

Message (Digitally Signed)

From: Hill, Gardiner [/O=MSXBP/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=██████████]
Sent: 14/12/2017 08:36:30
To: Stout, Robert [/O=MSXBP/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=██████████]; Horsfield, Michelle [/O=MSXBP/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=██████████]
CC: Jefferiss, Paul H. [/O=MSXBP/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=██████████]; Nolan, James [/O=MSXBP/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=██████████]; Stutz, Rachel [/O=MSXBP/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=██████████]
Subject: RE: Debunking Princeton Fracking "Study" (FYI only - DO NOT FORWARD)
Attachments: smime.p7s

Thanks for sharing.

From: Stout, Robert
Sent: 13 December 2017 23:48
To: Hill, Gardiner <██████████@uk.bp.com>; Horsfield, Michelle <██████████@uk.bp.com>
Cc: Jefferiss, Paul H. <██████████@uk.bp.com>; Nolan, James <██████████@bp.com>; Stutz, Rachel <██████████@bp.com>
Subject: Fwd: Debunking Princeton Fracking "Study" (FYI only - DO NOT FORWARD)

Do not forward the API note below but wanted to be sure you saw the reference to this article for which a Princeton professor (Janet Currie) was one of the authors.

Best,
Bob

Sent from my iPhone

Begin forwarded message:

From: "Sidoti, Elizabeth" <██████████@bp.com>
Date: December 13, 2017 at 5:15:59 PM EST
To: "Streett, Mary" <██████████@bp.com>, "Ellis, Joe" <██████████@bp.com>, "Stout, Robert" <██████████@bp.com>, "Guinn, Shanan" <██████████@bp.com>, "Scher, Robert" <██████████@bp.com>, "Stutz, Rachel" <██████████@bp.com>, "Miner, Robert" <██████████@bp.com>
Subject: FW: Debunking Princeton Fracking "Study" (FYI only)

From: Megan B. Bloomgren [mailto:██████████@api.org]
Sent: Wednesday, December 13, 2017 5:00 PM
To: ██████████@listserve.api.org
Cc: Jocelyn Kelly; Velma Morris; Eric Wohlschlegel; Reid Porter
Subject: Debunking Princeton Fracking "Study" (FYI only)

Dear Members of the API Communications Committee,

I wanted to flag a report that came out today in the journal "Science Advances" by researchers at the University of Chicago, Princeton University and the University of California, Los Angeles, who studied 1.1 million births in Pennsylvania

BPA_HCOR_00150971

between 2004 and 2013 when Pennsylvania became a major producer of natural gas from fracking. It says that based on that data “babies born to mothers living within 1 kilometer of active ‘fracking’ wells are 25% more likely to exhibit low birthweight. The results reflect a possible health consequence of exposure to fracking pollutants.”

API has been pushing back today with the following response:

“This report highlights a legitimate health issue across America that has nothing to do with natural gas and oil operations. It fails to consider important factors like family history, parental health, lifestyle habits, and other environmental factors and ignores the body of scientific research that has gone into child mortality and birthweight. In fact, health and environmental improvements have been dramatic in recent decades with a 73% drop in air emissions nationwide since 1970 and technology advancements that have reduced the industry’s environmental footprint and increased the industry’s safety performance in Pennsylvania. The natural gas and oil industry invests millions in scientific research every year to ensure the health and safety of the communities where we operate, live and work and will continue working hard to bring affordable and reliable energy to Pennsylvanians.”

The team has followed up with reporters including the *Guardian*, *Los Angeles Times* and *Washington Post*, who are covering this story. I’ve also coordinated with Energy In Depth. So far API is quoted in the following outlets (see stories below):

[CNBC \(12/13\)](#), [Oil And Gas Fracking Connected To Low Birth Weights In Infants, Landmark Study Finds](#)
[Wall Street Journal \(12/13\)](#), [Study Links Lower Birth Weights to Living Near Fracking Sites](#)

We are also monitoring social media and engaging allies with our statement. We tweeted 45 minutes ago: [@energytomorrow](#) Princeton #fracking study highlights a legitimate health issue across America that has nothing to do with natural gas and oil operations.

