

## RESPONSES TO ALLEGATIONS CONCERNING HYDRAULIC FRACTURING

In recent months opponents of hydraulic fracturing and oil and gas development in general have made a number of allegations that hydraulic fracturing has resulted in the contamination of drinking water wells around the county and that in some cases the fluids used in hydraulic fracturing operations have caused serious illness. These allegations have appeared in a variety of media. Some of the allegations commonly made including the following:

- McMillian Well – Claims have been made that hydraulic fracturing of a nearby gas well resulted in the contamination of the drinking water well used by Ruben and Cynthia McMillian in Adger, Alabama.
- Amos Well – It has been alleged that hydraulic fracturing of a nearby gas well contaminated a drinking water well used by the Amos family in Silt, Colorado and led to various health problems experienced by Laura Amos.
- Bainbridge Incident – Allegations have been made that hydraulic fracturing of a gas well caused a house in Bainbridge, Ohio to explode.
- Sublette County – Claims have been made that hydraulic fracturing has caused contamination in numerous wells in the Pinedale Anticline in Sublette County, Wyoming.
- Dimock, Pennsylvania – Residents of Dimock, Pennsylvania have raised concerns that their drinking water wells have been contaminated as a result of hydraulic fracturing and related drilling activities in nearby gas wells.
- Durango Nurse – Media reports have suggested that exposure to frac fluids caused an emergency room nurse in Durango, Colorado to become seriously ill and that the company that produced the fluids refused to assist the woman's physician by providing information on the chemical constituents in the fluid because the information was proprietary.
- Lytle Well – It has been alleged that a residential drinking water well located in the Seneca County town of Varick, New York was contaminated when a nearby natural gas well was hydraulically fractured.

Attached are fact sheets addressing each of these allegations. As demonstrated by these summaries, the consistent theme is that the allegations regarding hydraulic fracturing are unfounded. In the case of the alleged incidents of contamination, appropriate federal and/or state regulatory authorities have investigated these allegations and in every case have determined that hydraulic fracturing did not cause the contamination or other damage alleged. In the case of the Durango, Colorado nurse, the service company involved never refused to provide information to the woman's physician, who in fact never tried to contact the service company directly. In short, when viewed in light of the actual facts, these allegations regarding hydraulic fracturing do not hold up.

## **HYDRAULIC FRACTURING OPERATIONS DID NOT CONTAMINATE THE MCMILLIAN WELL**

### SUMMARY OF ALLEGATIONS

Allegations have been made that hydraulic fracturing operations at a gas well in the vicinity contaminated the McMillian family's drinking water well in Adger, Alabama. These allegations subsequently became the basis for a suit in federal court by the Legal Environmental Assistance Foundation ("LEAF") challenging the decision by the U.S. Environmental Protection Agency ("EPA") not to regulate hydraulic fracturing under the Safe Drinking Water Act. However, after extensive investigations by EPA and two different state agencies, the federal and state regulators all agreed that the issues with the McMillian well were not related to hydraulic fracturing.

### BACKGROUND OF EVENTS

- Beginning in 1989, Ruben and Cynthia McMillian of Adger, Alabama alleged that their drinking water well had become contaminated by hydraulic fracturing operations that had taken place at various coalbed methane wells in the vicinity of their home. These allegations were renewed by the McMillians in July and August of 1990.
- The McMillian well is only 200 feet deep and the nearest coalbed methane production well is located approximately one-quarter mile away. Coalbed methane wells located in the vicinity of the McMillian well underwent hydraulic fracturing operations at depths of between 1,335 and 1,752 feet.
- Extensive water quality sampling and analysis demonstrated that the McMillian well was not affected by these hydraulic fracturing operations.
  - In 1989, the Alabama Department of Environmental Management ("ADEM"), the Alabama Oil and Gas Board, and the well operator collectively conducted four separate water quality tests on the McMillian well. The results from all of these tests indicated that there were no water quality problems associated with the McMillian well.
  - In 1990 EPA conducted water quality sampling of the McMillian well and determined that there were no water quality problems.
  - ADEM subsequently conducted water quality sampling of the McMillian well on five separate occasions between 1991 and 1993. With the exception of a single result for high iron content, all of the sampling results indicated that constituents in the water met applicable drinking water quality standards.
- In a 1989 letter to Mr. McMillian, ADEM stated that, "It appears that no problems exist with your well water for the parameters sampled. All results are well below the Drinking Water Standards. The difference in concentrations of the parameters are not

significant enough to indicate that your well was adversely affected by the coalbed methane operation.”

