

**QEPA**

*Testimony Before The  
Second Regular Session  
Sixty-Ninth General Assembly  
State of Colorado*

Introduced House Bill 14-1297

A Bill For An Act

**CONCERNING AN ANALYSIS TO DETERMINE WHETHER OIL AND GAS OPERATIONS  
HAVE AN IMPACT ON HUMAN HEALTH ALONG THE FRONT RANGE.**

**Dollis Wright, CEO Quality Environmental Professional Associates, Inc.**

Dollis is the president and founder of QEPA, an environmental health risk communication firm. She has worked in the government and private sector for over twenty five 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). 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 12 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 presentations, and consultation in risk communication for communities with chemical exposure concerns.

Thank you for this opportunity to comment on introduced house bill 1297.

My name is Dollis Wright I am the CEO and founder of Quality Environmental Professional Associates. I have over 25 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 Wastes 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 the oil and gas hearings in 1998, 2013, and 2014. I have conducted public awareness campaigns for the USEPA for the past 3 years to increase community awareness about chemical exposures and their impacts on children.

Today I would like to share 3 questions that I have on introduced house bill 1297. Please note that QEPA questions are presented not to discourage this groups desire to be responsive to citizen concerns but to hopefully contribute to finding a solution that is practical, science based, and timely. My emphases just as it was last year on this issue is educating and empowering citizens so that they can make informed decisions based on science not perception. Unfortunately many of the studies that have been done to date in the name of public health have left citizens with more questions and concerns than answers to their current health concerns. QEPA suggest that this assembly consider empowering citizens with reality not enabling them with perceptions.

**What is known** about the impact of Oil and Gas activities on human health based on a health study conducted by the CDPHE

- Cumulative theoretical cancer risk is low.
- The quantitative evaluation of long-term (chronic) non-cancer hazards, is low.
- The quantitative evaluation of short-term (acute) non-cancer hazards, is low.
- The qualitative evaluation of 65 contaminants with no toxicity values is not likely to result in significant cancer and non-cancer effects.

An exposure investigation and cancer cluster investigation conducted by the Texas Department of Health

- **In response to community concerns** about potential health effects of natural gas drilling, DSHS collected biological samples from 28 Dish residents in late January to determine whether the levels of Volatile Organic Compounds, or VOCs, in their blood were higher than those measured in the broader population.
- "In Dish, we found no pattern to our test results indicating community-wide exposure to any of these contaminants," said Dr. Carrie Bradford, the DSHS toxicologist who led the investigation. "We were looking to see whether a single contaminant or a handful of contaminants were notably elevated in many or all of the people we tested. We didn't find that pattern in Dish"
- The Texas Department of State Health Services (TDSHS) report identifies **no evidence of cancer clusters** within Flower Mound and brings closure to a 2010 cancer rate study conducted within the Town.

**What about cancer latency** (see attachment)

- Independent University-based research study
- 27 year
- 19,000 past and current employees

**Latest results conclusively demonstrate:**

- Overall death rates lower than population.
- Overall cancer rate is no different than population rate.

**Perceived poisoning** may manifest in numerous ways: however, all cases share certain characteristics. All are fostered by the wide availability of *unreliable information* about chemical safety, *poor understanding* of scientific principles and *ineffective risk communication*. (Kiristen A. Nan-agas M.D.)

Again I emphasize the need to **empower citizens** with reality not enable them with perceptions.

#### **QEPA Question #1**

The need for the scientific oversight committee is not clear.

- Why is oversight needed for this agency to do their job?
- Is there a concern that the agency is not capable of conducting basic epidemiological/toxicological studies without outside advice?
- Would this agency not seek advice on their own if it were needed?
- It is important to note that the CDPHE has a cooperative agreement with the Agency for Toxic Substances and Disease Registry that in essence serves as an oversight committee for projects such as this.

*The mission statement of the CDPHE states*

- is committed to protecting and preserving the health and environment of the people of Colorado.
- They focus on evidence-based practices in the public health and environmental fields,
- Plays a critical role in providing education to our citizens so they can make informed choices.

#### QEPA Comment #1

The issue of credible health studies has become very polarized.

- The proposed approach is politicized by virtue of how it is being set up.
- It is assumed that Industry is the only group that would have a conflict of interest if involved in this study. Everyone involved in this issue has different motivations and unfortunately they are not always in the best interest of public health.
- CDPHE job is to protect and preserve public health.

#### QEPA Recommendation #1

Allow the CDPHE to conduct the study without an appointed oversight committee.

- Any document that is produced can have a public comment period where all members of the public can make suggestions.
- Hold CDPHE accountable by encouraging them to have a written response to any comments available to the public.

#### QEPA Question #2

What is the true intent of the study?

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- The intent of the study is not clear
- How do the authors define impact?
- Does this include an analysis of economic benefits of oil and gas operations on health?
- Approach will be difficult as potential level of exposure will be different based on recently enacted rules.

#### QEPA Recommendation #2

Consider changing the intent to collecting baseline information.

- Focus on communities where oil and gas activities are anticipated to begin.
- Collect baseline measures of exposure and health status and assessment of spatial temporal trends.

#### QEPA Question #3

How can the assembly best meet the needs of the people expressing concerns?

- How does this assembly define immediate?  
*The general assembly hereby finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.*
- Information gathered in the phase I surveys will have limitations, not be definitive, or conclusive for individual exposures.
- How will the results of the proposed survey help individuals who have alleged health concerns now.