API Scientific Advisor Uni Blake is taking a deeper look at the study and we will follow up with other activities.

Let us know if you have any questions.

Megan

Megan Bloomgren
VP, Communications
American Petroleum Institute
[REDACTED] office
[REDACTED] cell

Study Links Lower Birth Weights to Living Near Fracking Sites

University researchers examined 1.1 million births in Pennsylvania between 2004 and 2013

By Russell Gold

Updated Dec. 13, 2017 3:14 p.m. ET

<https://www.wsj.com/articles/study-links-lower-birth-weights-to-living-near-fracking-sites-1513191600#> =

Babies born to women who live close to fracked natural gas wells have an elevated risk of being born with a low birth weight, according to a study published Wednesday.

The findings, published in the journal *Science Advances*, are part of an emerging body of research suggesting that the industrialization of areas due to oil and gas exploration is having negative health impacts on neighboring residents. Similar studies have linked living near freeway toll plazas and industrial plants with lower birth weights.

That research underscores a problem that has bedeviled the industry and regulators: While the benefits of hydraulic fracturing are widespread, the costs are very localized.

The drilling and completion technologies commonly known as fracking have turned the U.S. into an energy superpower while lowering both energy prices and carbon dioxide emissions. To accommodate the industry's rapid growth over the past decade, several regions of the country—including parts of Pennsylvania, Colorado, Texas and North Dakota—have been turned into industrialized zones, sometimes overlapping with communities.

Researchers at the University of Chicago, Princeton University and the University of California, Los Angeles, examined more than 1.1 million births in Pennsylvania between 2004 and 2013, when breakthroughs in fracking turned the state into a major producer of natural gas. Thousands of wells were drilled and fracked in the state over that span, according to federal data.

The study found that the babies of women who lived within a kilometer of a well suffer from poorer health and have lower birth weights, while babies born more than three kilometers away show no apparent health impacts.

Researchers estimated that about 29,000 babies annually are born to mothers living within a kilometer of a well in the U.S.

"The fact that it is limited to relatively small distances from the well sites, I think, is consistent with local air pollution being the source—be that from the trucks or diesel generators or general activity," said co-author Michael Greenstone, the director of the Energy Policy Institute at the University of Chicago, and the university's Milton Friedman Professor of Economics.

Mr. Greenstone has previously written favorably about the economic impacts of fracking. He concluded that the economic benefits of living in a region with fracking—higher incomes and wages and lower unemployment—outweighed impacts on the quality of life, such as increased truck traffic, crime, noise and air pollution.

Industry representatives questioned the study's conclusions even before they were published.

"The natural gas and oil industry invests millions in scientific research every year to ensure the health and safety of the communities where we operate, live and work and will continue working hard to bring affordable and reliable energy to Pennsylvanians," said the American Petroleum Institute. It questioned whether the study's authors took into account other factors, such as parental health, to explain the low birth weight findings.

The study was funded mostly by the universities involved, as well as grants from the MacArthur Foundation and the Environmental Protection Agency.

Corrections & Amplifications

A new study found that about 29,000 babies are born each year to mothers living within a kilometer of a fracked well in the U.S. An earlier version of this article incorrectly stated the figure as being for Pennsylvania only, and gave an incorrect national figure. (Dec. 13, 2017)

Write to Russell Gold at @wsj.com

Oil and gas fracking connected to low birth weights in infants, landmark study finds

Tom DiChristopher | John W. Schoen Published 2 Hours Ago Updated 2 Hours Ago

<https://www.cnbc.com/2017/12/13/oil-and-gas-fracking-connected-to-low-birth-weights-in-infants-study.html>

Pregnant mothers who live near shale oil and gas fracking face an elevated risk of giving birth to babies with health problems, according to a landmark study.

The finding comes as U.S. oil production is approaching all-time highs, driven by growth from U.S. shale fields. Producers in these areas use an advanced drilling method called hydraulic fracturing.

