

QEPA
Testimony Before The
2017 1st Regular Session
Seventy-First General Assembly
State of Colorado

Introduced House Bill 17-1256

Oil and Gas Facilities Distance From School Property
CONCERNING A CLARIFICATION OF THE MINIMUM DISTANCE FROM WHICH CERTAIN OIL AND GAS FACILITIES
MUST BE LOCATED FROM ANY SCHOOL

Dollis Wright, CEO Quality Environmental Professional Associates, Inc. (QEPA)

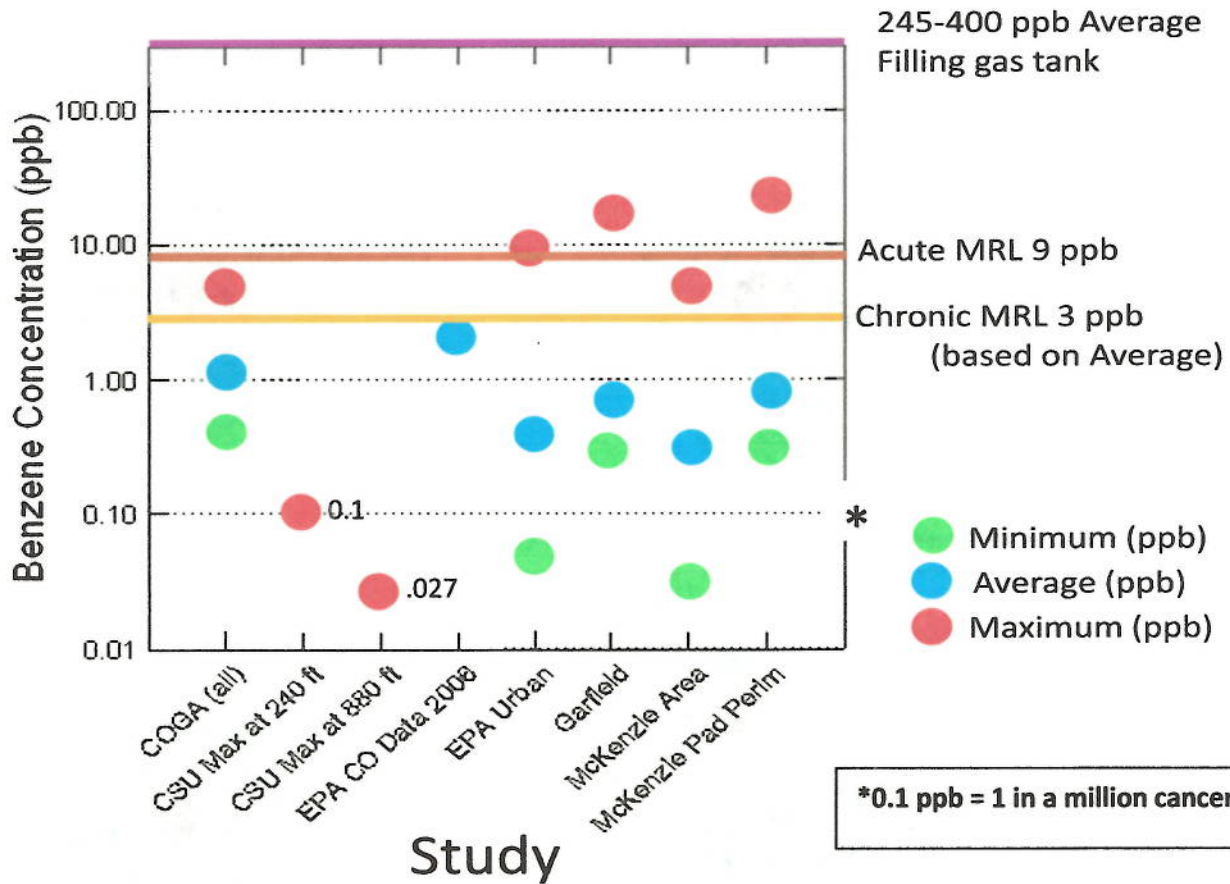
Dollis is the president and co-founder of QEPA, an environmental health risk communication firm. She has worked in the government and private sector for over thirty years in the fields of Epidemiology and Toxicology. She started her career working for the Centers for Disease Control collecting epidemiological data for the Metropolitan Atlanta Congenital Birth Defects and Very Low Birth Weight Program. She has conducted research in male and female reproductive potential for the National Institute for Occupational Safety and Health (NIOSH). Her work was nominated for the Alice Hamilton Research Award. Dollis served as the Staff Toxicologist and Director of Environmental Epidemiology for the Indiana State Department of Health, where she was responsible for reducing and preventing human exposure to chemicals spilled or released throughout the State. In the sixteen years since she started QEPA, her clients range from U.S. EPA to Industry. The QEPA team of associates performs *critical reviews of documents* for scientific soundness, *OSHA Hazardous Materials and Site Investigation training, public meeting presentation, and consultation in risk communication for communities with chemical exposure concerns.*

