Testimony of Nadia Steinzor
Eastern Program Coordinator
Earthworks' Oil & Gas Accountability Project

1612 K St., NW, Suite 808
Washington, D.C. 20006
www.earthworksaction.org
202-887-1872 x109
nsteinzor@earthworksaction.org

Before the U.S. Environmental Protection Agency
Proposed Emission Standards for New and Modified Sources
in the Oil and Natural Gas Sector
Docket ID No. EPA-HQ-OAR-2010-0505

Pittsburgh, Pennsylvania
September 29, 2015

My name is Nadia Steinzor, Eastern Program Coordinator for Earthworks. For over two decades, we have worked to protect communities and the environment from the negative impacts of mineral and energy development while seeking sustainable solutions.

We applaud the EPA for recognizing that the oil and gas industry must reduce emissions of methane and VOCs—for the sake of both the global climate and communities that live day in and day out with the negative impacts of operations on their health and quality of life.

Overall, we strongly support the proposed amendments. The rules make sense because the industry hopes to vastly expand production, processing, and transmission facilities, all of which leak and pollute. The rules even provide economic benefits for operators, which may now be persuaded to capture methane for sale rather than continuing to release it into the air.

For the past year and a half, Earthworks has used a Forward Looking Infrared (FLIR) camera to document emissions from well sites, compressor stations, processing plants, and other oil and gas facilities in Pennsylvania, Ohio, and five other states. As the nearly 150 videos we've produced clearly show, these leak from many sources—and often do so unabated. (See the videos at https://www.youtube.com/playlist?list=PL9BS7nDf-8tp79KUiH5wQQyuoiLt8C6UU)

An industry that constantly touts its technological achievements and has found a way to drill horizontally in deep shale should not have a problem fixing leaks, inspecting facilities, and installing better equipment. Federal rules are necessary because operators generally don't reduce emissions unless they're required to—and because most states have chosen not to take this step.

The industry's promise to consistently apply "best practices" voluntarily is long past due. For example, there are hundreds of natural gas producers in Pennsylvania and Ohio; yet less than a dozen have joined EPA's Natural Gas Star Program to reduce pollution from natural gas activities.

In the meantime, a growing body of scientific evidence confirms the connection between emissions from wells and facilities and health problems such as respiratory distress, dizziness, headaches, neurological damage, nausea, fatigue, and nosebleeds.[1] Proximity to oil and gas operations has also

been linked to increased hospitalizations,[2] lower birth weight,[3] and higher lifetime cancer risk.[4]

Nitrogen oxide is one of the primary VOCs associated with oil and gas development, and forms the ozone (smog) that can impair breathing, aggravate asthma, and permanently damage lungs. Across the eastern states, drilling, processing, and distribution activities are on the rise in areas already classified as non-attainment for ozone.

In light of these grave facts, we ask EPA to:

Add additional equipment to the list of regulated equipment, in particular storage tanks, liquids unloading, and well site compressor engines. All of these release methane and hydrocarbons on a regular basis. Omitting them therefore runs counter to the emissions reduction goal of the proposed rules.

Shorten the period that operators have to fix leaks. Six months may be convenient for operators, but nearby residents will suffer the consequences of ongoing exposure. As long as leaks remain unaddressed, emissions levels and pollution will worsen. Days of exposure is risky—months is simply unconscionable.

Quantify and monetize the public health benefits of reducing emissions of VOCs and hazardous air pollutants. Without these metrics included, benefits of the rules are understated—giving industry the excuse it seeks to claim they are too costly.

Most importantly, we strongly encourage EPA to begin work on rules to cover *existing* sources of methane and VOC emissions, which the Clean Air Act authorizes the agency to do. The current rules are vital, but are only the first step towards achieving full regulatory coverage. Across the Marcellus and Utica Shale states, thousands of wells, compressor stations, and processing facilities are now operational. In the next few years, most methane emissions from the oil and gas industry will come from sources that already exist today.

In closing, Earthworks does not believe that regulating methane will make oil and gas development safe. Yet the proposed rules will reduce emissions and hold the industry accountable for more of the pollution it causes. We look forward to the timely adoption, implementation, and enforcement of strong rules—which can not come soon enough for oil and gas field residents.

Thank you for your time and attention.

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[1] A library of peer-reviewed science on the oil and gas industry compiled by Physicians, Scientists, and Engineers for Healthy Energy is available at https://www.zotero.org/groups/pse_study_citation_database/items See also Nadia Steinzor, Wilma Subra, and Lisa Sumi, "Investigating Links Between Shale Gas Development and Health Impacts through a Community Survey Project in Pennsylvania." *NEW SOLUTIONS,* Vol. 23(1), 2013.

[2] Jemielita T, Gerton GL, Neidell M, Chillrud S, Yan B, et al. "Unconventional Gas and Oil Drilling is Associated with Increased Hospital Utilization Rates." *PLoS ONE* 10(8). July 2015.

[3] Stacy SL, Brink LL, Larkin JC, Sadovsky Y, Goldstein BD, Pitt BR, et al. "Perinatal Outcomes and Unconventional Natural Gas Operations in Southwest Pennsylvania." *PLoS ONE* 10(6), June 2015.

[4] Lisa M. McKenzie, Roxana Z. Witter, Lee S. Newman, and John L. Adgate. **"**Human Health Risk Assessment of Air Emissions from Development of Unconventional Natural Gas Resources." *Science of the Total Environment,* 2012.