

From: Yahoo <cemorgan75831@yahoo.com>
Subject: Limits for Controlling Low Frequency Noise (LFN) and LFN Health Effects
Date: June 8, 2020 at 4:23:36 PM EDT
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I want to thank Dr. John Howard's office for sending the information on how to participate in NIOSH and NORA. My thirteen years of research and personal experience with LFN has provided well documented human body effects. This LFN issue must be addressed immediately in order to protect our citizens of all ages as well as workers in the Oil and Gas Industry. Wherever there are Oil and Gas extraction and operations there are LFN health effects. I estimate (based on research of the LFN issues and data from Noise symposiums) that 70 percent of persons exposed to LFN are being harmed in their bodies and many dying of its effects. I am aware of seven deaths in Freestone County due to LFN.

This Oil and Gas activity must not be allowed to continue in its current method of operations. Within ten years with the current method of operations, we may not have enough able bodied men and women to protect this country..

Why is this LFN so devastating? Because each of our human body systems operate at a different Low Frequency! When a human body system's operating frequency is above its normal operating intensity in decibels on the "C" scale, that body system is compromised or caused another body system to be compromised. For example: if the adrenalin gland secretes too much adrenalin, it can cause a lack of blood flow in another part of the human body, i.e. the brain. In another example, the sack around the heart, the pericardium, becomes thickened. Results -

a heart attack. Due to a large gas compressor station within one mile of my home that emits continuous LFN at varying intensities, I have experienced most symptoms of LFN. You have to escape the area within a timely fashion to survive (minutes) depending on the LFN intensity.

The Human Development Center in Lisbon, Portugal has studied the LFN affects for more than 40 years and have performed autopsies on persons who died due to LFN. See attached.

Another study on LFN intensity was performed at the direction of the British Government by Dr. Jeffery Leventhall. His research of British and other European countries noise levels reveal that an intensity of 30 decibels on the "C" scale should be implemented. Another study by the Alberta, Canada Utilities Energy Board also implemented a 30 decibel limit for LFN in their Rule 038. In the U.S., the Environmental Protection Agency only addressed the hearing range noise. They set a limit of 55 dBA for the hearing range noise (Noise above 500 cycles per second). LFN is noise below 500 cycles per second and down to 25 cycles per second. The U.S. must adopt the Portuguese, British and Canadian limit of 30 dBC for LFN to protect our people. I have personally suffered most symptoms of the LFN effects.

There have been at least six persons who died from LFN in Freestone County, Texas. Several have suffered brain damage, myself included, but is now

healed. Freestone County Texas has 3,058 gas wells and 130 gas compressor stations thus rating number eight out of 254 counties in gas wells in the state. There are 21 counties in Texas with more than 1,000 gas wells. I estimate 2,300,000 persons in Texas are being affected by the LFN.

The Federal Regulatory Energy Commission (FERC) is the federal regulating agency for Oil and Gas. They have refused to implement their own rules in a Virginia pipeline and compressor permit. We must control the LFN emissions at all levels of regulation. The Virginia pipeline permit will have a 53 thousand horsepower gas compressor station. No one will be able to live within 20 miles of that site. The area is currently occupied by black citizens.. The existing compressor station at that site is currently harming nearby citizens. The current LFN noted in the permit application indicates LFN levels that are harmful to our citizens. The response to our comments states there is no problem and that they do not know who regulates the LFN. My source is from rules provided in an e-mail sent to me by the Deputy Director of the FERC.

The attached files will describe the problem with LFN. The federal noise levels do not address LFN, but only hearing range noise. The federal noise levels were developed in 1974. We did not know about LFN at that time. The LFN limits I have developed are based on limits noted above from other countries. See my limits attached.

Currently, the Oil and Gas entities in our county are trying to incapacitate me. Their LFN from a nearby gas compressor station is frequently 85 decibels on the "C" scale. I am run out of my home every day. I must cover my head with multiple layers of protective material to survive. I don't know how much longer I can escape.

We need help now from someone in the federal government. Our people in several states are being harmed where ever oil and gas development and operations are taking place. We know your group is not a regulatory agency. However, your group does recommend limits on operations of oil and gas. It is extremely important that you recommend limits on noise of 30 dBC for Low Frequency (LFN) and 55 dBC for hearing range noise. Noise barriers should be installed to control the noise on site.

Thank you for your attention to this matter.

Regards,

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[Study: Fracking Industry Wells Associated With Premature Birth](#)

Expectant mothers who live near active natural gas wells operated by the fracking industry in Pennsylvania are at an increased risk of giving birth prematurely and for having high-risk pregnancies, new Johns Hopkins Bloomberg School of Public Health research suggests.

