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Erie Rising

Testimony On: Federal Regulation: Economic, energy and job security implications of Federal Hydraulic Fracturing Regulations

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Is fracking 600 yards from two elementary schools and a daycare economic, energy and job security or a risk far too great to take?

I have heard industry representatives claim that mining using hydraulic fracturing is exciting, awesome and the answer to energy independence for the United States. The last time I heard these words I shook my head in disbelief because for me, as a mother, learning about the process termed “fracking” has been agonizing. After reading from Lisa McKenzie’s report, that “Cancer risks were 66% higher for residents living less than half a mile from oil and gas wells than for those living farther away, with benzene being the major contributor to the increased risk.”<sup>1</sup>, how am I to think any differently? Is the COGCC upholding their mission statement to protect public health, safety and welfare and prevent adverse environmental impacts? This same study reminds us that “chronic exposure to ozone, prevalent at gas production sites, can lead to asthma and pulmonary diseases, particularly in children and the aged.”<sup>1</sup>

I live in Erie, CO which sits on the Wattenberg Field, of the Niobrara shale formation. My small town of 19,000 that is approximately 48 square miles has over 350 oil and gas wells. Weld County, which Erie is part of has close to 18,000 wells and has been given the name “the new Saudi Arabia” by Commissioner Sean Conway. Just a few towns away from Erie, still in Weld County you can find Frederick and Firestone where there are wells that come as close as 50 feet to a home or as close as 300 feet to hospitals, schools and parks. A home that was mapped in Firestone has 75 active wells in a one mile radius around it. This appears to be a human health risk given the study results from the Colorado School of Public Health Report.

. My daughter’s school has 58 wells pads within a 2 mile radius and another 8 well pad is scheduled to be drilled 600 yards away on May 26<sup>th</sup>. As a mother who wants nothing but to protect my children I ask myself every day if we know enough about mining using hydraulic fracturing for it to occur this close to where children spend a majority of their time. According to the Pediatric Environmental Health Studies Unit, a distinct challenge in discussing these possible health effects is the lack of research regarding the human health effects of natural gas extraction using hydraulic fracturing. Because many questions remain unanswered, the PEHSU network recommends a precautionary approach to toxicants in general and to the NGE/HF process specifically. These industrial operations have encroached on humanity yet our government is not taking a hard look at the impact on human and environmental health to determine both short and long term impacts before allowing them to move into our communities.

The oil and gas industry is afforded many exemptions from the 2005 Energy Policy Act that were put into place to protect human and environmental health. If these operations are safe to human and environmental health then why do they need a loophole? “This lack of regulatory oversight can be traced to many illnesses and even deaths for people and wildlife across the country. Because of the exemptions and exclusions, toxic chemicals and hazardous wastes are

permeating the soil, water sources and the air threatening human health to an alarming extent.”<sup>2</sup> “ Between 2005 and 2009, the oil and gas service companies used hydraulic fracturing products containing 29 chemicals that are (1) known or possible human carcinogens, (2) regulated under the Safe Drinking Water Act for their risks to human health, or (3) listed as hazardous air pollutants under the Clean Air Act. Each BTEX compound is a regulated contaminant under the Safe Drinking Water Act and a hazardous air pollutant under the Clean Air Act. Benzene also is a known human carcinogen. The hydraulic fracturing companies injected 11.4 million gallons of products containing at least one BTEX chemical over the five year period.”<sup>3</sup>

A NOAA report from their tower located in Erie, CO from March 2011 showed elevated levels of propane, butane and ethyne. According to Russo et. al reports from the tower showed “ridiculously high levels of NMHC’s, especially the alkanes. Alkanes dominated OH activity which can lead to downwind ozone production.”<sup>4</sup> Erie which is already in non attainment for ozone should not be put in a position to further increase ozone production without fully investigating the impact it will have on human health. According to the EPA, “when inhaled, ozone can damage your lungs. Relatively low amounts can cause chest pain, coughing, shortness of breath, and, throat irritation. Ozone may also worsen chronic respiratory diseases such as asthma and compromise the ability of the body to fight respiratory infections. People vary widely in their susceptibility to ozone. Healthy people, as well as those with respiratory difficulty, can experience breathing problems when exposed to ozone. Exercise during exposure to ozone causes a greater amount of ozone to be inhaled, and increases the risk of harmful respiratory effects. Recovery from the harmful effects can occur following short-term exposure to low levels of ozone, but health effects may become more damaging and recovery less certain at higher levels or from longer exposures (US EPA, 1996a, 1996b).”<sup>5</sup> “Propane and butane are listed on OSHA’s Extremely Hazardous Substances list, mostly due to flammability. Benzene is a known human carcinogen. Overall these and other volatile hydrocarbons measured in local air can cause respiratory irritation. They can be transformed by sunlight into other, more harmful chemicals, principally ozone, and perhaps carcinogens. The potential impact to children’s health is difficult to gauge but deserves further consideration.” Stated Sonya Lunder, EWG Senior Analyst<sup>6</sup> When hydraulic fracturing chemicals are injected deep underground their migration is not entirely predictable. You cannot control mother nature. Well failures have the potential to lead to fluid release at shallower depths, closer to drinking water supplies. Not all fracturing fluids are removed from the well at the end of the process, a substantial portion remains underground. Again, as a mother I am left with the question, do we know enough about the impacts of mining using hydraulic fracturing from start to finish to have it happening as close as 150 feet from where children live and play?

In 2011, Shane Davis, Rocky Mountain Chapter-Sierra Club, analyzed 1,000 official oil and gas spill release reports located on the COGCC’s website and statistically determined that 42.7% of spills from oil and gas production were reported to have caused ground water contamination.