- An EPA environmental scientist concluded that, even without water quality testing, other available scientific evidence suggested that hydraulic fracturing operations could not have affected the McMillian well. As the scientist stated, “the available information suggests that the propagation of fractures, and movement of fluids from the hydraulic fracture zone, should not have been extended to the location of the McMillian well from any of the hydraulic fracturing operations alleged to have caused the McMillian well water quality problems.” The EPA scientist concluded that the most likely source of any contamination in the McMillian well was dislodged materials (such as coal or clay) in the “open hole” (or unlined) portion of the well.
- In a legal brief submitted to the U.S. Court of Appeals for the Eleventh Circuit in 1995 in connection with the lawsuit filed by LEAF, EPA definitively stated that “[a]fter extensive testing, the McMillian water well has suffered no harm as a result of hydraulic fracturing activities.”
- In a 1995 letter, Carol M. Browner, then Administrator of EPA, stated that:

There is no evidence that the hydraulic fracturing at issue has resulted in any contamination or endangerment of underground sources of drinking water (USDWs). Repeated testing, conducted between May of 1989 and March of 1993, of the [McMillian well] failed to show any chemicals that would indicate the presence of fracturing fluids. The well was also sampled for drinking water quality and no constituents exceeding drinking water standards were detected. Moreover, given the horizontal and vertical distance between the drinking water well and the closest methane gas production wells, the possibility of contamination or endangerment of USDWs in the area is extremely remote.

### CONCLUSION

The allegations by the McMillians regarding contamination of their drinking water well have been thoroughly investigated and refuted by Alabama oil and gas and environmental officials and by EPA. After numerous sampling events, there is no indication that the McMillian well was in fact contaminated as a result of hydraulic fracturing activities in gas wells a quarter-mile or more away.

## **HYDRAULIC FRACTURING DID NOT CONTAMINATE THE AMOS WELL IN COLORADO**

### **SUMMARY OF ALLEGATIONS**

Laura Amos, a resident of Garfield County, Colorado, has alleged that her water well was contaminated by fluids used to hydraulically fracture several natural gas wells located on a well pad some distance from her house. Ms. Amos has specifically claimed that these frac fluids contained, and that she was exposed to, the chemical 2-butoxyethanol (“2-BE”). Ms. Amos further alleged that her exposure to 2-BE caused her to develop Conn syndrome, which is a benign tumor in one of the adrenal glands. However, the Colorado Oil and Gas Conservation Commission (“COGCC”), which is the state agency that regulates oil and gas activities in Colorado, thoroughly investigated Ms. Amos’s allegations and specifically concluded that frac fluids never reached Ms. Amos’s well.

