside methane include volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons, carbon monoxide, toxic heavy metals and soot and include several known human carcinogens, notably benzene and formaldehyde. Ethylbenzene, another hazardous pollutant from oil and gas emissions, is a probable carcinogen. In addition to these dangers, VOCs also interact with other emissions in the presence of sunlight to form ground-level ozone pollution. Ozone, or smog, can worsen asthma, increase hospital visits and lead to premature death. According to the American Lung Association's "State of the Air" report, over 122 million people live in counties with failing grades for ozone.<sup>5</sup>

Additional health impacts are associated with oil and gas production. One is greater risk of preterm birth. A 2020 study of pregnant women living in the Eagle Ford Shale area of Texas found that exposure to oil and gas emissions was associated with a 50 percent increase in the risk of preterm birth.<sup>6</sup> Preterm birth is a leading contributor in the United States to infant death. Children are also particularly vulnerable to health impairment from both VOCs and ozone due to their faster breathing rate, proportion of time spent outside and developing lungs. A Yale School of Public Health study found that children living near unconventional oil and gas developments at birth were two to three times more likely to be diagnosed with leukemia between the ages of 2 and 7 than those who did not live near an oil and gas facility.<sup>7</sup>

Oil and gas wells are not just accelerators of climate change, they are also emitters of hazardous air pollutants that threaten the health of nearby communities. These communities are often low-wealth, rural and/or communities of color and are already bearing the brunt of exposure to air pollution from fossil fuels.<sup>8,9</sup> 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.<sup>10</sup> The voices of people living in frontline communities can and should be heard.

We are grateful for the diligent work of EPA staff to review the hundreds of thousands of comments the Agency received during the initial public comment period. We note that the supplemental proposal includes a number of changes that will strengthen and improve the initial proposal. Among these, the updates to strengthen the leak detection and repair standards are a welcome change. Leaks are the largest source of methane pollution from this sector, which drives up atmospheric methane levels and exacerbates climate change. In health groups' original comments, we drew attention to low-producing wells. Wells that are near the end of their lifespan can be a disproportionately large source of methane emissions relative to their production.<sup>11</sup> These wells are costly to decommission and so are kept running or at the ready, sometimes leaking more gas than what is intentionally extracted, captured and used.<sup>12</sup> By requiring routine inspections using gas imaging cameras at all wells with equipment known to malfunction (like tanks and flares), low-producing wells will be required to regularly check for leaks.

We appreciate the inclusion of a novel Super Emitter Response Program that can more quickly address so-called super-emitters through third-party monitoring. If done correctly, this program could ultimately lead to pollution cleanup while also engaging affected community members in the process, a key component of righting environmental injustices. We advise EPA to design the program in a way that makes accessing information straightforward and clear. Publicly available information should include descriptions of who is eligible to submit findings, requirements around permissible equipment used to identify leaks, what levels are defined as "super-emitter" and how to track the status of a filed violation. We also encourage EPA to require states to inform their constituents about the availability of this program.

Methane leakage from abandoned wells is a problem in need of a prompt and effective solution. Our organizations appreciate the updates made to the proposal that require monitoring until closure at abandoned wells as well as the requirement for oil and gas companies to submit a closure plan and post-closure survey to ensure leaks are not occurring. We urge EPA to maintain this requirement. 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.<sup>13</sup> 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.<sup>14</sup> Furthermore, oil and gas well owners should be held responsible for the prompt cleanup of their wells as the risk of methane leaks increases as inactive wells age.

One opportunity that remains to strengthen this supplemental proposal is to promulgate stronger prohibitions on routine flaring. Flaring 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 take the time or spend the resources to build the infrastructure to capture the gas (even though that technology exists). Routine flaring is another example of environmental injustice and poses a threat to public health. Besides contributing to climate change by increasing the levels of carbon dioxide emitted, routine flaring generates co-pollutants that have immediate negative health impacts. A study of flaring the Eagle Ford Shale in Texas showed flaring to be the dominant source of exposure to nitrogen oxide air pollutants in an otherwise rural area.<sup>15</sup> EPA has an opportunity to be stronger in its requirement that operators at wells capture associated gas and limit routine flaring.

Our organizations would also like to reiterate the need to continue framing methane's climate impact utilizing the 20-year timeframe. Health organizations made this point in comments submitted to the initial proposal, and we appreciate EPA's updated language in the November 11, 2022 press release to reflect this long-term high potency of methane. Since the close of the initial comment period in January 2022, the Intergovernmental Panel on Climate Change (IPCC) released its updated Sixth Assessment Report. According to the experts, methane emissions would need to be reduced by about a third by 2030 to limit warming to around 1.5 degree Celsius.<sup>16</sup>

Lastly, it is imperative that EPA finalize this rule no later than August 2023, as outlined in the Unified Regulatory Agenda. Any delays in the finalization will lengthen the time that frontline communities are exposed to harmful, cancer-causing pollution and will further accelerate the catastrophic impacts of climate change.

We appreciate EPA's commitment to strengthen standards on oil and gas pollution. We urge the Agency to take the opportunity in this second comment period to strengthen components of the rule as outlined in these comments and to finalize the rule no later than August 2023.

