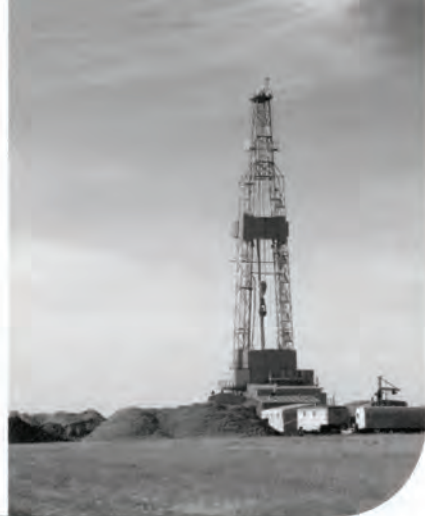


HEALTH STUDY

Study of oil and gas health impacts concludes risk is low, opponents demand new study

BY DAN LARSON • FOR ENERGY PIPELINE



WHEN A STATE STUDY OF POSSIBLE HEALTH IMPACTS for those living near oil and gas operations showed the health risks to be low, opponents found fault in the study's lack of absolute certainty and its "dismissive tone."

The study, released earlier this year, reviewed a dozen earlier studies of health risks for those who might be exposed to the gaseous substances that can be emitted from an oil and gas facility. A second study that will use data recently gathered by researchers at Colorado State University is due next year.

Produced by the Colorado Department of Public Health and the Environment, the latest study "evaluates the existing science about whether you are at risk if you live near oil and gas operations," according to Dr. Larry Wolk, executive director at CDPHE. "Going forward, we will continue to evaluate health risks using more comprehensive, relevant data currently being collected."

The study quickly drew criticism for not recommending the state take action to reduce exposures when it could not assure the public there was no risk. "Oil and gas wells threaten our communities with cancer-causing toxic chemicals, greenhouse gas emissions and possible explosion," wrote a group of Democratic legislators in a letter to Wolk. The department should act, they said, to protect the public "if the consequences are uncertain and potentially dangerous."

Longtime residents of Northern Colorado observe that the study simply underlines what they have always known: the industry operates very safely and health

risks are minimal.

"We have been living around oil and gas for eons" said Sen. Jerry Sonnenberg, R-Sterling. "After what happened in Firestone, everybody is alarmed about safety and the health effects of living near oil and gas production. There are still some questions about what happened there so I am reluctant to jump to conclusions. In fact, the industry has a long track record of safety."

Sonnenberg, the Senate majority leader, said he was not surprised by the opposition's non-acceptance of the CDPHE study.

"That's how it usually works," he said. "They find someone to produce the results they want and throw the other 99 studies away. There is lot of junk science out there right now. They start with a conclusion and work backward to prove the result. That sort of junk science doesn't help anything."

EXISTING SCIENCE

The department developed the study at the request of the oil and gas task force called by Gov. John Hickenlooper in 2014. The task force requested, among other things, a review of existing scientific literature on oil and gas health effects and for the department to "summarize useful findings."

As part of its mandate, in 2015 CDPHE established the Oil and Gas Health Information and Response program to respond to neighbor concerns and "conduct evaluations of exposure and health science related to oil and gas."

In planning the study, CDPHE said its priority "was to examine the potential health

effects from exposures to substances emitted into the air from oil and gas operations."

According to the department, the question for researchers was: "Do substances emitted into the air from oil and gas operations result in harmful exposures to Coloradans living near those operations?"

Researchers developed an assessment tool for considering 62 different substances that can be emitted from an oil and gas site while acknowledging that many of the substances are emitted from other sources as well. They then compiled the results of more than 10,000 air samples from areas of Colorado where oil and gas operations are present.

The data gathered "were used to estimate potential air exposures to people living near oil and gas operations" and the compared to established "safe" levels for cancer and non-cancer effects.

Earlier this year, CDPHE released the researchers' findings.

AT LOW RISK

The study, Assessment of Potential Public Health Effects from Oil and Gas Operations in Colorado, was produced by a team of five health science researchers, led by Tami McMullen, CDPHE program manager and toxicologist, and released on Feb. 21, 2017.

The researchers concluded they had "a high level of confidence" that the list of 62 substances examined, ranging from acetaldehyde to xylene, included the majority of compounds that are emitted from oil and gas operations.

And they were likewise confident that the dataset of 10,000 individual air samples from 33 different locations in three counties with

oil and gas production, and the conservative assumptions applied to the analysis “minimized underestimating any potential health risks,” they noted.