The authors stated limitations of the study are

- nature of study and the available data make it impossible to provide definitive causal relationships between observed health and exposures, particularly at the **individual level**
- **cannot say conclusively** that any of these health trends are directly related to the presence of the natural gas industry activities or to other factors
- both risk and causation involve probability statement, we **may never be able to say with certainty that a particular health condition is caused by an exposure** to a potentially toxic material.
- The risk of cancer exceeds the EPA acceptable range only for a **seventy-year exposure**. An exposure of that duration to uncontrolled flow back appears **unlikely**.

### QEPA Recommendation # 3

Approach the problem from a different angle. See *10 essential Public Health Services for a community box below*. Focus on Health Professional Training.

*Emphasis should be placed on taking immediate public health actions to help communities affected by hydraulic fracturing (e.g., increased access and referrals to Community Health Clinics, physicians and other health services, .....and ongoing risk communications ....) (ATSDR Board of Scientific Counselors November 2011)*

- **Focus on #8, #7, # 4, and #3**. To date the focus has been studies or the lack of studies to find out if industry is impacting health.
- **Informs, educates, and empowers citizens in a timely fashion**
- Provides a **timely and long term solution** to a public health issue
- Empower citizens with reality don't enable them with perceptions
- Allow the CDPHE to come up with a strategy to educate physicians on how to take an exposure history and the signs and symptoms of key chemicals of concern used by Industry.
- Use **ATSDR recommended trainers** for health professional training and recommended approach.

### 10 Essential Public Health Services

1. Monitor health status to identify community health problems. Don't have baseline
2. Diagnose and investigate health problems and health hazards in the community.  
Real vs Perceived, Polarized issue
3. **Inform, educate, and empower people about health issues. ??**
4. **Mobilize community partnerships to identify and solve health problems. ??**
5. Develop policies and plans that support individual and community health efforts. Ongoing
6. Enforce laws and regulations that protect health and ensure safety. Ongoing
7. **Link people to needed personal health services and assure the provision of health care when otherwise unavailable. ??**
8. **Assure a competent public health and personal healthcare workforce. ??**
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services. ??
10. Research for new insights and innovative solutions to health problems. ??

The 10 Essential Public Health Services were developed in 1994. They describe the public health activities that all communities should undertake. The committee included representatives from US Public Health Service agencies and other major public health organizations. For more information, see the [Public Health Functions Project website](#).

## **MEDIA RELEASES**

30 November 2007

### **A Good Health Report Card for the Australian Petroleum Industry**

AIP and its member companies welcome the very encouraging results of the industry's 13th 'Health Watch' Report released today. "The Study clearly shows that petroleum industry employees have better health than the general Australian community and are less likely to die from cancer and from heart, respiratory and digestive diseases", said Dr John Tilley, AIP Executive Director.

Health Watch is an independent, university-based research study which has been sponsored by AIP for the past 27 years. The Study follows 19,000 past and present employees of the petroleum industry. Although participation in Health Watch is voluntary, the employee participation rate has been outstanding – clearly demonstrating the value of the Study to employees.

The latest Report builds on the results of the preceding twelve reports in conclusively demonstrating that overall death rates from cancer in the petroleum industry workforce are significantly lower than in the general Australian population.

The latest Report shows that the overall cancer rate (cancers which have not resulted in death) is no different to that for other Australians. This is also the case with leukaemia, including acute non lymphatic leukaemia (ANLL) which has previously been associated with exposure to benzene. Importantly, there have been no new cases of ANLL identified since the last report. Dr Tilley said "the industry has taken substantial steps to reduce employee exposure to benzene and to petroleum products in general". Similarly, a greater awareness of the hazards of asbestos mean that working in the petroleum industry is unlikely to result in asbestos exposure. This is highlighted in the Report by the significantly low lung cancer rates in the petroleum industry, which means there can be few, if any, asbestos related lung cancers.

Participants in Health Watch have higher rates of melanoma (skin cancer) than the general population, but the excess has fallen over the last 20 years. "This is likely to have resulted from workers in the petroleum industry having their condition diagnosed earlier than would be the case for the general population", Dr Tilley said. The Report concludes that higher melanoma rates are unlikely to be caused by any workplace factor and, most importantly, the death rate is the same as for the general population.

The latest Report shows a higher level of kidney cancer among tanker drivers than might be expected, but the risk is lower than that identified in the previous Health Watch report. However, the numbers are too small (only 13 cases) to draw any firm conclusion. Kidney cancer will continue to be monitored and be further analysed in the 14th Health Watch Report.

In terms of lifestyle factors influencing employee health, the latest Report shows that smoking has a powerful influence on ill health and mortality, and that quitting smoking noticeably reduces the risks.

The 13th Health Watch Report was undertaken by the Monash Centre for Occupational and Environmental Health, a leading international centre for epidemiological programs and collaborative research at Monash University.

Dr Tilley said "AIP is committed to supporting Health Watch because it is highly valued by the petroleum companies and their employees and is an internationally respected study. The Study also provides a robust scientific basis for the community to understand the health impacts of exposure to petroleum products. For these reasons, AIP and its member companies have decided to significantly expand the Health Watch Study from 2008."

The 13th Health Watch Report can be downloaded from [www.aip.com.au/health/ohs.htm](http://www.aip.com.au/health/ohs.htm).

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Executive Director

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