Sincerely,

Allergy & Asthma Network  
Alliance of Nurses for Healthy Environments  
American Academy of Pediatrics  
American College of Physicians  
American Lung Association  
American Medical Association  
American Public Health Association  
American Psychological Association  
Asthma and Allergy Foundation of America  
Children's Environmental Health Network  
Climate for Health/ecoAmerica  
Climate Psychiatry Alliance  
Health Care Without Harm  
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  
Public Health Institute

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<sup>1</sup> <https://www.lung.org/getmedia/676d1adb-2818-454b-acc6-8ba725cb02e1/Health-Professionals-Comment-to-EPA-on-Methane-Proposal-1-31-22>

<sup>2</sup> <https://www.lung.org/getmedia/41f14659-e9c1-4284-9e38-ff946a32d164/National-Health-Orgs-Comment-to-EPA-on-Methane-Proposal-1-31-2022>

<sup>3</sup> <https://www.lung.org/getmedia/4b13b896-4e0a-4cf3-bc7b-d7135c71dba4/State-and-Local-Health-Org-Comment-to-EPA-on-Methane-Proposal-1-31-2022>

<sup>4</sup> Lawrance, E. L., Thompson, R., Newberry Le Vay, J., Page, L., & Jennings, N. (2022). The impact of climate change on mental health and emotional wellbeing: a narrative review of current evidence, and its implications. *International Review of Psychiatry*, 34(5), 443-498.

<sup>5</sup> <https://www.lung.org/research/sota/key-findings/ozone-pollution>

<sup>6</sup> Cushing, L. J., Vavra-Musser, K., Chau, K., Franklin, M., & Johnston, J. E. (2020). Flaring from unconventional oil and gas development and birth outcomes in the Eagle Ford Shale in South Texas. *Environmental Health Perspectives*, 128(7). doi: 10.1289/EHP6394

<sup>7</sup> Cassandra J. Clark, Nicholaus P. Johnson, Mario Soriano Jr, Joshua L. Warren, Keli M. Sorrentino, Nina S. Kadan-Lottick, James E. Saiers, Xiaomei Ma, and Nicole C. Deziel 2022. “Unconventional Oil and Gas Development Exposure and Risk of Childhood Acute Lymphoblastic Leukemia: A Case–Control Study in Pennsylvania, 2009–2017” *Environmental Health Perspectives* doi.org/10.1289/EHP11092

<sup>8</sup> Tessum, C. W., Apte, J. S., Goodkind, A. L., Muller, N. Z., Mullins, K. A., Paoletta, D. A., . . . Hill, J. D. (2019). Inequity in consumption of goods and services adds to racial-ethnic disparities in air pollution exposure. *PNAS*, 116(13), 6001-6006. doi: 10.1073/pnas.1818859116

<sup>9</sup> Johnston, J., & Cushing, L. (2020). Chemical exposures, health, and environmental justice in communities living on the fenceline of industry. *Current Environmental Health Reports*, 7, 48-57. doi: 10.1007/s40572-020-00263-8

<sup>10</sup> Zwickl, K. (2019). The demographics of fracking: A spatial analysis for four U.S. states. *Ecological Economics*, 161, 202-215. doi: 10.1016/j.ecolecon.2019.02.001

<sup>11</sup> Jacob A. Deighton et al. 2020. “Measurements Show That Marginal Wells Are a Disproportionate Source of Methane Relative to Production,” *Journal of the Air & Waste Management Association* 70, no. 10 (2020): 1030–42, <https://doi.org/10.1080/10962247.2020.1808115>.

<sup>12</sup> Jacob A. Deighton et al. 2020. “Measurements Show That Marginal Wells Are a Disproportionate Source of Methane Relative to Production,” *Journal of the Air & Waste Management Association* 70, no. 10 (2020): 1030–42, <https://doi.org/10.1080/10962247.2020.1808115>.

<sup>13</sup> Kang, M., Christian, S., Celia, M. A., Mauzerall, D. L., Bill, M., Miller, A. R., Jackson, R. B. 2016. Identification and characterization of high methane-emitting abandoned oil and gas wells. *Proceedings of the National Academy of Sciences*, 113(48), 13636-13641. doi: 10.1073/pnas.1605913113.

<sup>14</sup> Lebel, E.D., Lu, H.S., Vielstädte, L., Kang, M., Banner, P., . . . Jackson, R.B. (2020). Methane emissions from abandoned oil and gas wells in California. *Environmental Science & Technology*, 54(24), 14617-14626. doi: 10.1021/acs.est.0c05279.

<sup>15</sup> Franklin, M., Chau, K., Cushing, L. J., & Johnston, J. E. (2019). Characterizing flaring from unconventional oil and gas operations in south Texas using satellite observations. *Environmental Science & Technology*, 53(4), 2220-2228. doi: 10.1021/acs.est.8b05355

<sup>16</sup> IPCC, 2022: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press. Cambridge University Press, Cambridge, UK and New York, NY, USA, 3056 pp., doi:10.1017/9781009325844.