Thank you for this opportunity to comment on introduced House Bill 1256.

My name is Dollis Wright; I am the CEO and co-founder of Quality Environmental Professional Associates. I have over 30 years of experience in Toxicology and Epidemiology research. I have worked for the Georgia and Indiana State Departments of Health, The Centers for Disease Control, The National Institute for Occupational Safety and Health, and the Agency for Toxic Substances and Disease Registry. I have authored many Health Assessments and Consultations for Superfund Hazardous Waste Sites, conducted many Exposure Investigations, Cancer Cluster Investigations, Community Health, and Health Professional Education. I have conducted technical and literature reviews of most of the existing data on oil and gas, and provided expert testimony at oil and gas hearings. I have conducted public awareness campaigns for the USEPA to increase community awareness about chemical exposures and their impacts on children.

Today, I would like to share some questions on House Bill 1256. Please note that QEPA's questions are presented not to discourage this groups desire to be responsive to citizen concerns but to hopefully contribute to this group making decisions that are scientifically based.

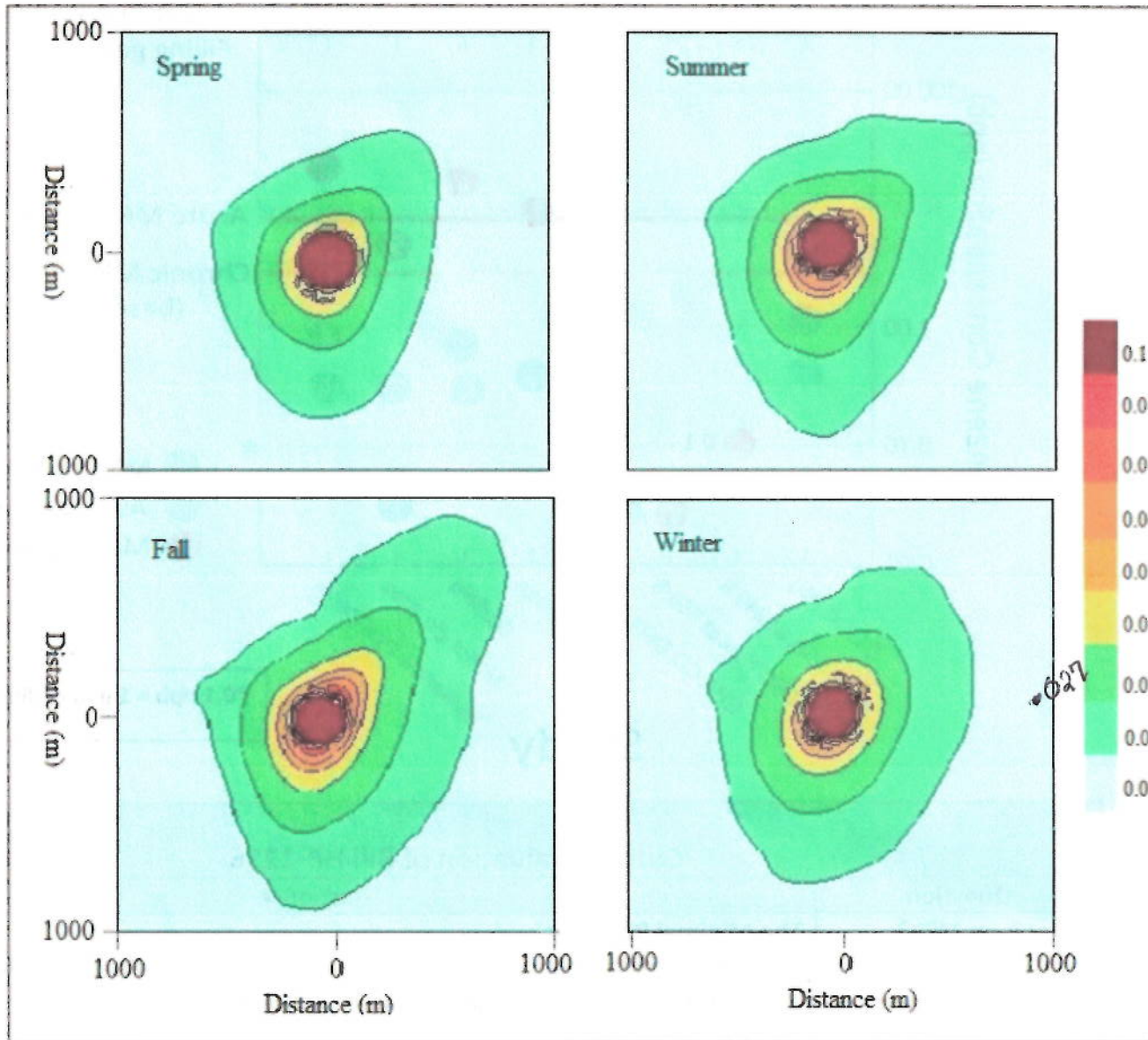
| Critical Evaluation of Bill HB-1256 | |
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| Question/Perception Statement | Actually |
| Distance will decrease Health Impact. | Currently all data show that air samples (the only potential completed pathway) are below a level of health concern. |
| Fracking chemicals could cause harm. | Only if there were completed exposure routes at levels that are above federal guidelines. The only potential complete exposure route is ambient air, but the levels are below health guidelines. |
| Studies have shown an association between Fracking and health. Doesn't that mean that Fracking activities are causing health issues? | Association does not mean causation. An association simply means <i>there could be</i> a relationship between A and B. To determine the validity of the relationship, confounding relationships have to be evaluated. To date, the studies that have claimed association have also claimed that the validity of their study is limited because they were not able to or did not evaluate confounding relationships. Cause and effect have not been proven. |
| If Cause and effect have not been proven, doesn't that mean that it has not been dis-proven either? | The current data does not suggest or indicate that the levels of chemicals that are emitted during fracking operations are such that you would expect health impact based on federal guidelines. |
| Why are these Association Studies done if they have not proven anything? | Scientist in an effort to answer questions sometimes will pose a hypothesis and test it. It doesn't mean that the hypothesis is true; the scientist is testing the idea. The kind of studies that can prove relationships usually cost more than the researcher can afford and these less conclusive studies are done in an effort to attract funding for more rigorous and detailed studies. |



