

A new study connects health issues with rural gas compressor pollution.

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In rural Minisink, NY, air contaminants from the Millennium Pipeline gas compressor now exceed what would be found even in a big city, says environmental health consultant David Brown. After dozens of Minisink residents found they were beset by similar ailments immediately after the compressor station was built in 2013, a two-month study of air contaminants and residents' symptoms was conducted by Brown and his cohorts at Southwest Pennsylvania Environmental Health Project. The nonprofit group of public health experts, based in McMurray, PA, have been investigating a comparable pattern of symptoms near gas drilling sites in Pennsylvania and other states.

In the Minisink study, recently released, they found that spikes in air toxins around the compressor coincided with residents' adverse health symptoms. The study involved 35 residents, who were surveyed using a well-tested survey method, including interviews by a physician. SWP-EHP also provided five Speck monitors to measure fine particulate matter in air near residences for the two months, from October 19 to December 17 of 2014. Participants additionally used special canisters to capture air samples during "odor events," periods when the compressor emitted strong odors.

Asthma, nosebleeds, headaches, and rashes were common among the 35 participants in eight families living within one mile of the compressor. Those symptoms are also frequently reported around gas fracking sites, said Brown.

Six of the 12 children studied had nosebleeds, which Brown attributed to elevated blood pressure or irritation of mucous membranes by formaldehyde, a carcinogen found in excess around compressors in a recent SUNY Albany study.

Of particular concern were elevations of fine particulate matter (PM 2.5). During the monitoring period, average PM 2.5 was 17 to 20 micrograms per cubic meter (ug/M3)—three times the regional average of 6.3. So it was regularly beyond the Environmental Protection Agency limit of 12. Multiple episodes of peaks into the hundreds, as high as 426, were also recorded by Speck monitors. "One home had a 24-hour period with an average of 64ug/m3," said Brown.

A study published in June by Harvard epidemiologist Joel Schwartz and his colleagues identified the dangers of PM 2.5 even above 6. Each increase of one microgram per cubic meter increases the mortality rate by 1 percent for people over 65, they found. They used Medicaid mortality statistics in conjunction with satellite readings of PM 2.5 in New England for the research.

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Page 2 — Schwartz attributes the effects of PM 2.5, particularly respiratory disease and heart attacks, to the inflammation it generates throughout the body. Inflammation of arterial plaque stimulates white

blood cells to infiltrate the plaque, making it less stable and more likely to rupture, causing a heart attack, Schwartz says. “Even in a big city like New York, you wouldn’t see these peaks in particulate matter nor have the same chemicals in the air,” said Brown.

Several kinds of volatile organic compounds (VOCs) were captured in canisters by residents during odor events. “The levels of reported VOCs were not high in terms of health effects for a single chemical exposure, but are still of concern if these exposures occur over a long period of time or if high spikes periodically occur,” according to the report.

Brown would like to get data about what exactly is being done at the compressor. “They keep records,” he says. “But everyone is so secretive, protecting their business interests.”

To attain permits, pipeline companies use analysts who manipulate projected emissions levels to make them acceptable by Environmental Protection Agency standards, Brown says. Those standards are also weakened by industry lawsuits when the EPA tries to tighten them. “They delude themselves about emissions safety,” says Brown.

Pramilla Malick, who lives a half mile from the compressor, participated in the study. She recalls how Minisink residents were told the compressor would emit only “water vapor” by representatives from AECOM, the company who did the emissions analysis for the compressor. She notes that the CEO of AECOM, Daniel Tishman, was chairman, and is now vice chairman, of the Natural Resources Defense Council board of trustees. “I’m tired of this duplicitousness,” she says.

She points to the opportunity for public health safety that was denied by Millennium. “They could easily eliminate these issues with an electric compressor,” as opposed to the high emissions gas-fueled compressor, she says. But the electric one would cost the company more initially. “Why are economic considerations allowed to be a priority? People are getting sick,” says Malick.

She has led opposition both to the compressor and to plans to build a Competitive Power Ventures gas power plant in Wawayanda, seven miles away. The plant would produce multiple amounts of the same emissions.

Meanwhile, the gas industry plans to increase gas drilling wells to ten times their current numbers, according to Sam Koplinka-Loehr, of the Clean Air Council. Over the next decade, wells will increase from 10,000 to 100,000, he said. Consequently, pipelines and compressors would also proliferate.

Page 3 — Gas compressors are built near wells and at 50- to 100-mile intervals along pipelines to stimulate gas flow. They regularly emit many tons of air pollutants.

“Since Minisink has only a compressor and no gas wells, we hoped to be able to sort the data,” to determine what symptoms can be traced to compressors, said Brown. He was previously Chief of Environmental Epidemiology and Occupational Health in Connecticut and a Centers for Disease Control superfund site investigator. “But we’re not just doing research,” he said. If we see health effects, we provide guidance about maintaining quality of health. Minisink people were engaged and rigorous with what we were doing. We could do more with more money and equipment, but we got good, reliable data.”

The health findings are consistent with research reported in peer-reviewed literature and by other environmental health organizations, Brown says.

Brown says county health departments are the government agencies designed to address public health issues when other departments fail. But a spokesperson for the Orange County Health Department said protocol required that questions go through the county executive. A spokesperson for County Executive Steve Neuhaus, Justin Rodriguez, declined to provide a contact at the Orange County Department of Health for comment on survey findings. "Air quality issues are addressed by the NYS Department of Environmental Conservation, and with their discretion, input from the NYS-DOH," Rodriguez wrote in an e-mail.

However, both the DEC and NYS-DOH acknowledged questions about Minisink survey results, but failed to respond.

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