Mr. Davis also investigated an incident that was officially reported in 2009 by the COGCC to have contaminated a land owner’s private water well with toluene and thermogenic methane. This same incident was also reported by the COGCC to have caused contamination of the Laramie Fox Hills Aquifer with toluene and thermogenic methane. This aquifer is used by

hundreds of thousands of residents in Colorado. It is unsettling that we allow this industry to be exempt from the Safe Drinking Water Act given these findings.

It is time overturn these exemptions and demand that this industry operate under the safety measures that were put into place in the 2005 Energy Act. In order to protect the air we breathe and determine the hazardous effect on air quality emissions have, this industry must be regulated by the Clean Air Act. The US water supply is critical to survival and we must protect it. In what capacity are we protecting this resource by exempting the oil and gas industry from the Safe Drinking Water Act when spills that contaminate groundwater are happening? Operations need to fall under the Comprehensive Environmental Response, Compensation and Liability Act to protect human health and the environment from spills of hazardous or carcinogenic chemicals at operation sites. Hazardous and carcinogenic waste from oil and gas operations must be regulated under the Resource Conservation and Recovery Act. Run off from storm water needs to be regulated under the Clean Water Act. I urge this committee to look at the risk we are taking as a country by allowing this industry to continue without holding them to the standard of all the above regulations while developing on land across our country.

My 6 year old daughter attends Red Hawk Elementary School in Erie, CO. This is one of the schools that will be affected by drilling and hydraulic fracturing Encana will begin just 600 yards away. This is a new, \$13 million, green-star school that will now have heavy industrial activity occurring in extremely close proximity. This drilling site is also located very near to housing and noise from these industrial sources can impact sleep which has been associated with negative effects on learning and other aspects of daily living for both children and adults. "Children are more vulnerable to environmental hazards. They eat, drink, and breathe more than adults on a pound for pound basis. Research has also shown that children are not able to metabolize some toxicants as well as adults due to immature detoxification processes. Moreover, the fetus and young child are in a critical period of development when toxic exposures can have profound negative effects."<sup>7</sup> How is a parent or a woman of child bearing years to read information like the above and be at ease with these operations occurring so close their homes, schools and places for recreational activity?

Data given by earthworksaction.org states that, "For a single horizontal well fracturing, requiring 5 million gallons of freshwater, expect 100 large freshwater-hauler loads of driving to the well during fracture. Then, another 700 smaller waste-hauler truckloads to transport the toxic waste away to a disposal facility, that's 800 trucks with a gross weight of up to 40 tons". I ask you to remember that this data is for a single well. If we reference the wells that will be drilled between Red Hawk and Erie Elementary we can multiply this data times eight. And we also need to take into account that a single well can be fracked up to 10 times so that leaves us with the potential of multiplying that data by 80. With the thousands of truck trips required to set up, drill, frack and combust the wells there will be increased traffic, air and noise pollution which is not an acceptable environment for a school zone or a densely populated residential area.

The burden of proof lies unequivocally with the oil and gas industry and our elected officials to prove to the citizens that natural gas drilling and mining by fracturing is safe and does not provide a real or imminent threat to our children, our health or our environment. We are seeking

scientific studies and other information to prove we are not at risk from this activity before it is lauded as the source of economic, job and energy security for the future. Our future will determine if your ambitions were in favor of preventing adverse human health and environmental impacts. It is time for our government to stand up to the oil and gas industry and demand protection for the safety and welfare of humanity and the environment we live in. Whether it is on federal land or private land it is time for your, our elected officials, to overturn the exemptions and hold this industry to a standard that protects the health, safety and welfare of humanity and the environment. My children's future depends on it.

**Endnotes:**

waterdefense.org- <http://www.waterdefense.org/news/gas-industry-spin-cant-cover-air-problems-associated-fracking>

Renee Lewis Kosnik, MSEL, JD, Research Director, Oil and Gas Accountability Project  
The Oil and Gas Industry's Exclusions and Exemptions to Major Environmental Statutes

US House of Representatives Committee on Energy and Commerce, Report on Hydraulic Fracturing, April 2011

<http://democrats.energycommerce.house.gov/sites/default/files/documents/Hydraulic%20Fracturing%20Report%204.18.11.pdf>

Russo, et al- Applachian State University, Dept. of Chemistry. VOC Measurements from the Tower, September 2, 2011.

EPA- <http://www.epa.gov/iaq/pubs/ozonegen.html>

<http://www.eriesing.com/ridiculously-high-levels-of-nmhcs/>

Renee Lewis Kosnik, MSEL, JD, Research Director, Oil and Gas Accountability Project  
The Oil and Gas Industry's Exclusions and Exemptions to Major Environmental Statutes

**PEHSU Information on Natural Gas Extraction and Hydraulic Fracturing for Health Professionals**

[http://aoec.org/pehsu/documents/hydraulic\\_fracturing\\_and\\_children\\_2011\\_health\\_prof.pdf](http://aoec.org/pehsu/documents/hydraulic_fracturing_and_children_2011_health_prof.pdf)

**References:**

PEHSU Information on Natural Gas Extraction and Hydraulic Fracturing for Health Professionals

Earthworksaction.org

COGCC website: <http://cogcc.state.co.us/>

1,000 Spill Statistics: <http://wtfrackorg.blogspot.com/2012/02/media-advisory-northern-colorado.html>

Laramie-Fox Hills Aquifer Contamination: <http://wtfrackorg.blogspot.com/2011/11/case-of-mr-andersons-contaminated-water.html>