Critical Evaluation of Bill HB-1256

| Question | Response |
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| What is an MRL? | The Minimal Risk Level. ¹ It is an estimate of the daily human exposure to a hazardous substance that is likely to be without appreciable risk of adverse noncancer health effects over a specified duration of exposure |
| What are they used for? | They are used by Health Assessors to identify contaminants and potential health effects that may be of concern at hazardous waste sites. |
| Do they apply to sensitive populations such as the elderly and children? | They are below levels that might cause adverse health effects in the people most sensitive to such chemical-induced effects. |
| What exposure time is assumed? | MRLs are derived for acute (1–14 days), intermediate (15–364 days), and chronic (365 days and longer) durations. The Chronic MRL is based on the average exposure over a lifetime. |
| What does this graph mean? | All air sampling data (of the listed studies) falls below the chronic MRL. Even the most recent work by CSU indicates that right at the well pad the levels are expected to be almost 30 times less than the MRL. See the Blue Dots which represents the average concentration. |

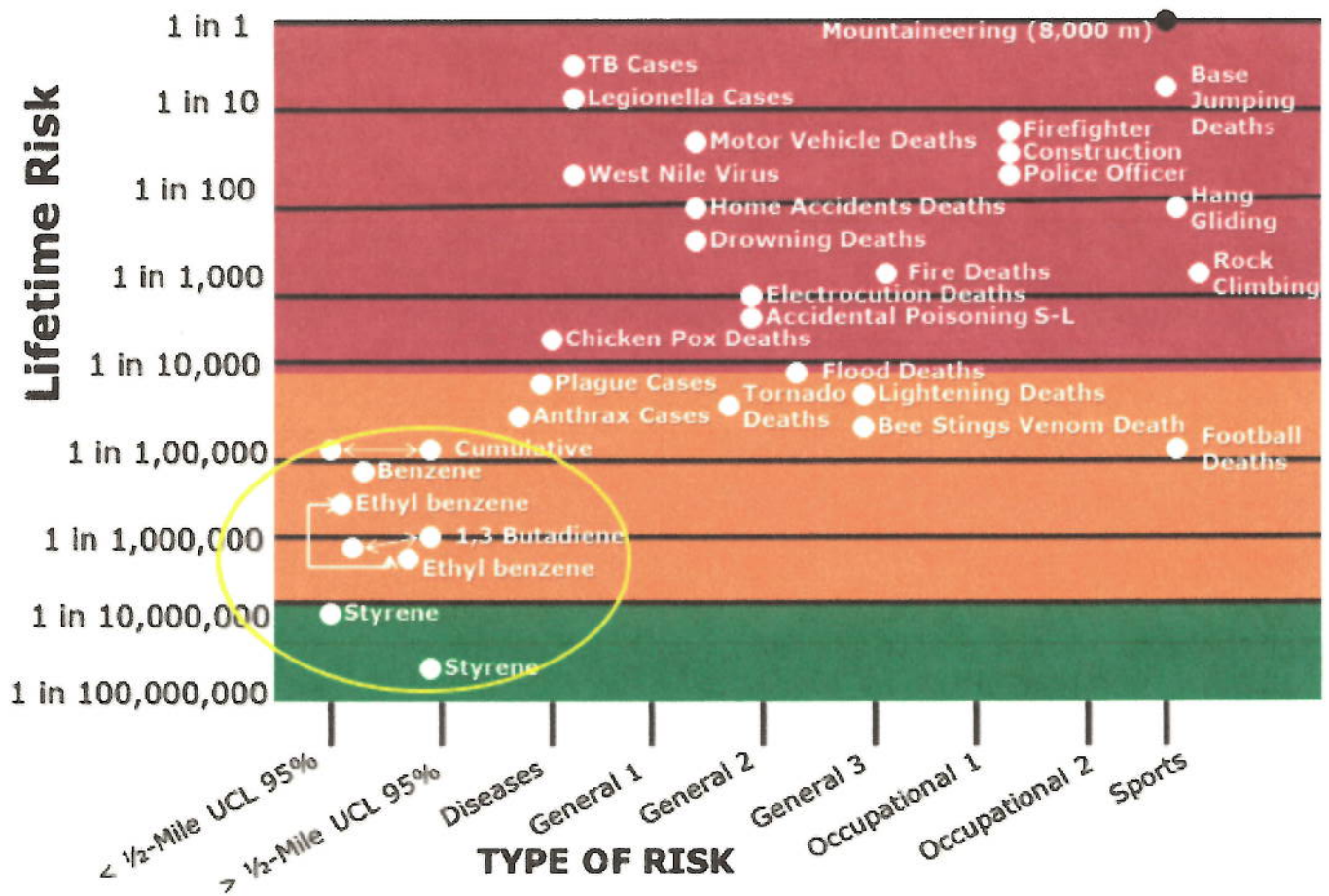
¹ <http://www.atsdr.cdc.gov/mrls>



²Note- At 880 feet from the pad the expected Benzene air levels are 0.027 ppb which is more than 100 times below the Chronic MRL

At 240 feet from the pad the expected Benzene levels are 0.1 ppb which is 30 times below the Chronic MRL

² Collett, Jeffrey L., et al: North Front Range Oil and Gas Air Pollutant Emission and Dispersion Study. Colorado State University, September 5, 2016. Colorado State University Air Sample Data



| Critical Evaluation of Bill HB-1256 | |
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| Question | Response |
| What about the cancer risk? | The CSU air data shows their maximum levels detected are within the EPA Acceptable Cancer Risk. The risk calculated from the Mckenzie study also is within the EPA acceptable range |
| What is the EPA Acceptable Cancer Risk? | This is the risk level or range that people can be exposed to, including sensitive populations, without health problems. The acceptable risk range is 1 in ten thousand to 1 in a million |
| Does this mean that if the cancer risk reaches 1 in a million that I will get cancer? | ³ No it does not. EPA uses this range to determine the need for alternative enforcement actions when relevant and appropriate requirements are not available or are not sufficiently protective of health. |

³ www.epa.gov/superfund/commuity/pdfs

