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Organization:

Title:

Comments: Packet #33: uog pollution plume shows 2500ft setback needed; McKenzie et al., 2018: Ambient Nonmethane Hydrocarbon Levels Along Colorado's Front Range: Acute and Chronic Health Risks

Attached find, from <https://pubs.acs.org/doi/10.1021/acs.est.7b0598>

Lisa M. McKenzie et al., Environ. Sci. Technol., 2018, 52 (8), pp 4514-4525 DOI: 10.1021/acs.est.7b05983, Pub Date (Web): March 27, 2018

Abstract:

Oil and gas (O&G) facilities emit air pollutants that are potentially a major health risk for nearby populations. We characterized prenatal through adult health risks for acute (1 h) and chronic (30 year) residential inhalation exposure scenarios to nonmethane hydrocarbons (NMHCs) for these populations. We used ambient air sample results to estimate and compare risks for four residential scenarios. We found that

air pollutant concentrations increased with proximity to an O&G facility, as did health risks. Acute hazard indices for neurological (18), hematological (15), and developmental (15) health effects indicate that populations living within 152 m of an O&G facility could experience these health effects from inhalation exposures to benzene and alkanes. Lifetime excess cancer risks exceeded 1 in a million for all scenarios. The cancer risk estimate of 8.3 per 10 000 for populations living within 152m of an O&G facility exceeded the United States Environmental Protection Agency's 1 in 10 000 upper threshold. These findings

indicate that state and federal regulatory policies may not be protective of health for populations residing near O&G facilities. Health risk assessment results can be used for informing policies and studies aimed at reducing and understanding health effects associated with air pollutants emitted from O&G facilities.

#2: Environmental Health Project's Setback Distances, Public Health and Shale Gas Development factsheet.

Note guidance to

Establish a setback distance minimum of 1  $\frac{1}{4}$  miles (6600 feet or 2 km) from gas processing plants and large

compressor complexes whose emissions exceed 1000 grams/hour.

? Establish a setback distance minimum of 1  $\frac{1}{4}$  miles (6600 feet or 2 km) for schools/daycares, hospitals, nursing

homes, and other high-occupancy buildings that house vulnerable populations and/or are difficult to evacuate.

and #3:

Also to be assessed is the following press release, dated 8-28-18 concerning evidence of the reach of oil and gas infrastructure plumes filmed 8-24-18 in Colorado, which has much stricter regulation than Ohio's horrendous rules (such as they are, considering ODNR has not developed rules required by legislation years ago).

The Wayne must consider the economic costs to communities whether these setback guidelines are implemented (unlikely) or not, if it is to further contemplate including fracking as an activity under the new Plan.

Normally invisible air pollution shows why 2,500 foot setback necessary

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Colorado Rising \* Earthworks \* Erie Protectors

PRESS RELEASE: 28 Aug 2018

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Infrared camera reveals huge oil & gas air pollution plume near Erie homes

Normally invisible air pollution shows why 2,500 foot setback necessary

Denver & Washington, D.C. -- Earthworks, an environmental nonprofit whose energy program is based in Durango, today published optical gas imaging (infrared) video showing oil and gas air pollution from Extraction's new production facilities (Coyote Trails) near Erie, CO blowing towards homes less than 2,000 feet away. Taken Aug 24 by a certified thermographer in cooperation with the Erie Protectors, the video makes visible normally invisible methane and toxic volatile organic compounds that are subject to Colorado's oil and gas safeguards.

"This video shows why Coloradans need the 2,500 foot setback ballot initiative to protect their health," said Earthworks Colorado organizer and resident Nathalie Eddy. She continued, "Even with some of the strongest pollution controls in the country, the health of Coloradans is still threatened by oil and gas production."

"With only 28 inspectors for more than 50,000 active wells statewide, not every community will be so lucky as Erie as to have a problem like this identified and dealt with. This is a clear example of how regulations have failed to protect our communities, and why we need to keep these dangerous operations away from our neighborhoods and schools with the 2500 ft setback initiative. This abusive industry should not be allowed to risk the health and safety of our children with explosions and cancer-causing chemicals, as seen in these videos. We need a safer setback," said Anne Lee Foster, a volunteer with Colorado Rising and Colorado resident.

As soon as Earthworks detected the pollution, field staff reported it to the Colorado Oil and Gas Conservation

Commission, and will be submitting a formal complaint along with the footage. The COGCC responded immediately, and shortly thereafter the operator (Extraction Oil and Gas, Inc) took steps to reduce pollution at the site.

"We asked Earthworks to inspect Extraction's operation and they happened to be available," said Heidi Russ Henkel, a local mother. She continued, "if they hadn't been, we have every reason to believe Extraction's pollution would still be blowing into nearby homes. There are more than 50 thousand active wells in Colorado. Regulators, no matter how strong our rules, cannot stay on top of pollution from so many sites. The only real way to protect our families is to keep oil and gas production far away from where we live, and play."

Earlier this year, the University of Colorado published the latest study in a growing body of peer-reviewed science demonstrating that living in proximity to active oil and gas operations is strongly correlated with negative health impacts. Based on recent research, the Environmental Health Project now recommends a 3,281 foot minimum setback from wells and 6,600 foot minimum setback from gas processing plants and large compressor complexes.

For More Information -

About the video

- \* August 24 optical gas imaging video taken by Earthworks' ITC-certified thermographer showing plume of methane and other volatile organic compound pollution from Extraction Oil & Gas Inc's Coyote Trails operation blowing towards Erie homes.

- \* Earthworks takes these videos on behalf of oil and gas impacted communities around the country as part of its Community Empowerment Project.

- \* Earthworks thermographers are ITC-trained, the same used by industry and regulators to train their thermographers to detect oil and gas air pollution.

- \* Earthworks thermographers use the industry standard FLIR GF320 optical gas imaging camera which is specifically tuned to detect volatile organic compounds. FLIR GF = Forward Looking InfraRed Gas Finder.

About the impacts of oil and gas and the need for setbacks

- \* Colorado oil and gas threat map using COGCC and Census data to show the number of active oil and gas operations in Colorado and the number of people, schools and medical facilities within [frac12] mile of them.

- \* A June 2018 overview by the Endocrine Disruption Exchange of the scientific evidence supporting the conclusion that significant health impacts can occur from exposure to chemicals used and released during unconventional oil and gas operations (UOG).

- \* Study published in PLOS ONE: Setback distances for unconventional oil and gas development. August 2018.

- \* Colorado School of Public Health: Living near oil and gas facilities may create higher risk of cancer and other diseases. April 2018.

END

Colorado Rising is powering the grassroots effort to pass a statewide ballot initiative (Initiative 97) establishing common sense protections for our communities from the dangers of oil & gas development and fracking.

Earthworks is dedicated to protecting communities and the environment from the negative impacts of resource extraction.

Erie Protectors are a group of disproportionately affected residents intent on ending the practice of residential drilling

[www.earthworksaction.org](http://www.earthworksaction.org)

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Sincerely,

Heather Cantino, Steering Committee Chair,

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on behalf of Athens County Fracking Action Network,

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Buckeye Environmental Network (formerly Buckeye Forest Council), Roxanne Groff, board chair

Jean Andrews, Documentary Video Producer, "A Forest Returns: The Success Story of Ohio's Only National Forest as Told by Ora Anderson"

Concerned Citizens of New Concord Muskingum County, OH 43762

Meghan Wynne, Organizer