These "frackers" inject water, sand and chemicals underground at high pressure to create a network of fractures in shale rock formations that allow oil and gas to flow.

The method has long faced opposition from environmentalists concerned about potential groundwater contamination and air pollution caused by truck traffic and diesel emissions near fracking sites.

The new study released Wednesday in the journal *Science Advances* raises fresh concerns about hydraulic fracturing's impact on infants.

"These results suggest that hydraulic fracturing does have an impact on our health, though the good news is that this is only at a highly localized level. "

-Janet M. Currie, Princeton University professor of economics and public affairs

It is the first peer-reviewed research that shows large-scale evidence that fracking may negatively affect infant health. It was co-authored by economists from Princeton University, the University of Chicago and UCLA and based on a study of more than 1.1 million births between 2004 and 2013 in Pennsylvania, a major producer of natural gas from shale deposits.

The study finds that babies born to mothers who live 1 kilometer, or about half a mile, from fracking sites are 25 percent more likely to be born at low birth weights. Infants born below 5.5 pounds are at greater risk of infant mortality, attention deficit hyperactivity disorder, known as ADHD, and asthma, according to the authors.

The impacts on infants born 3 kilometers, or nearly 2 miles, from the sites were about one-half to one-third lower than those living 1 kilometer away. Beyond 3 kilometers, there were no observable impacts on infant health.

"These results suggest that hydraulic fracturing does have an impact on our health, though the good news is that this is only at a highly localized level," Janet M. Currie, professor of economics and public affairs at Princeton University, said in a release.

To be sure, few people live very close to these sites because most fracking occurs in remote rural areas in several parts of the United States. However, the authors note that oil and gas production is starting to encroach on more densely populated areas in some parts of the United States, including around Pittsburgh.

They estimate that 29,000 out of nearly 4 million U.S. births each year occur within 1 kilometer of a fracking site, while 95,000 babies are born to mothers who live within 3 kilometers.

Study co-author Michael Greenstone, director of the Energy Policy Institute at the University of Chicago, said the findings may cause some communities to factor infant health into a discussion of the pros and cons of hydraulic fracturing.

Previous research by Currie and Greenstone found that shale oil and gas activity boosts incomes, employment and housing prices in the areas where it occurs. They calculated an average benefit of \$1,900 per household.

Fracking also has been broadly beneficial at the national level too, Greenstone told CNBC.

"The advent of hydraulic fracturing has produced very large benefits for the country" through lower energy prices, he told CNBC. "Those benefits are widely dispersed."

"It is also true that ... hydraulic fracturing has produced lots of benefits on the health side by greatly reducing coal's share of electricity generation," he added.

The U.S. drilling boom, fueled by fracking, has driven down natural gas costs, making the cleaner-burning fuel more competitive with coal. As a result, coal's share of electricity production in the United States has fallen significantly.

The study did not pinpoint the exact cause of low birth weights in areas with fracking operations. The authors said it was potentially due to drilling-related air or water pollution, the chemicals used onsite, increased traffic or another channel.

Greenstone said the authors hope the study will spark new research to identify the exact mechanism for the lower health outcomes among infants, as well as potential impacts on people at other stages of life. That work could lead to a regulatory solution, he said.

"Until we can determine the source of this pollution and contain it, local lawmakers will be forced to continue to make the difficult decision of whether to allow fracking in order to boost their local economies — despite the health implications — or ban it altogether, missing out on the jobs and revenue it would bring," said co-author Katherine Meckel, assistant professor at UCLA.

Several industry groups quickly criticized the study and its methodology following its release.

"This report highlights a legitimate health issue across America that has nothing to do with natural gas and oil operations," the American Petroleum Institute said in a statement.

"It fails to consider important factors like family history, parental health, lifestyle habits, and other environmental factors and ignores the body of scientific research that has gone into child mortality and birthweight."

The authors of the study compared the health of children born to mothers who live near oil and gas wells both before and after fracking operations began. They then compared those results against mothers who did not live near fracking sites.

To further check their work, they compared infants born near wells with their siblings who were not exposed to fracking operations.