Air concentrations of were below established “safe” levels of exposure for non-cancer health effects, the study concluded. For the three very hazardous substances studied, concentrations were 4-5 times below the established standards while concentrations of other, less-hazardous materials was found to be 5-10,000 times below the reference levels.

Risks for exposure to known cancer-related substances were within federal “acceptable risk” ranges, the study indicated, although the three most hazardous substances studied – benzene, acetaldehyde and formaldehyde – represent the highest risk and warrant continued monitoring.

Researchers acknowledged the study did not cover all areas of the state with oil and gas operations and that the analysis represented a person’s total outdoor exposure, including exposure to emissions from other sources such as gas stations, landfills or vehicle exhaust.

“Overall, data suggest low risk of harmful health effects from combined exposure to all substances,” the study concluded.

The department “will continue to collect data from citizen reports” (see box) to characterize, map and respond where symptoms are reported and to address community concerns, it said.

CAUTION FIRST

The results of the study were welcomed by industry and defended by the Hickenlooper administration.

When asked if the department should be recommending action to protect public health when its study called for continued monitoring of hazardous emissions, one member of the research team said such an action would “get away from the science.”

“The science doesn’t support the supposition that all exposure is harmful,” said Mike Van Dyke, head of Environmental Epidemiology, Occupational Health and Toxicology at CDPHE. “Science does support that there is a safe level of exposure for most of these things,” he said in interview with the Colorado Independent, March 6.

Since the study recommended continued study of possible health effects and did not call for government action to rein in oil and gas development, it was quickly targeted for criticism by oil and gas opponents, including clean air organizations and a group of Democratic state legislators.

“Health impact studies should not come after oil and gas has already moved into our neighborhoods,” Christine Berg, with the advocacy group Moms Clean Air Force, said in a newspaper interview. She added that the CDPHE study was “preliminary” and accused the administration of “lacking the political will to ensure public safety.”

In early April, a group of seven state senators and 11 state representatives signed a letter to CDPHE director Wolk requesting a new health effects study and accused the department of not doing its job.

The CDPHE is responsible for protecting public health, the letter said, and so should rely on “the precautionary principle that no action should not be taken if the consequences are uncertain and potentially dangerous.”

The study also featured a tone of indifference that reflected the approach taken by oil and gas companies to public health issues, said the state senator who authored the letter.

“I felt the study was really dismissive of people’s health concerns,” said Sen. Matt Jones (D-Louisville). “The commission’s job is to protect people’s health. That means you regulate with caution instead of finding out that there is a problem later.”

Acknowledging the ongoing conflict over property rights between mineral owners and surface owners, Jones says the conflict has become one of proximity and scale. “You can’t just put one of these industrial operations in a neighborhood,” he said. “These new well sites involve multiple wells with multiple possible sources of emissions and potential hazards.”

“These are not the little wellheads and pump jacks we used to think of,” Jones observed, noting that as a young man, he earned college tuition as a field hand in the Wattenberg oil patch.

The burden of proving oil and gas operations are safe belongs with the companies, Jones said. “Anytime you create an industrial activity, you should be able to prove it is not going to hurt the neighbors, especially if you are making a bunch of money.”

Jones, the deputy minority leader, continues to lead Senate Democrat efforts to curb oil and gas development, including a late-session bill to increase well setbacks to one-half mile from the nearest building.

Asked if the state should deny drilling permits because there is no assurance of zero risk, Jones said “until they can prove it is safe, yes.”

NO RISK

A demand that all potential risk be removed from oil and gas development remains a top priority for opponents of the industry. When an abandoned flowline from old well to a tank battery long-since removed allowed natural gas to seep into a newly built home in Firestone and resulted in a tragic, deadly explosion, opponents said it proved wells should be nowhere near homes.

For many years, opponents of oil and gas have pointed to the various compounds found in a barrel of oil or a cubic foot of natural gas and demanded that no trace of it should ever come in contact with people.

The CDPHE health effects study examined reliable, existing data and found that while people may be exposed to some of those compounds, possibly from sources other than oil and gas locations, that exposure is at such low concentrations as to present very little risk to health. ♠

CDPHE OIL & GAS HEALTH INFORMATION AND RESPONSE PROGRAM

Created to respond to public concerns about health related to oil and gas activities. The program gathers up-to-date information about oil and gas activities with a focus on health.
CO Helpline: 303-389-1687
Website: www.oghir.dphe.state.co.us