The findings, published online last week in the journal Epidemiology, shed light on some of the possible adverse health outcomes associated with the fracking industry, which has been booming in the decade since the first wells were drilled. Health officials have been concerned about the effect of this type of drilling on air and water quality, as well as the stress of living near

a well where just developing the site of the well can require 1,000 truck trips on once-quiet roads.

“The growth in the fracking industry has gotten way out ahead of our ability to assess what the environmental and, just as importantly, public health impacts are,” says study leader Brian S. Schwartz, MD, a professor in the Department of Environmental Health Sciences at the Bloomberg School. “More than 8,000 unconventional gas wells have been drilled in Pennsylvania alone and we’re allowing this while knowing almost nothing about what it can do to health. Our research adds evidence to the very few studies that have been done in showing adverse health outcomes associated with the fracking industry.”

In Pennsylvania in 2006, there were fewer than 100 unconventional gas wells; now there are more than 8,000.

For his study, Schwartz and his colleagues analyzed data from Geisinger Health System, which covers 40 counties in north and central Pennsylvania. They studied the records of 9,384 mothers who gave birth to 10,946 babies between January 2009 and January 2013. They compared that data with information about wells drilled for fracking and looked at how close they were to the homes of the pregnant mothers as well as what stage of drilling the wells were in, how deep the wells were dug and how much gas was being produced at the wells during the mothers’ pregnancies. Using this information, they developed an index of how active each of the wells were and how close they were to the women.

The researchers found that living in the most active quartile of drilling and production activity was associated with a 40 percent increase in the likelihood of a woman giving birth before 37 weeks of gestation (considered pre-term) and a 30 percent increase in the chance that an obstetrician had labeled

their pregnancy “high-risk,” a designation that can include factors such as elevated blood pressure or excessive weight gain during pregnancy. When looking at all of the pregnancies in the study, 11 percent of babies were born preterm, with the majority (79 percent) born between 32 and 36 weeks.

The U.S. Centers for Disease Control and Prevention says that preterm-related causes of death together accounted for 35 percent of all infant deaths in 2010, more than any other single cause. Being born prematurely is also a leading cause of long-term neurological disabilities in children. Preterm birth cost the U.S. health care system more than \$26 billion in 2005, they say.

While the study can’t pinpoint why the pregnant women had worse outcomes near the most active wells, Schwartz says that every step of the drilling process has an environmental impact. When the well pads are created, diesel equipment is used to clear acres of land, transport equipment and drill the wells themselves. Drilling down thousands of feet and then horizontally many more thousands of feet requires heavy equipment to break up the shale where the gas sits. Hydraulic fracturing (fracking) then involves injecting millions of liters of water mixed with chemicals and sand to fracture the shale. The fluids are then pumped back to the surface. The gas itself also releases pollutants.

Schwartz also says that having a well developed nearby results in increased noise, road traffic and other changes that can increase maternal stress levels.

“Now that we know this is happening we’d like to figure out why,” Schwartz says. “Is it air quality? Is it the stress? They’re the two leading candidates in our minds at this point.”

Energy companies moved to natural gas wells dug using fracking when gas prices were high and supplies were low. While New York

State has banned fracking altogether and there is a moratorium on it in Maryland, Pennsylvania has embraced the industry.

At the peak in 2011, Pennsylvania dug 1,900 wells and gas was \$12.11 per thousand cubic feet. And while production is down as prices have plummeted – the state is on track for fewer than 500 new wells in 2015 with the price at \$3.69 per thousand cubic feet in July – Schwartz predicts the economy will again shift and fracking will again be back in favor.

Nevertheless, Schwartz says policymakers must understand there may be real risks as they make decisions on future wells. While the research is still in its infancy, Schwartz says everything that has come out so far should give decision makers cause for concern.

“The first few studies have all shown health impacts,” he says. “Policymakers need to consider findings like these in thinking about how they allow this industry to go forward.”

“Unconventional Natural Gas Development and Birth Outcomes in Pennsylvania, USA” was written by Joan A. Casey, David A. Savitz, Sara G. Rasmussen, Elizabeth L. Ogburn, Jonathan Pollak, Dione G. Mercer and Brian S. Schwartz. The study was funded by grants from the National Institutes of Health’s National Institute of Environmental Health Sciences (ES023675-01, ES071541), the Robert Wood Johnson Foundation Health & Society Scholars Program and the National Science Foundation Integrative Graduate Education and Research Traineeship.