### **BACKGROUND OF EVENTS**

- Ms. Amos complained to COGCC in 2001 and again in 2004 about a variety of problems associated with her drinking water well, including reduced water volumes and the presence of methane in the water. According to Ms. Amos these problems were caused by hydraulic fracturing operations conducted on gas wells that were located at a well pad approximately 1000 feet from her home. The fracturing operations took place at depths of over 2000 feet; the Amos well is 225 feet deep.
- Ms. Amos later alleged that the hydraulic fracturing operations conducted near her house created a hydrogeological connection between her water well and at least one of the gas wells. This connection, according to Ms. Amos, allowed frac fluids to contaminate her well water and exposed her to several harmful chemicals allegedly contained in frac fluids, including 2-BE.
- The COGCC undertook an extensive investigation of Ms. Amos’s complaints. On at least eight occasions between 2001 and 2005, COGCC staff tested the Amos well for contaminants associated with frac fluids as well as for benzene, toluene, ethylbenzene, and xylenes (“BTEX”) and other contaminants. Because the fluid used in hydraulic fracturing operations at the nearby wells contained potassium chloride the COGCC specifically tested water samples from the Amos well for potassium and chlorides. However, neither BTEX compounds nor frac fluid constituents were ever detected in any of these samples. In particular, the COGCC did not find the elevated levels of potassium or chlorides that would have been expected if frac fluids had reached the Amos well. In addition, the COGCC staff specifically tested for 2-BE but did not find any in the samples taken.
- The results of the hydraulic fracturing operations in the nearby gas wells made it highly unlikely that any frac fluids would have reached the Amos well. In fact, microseismic mapping that was conducted during fracturing operations showed that the fractures created as a result of those operations were not oriented in the direction of the Amos well, meaning that frac fluids did not travel in the direction of the Amos well.



- After the COGCC had investigated Ms. Amos’s allegations for nearly four years, Brian Macke, Director of the COGCC, stated in a letter dated February 3, 2005, that there was “no evidence that frac fluids of any kind had impacted” the Amos well.
- Director Macke further noted in his letter that 2-BE is commonly found in a variety of household cleaners such as Windex and that any exposure Ms. Amos may have had to 2-BE could have come from various cleaning products.
- In March 2006, the COGCC issued a formal ruling definitively concluding that frac fluids had never reached the Amos well. In that ruling COGCC stated the following:
  - “The impact to the [Amos] Water Well is not a result of the hydraulic fracturing [operations].”
  - “[F]rac fluids have not reached the [Amos] Water Well . . . .”
  - “Analytical results from extensive water sampling of nearby water wells likewise demonstrate that no frac fluids were ever found to be present in the ground water.”
- At the same time, the COGCC found that, to the extent activities at nearby gas wells had impacted the Amos well, those impacts were a result of the failure of the cementing of a gas well. In light of these cementing issues, the COGCC determined that the operator had violated the Commission’s regulations and issued a fine.

#### CONCLUSION

Ms. Amos’s allegations are entirely inconsistent with the facts of this situation. Extensive water quality testing conducted by the COGCC demonstrates that frac fluids never reached the Amos well. Microseismic mapping shows that the fractures created during fracing operations were not oriented in the direction of the Amos well. In short, there is no factual evidence that would indicate Ms. Amos was ever exposed to frac fluid, much less that frac fluid was a cause of her health issues.

## **HYDRAULIC FRACTURING DID NOT CAUSE AN EXPLOSION AT A HOUSE IN BAINBRIDGE, OHIO**

### SUMMARY OF ALLEGATIONS

An explosion occurred at a house in Bainbridge, Ohio after natural gas seeped into local water supplies. While it has been alleged that the house “exploded in a fiery ball” neither the house nor any of the furnishings inside the house suffered any fire or smoke damage. In fact, an elderly couple inside the house at the time was uninjured by the explosion. Despite claims that this explosion was caused by hydraulic fracturing operations, the Ohio Division of Mineral Resources (“DMRM”) determined that the most critical contributing factor leading to the incident was the operator’s failure to properly vent the gas well. DMRM also concluded that hydraulic fracturing fluid never entered local water supplies.

### BACKGROUND OF EVENTS

- On December 15, 2007, an explosion occurred in the basement of a home in Bainbridge, Ohio. An elderly couple that was asleep in the house at the time was awakened but unharmed by the explosion. The house, which suffered damage to its foundation as well as nonstructural damage, remained standing after the incident. In fact, neither the house nor its furnishings suffered any kind of fire or smoke damage.
- DMRM conducted an extensive year-long investigation of this incident. At the conclusion of its investigation DMRM published an 81-page report summarizing its investigation and describing what caused the incident. At no time did DMRM conclude that the explosion was caused by hydraulic fracturing.
- According to the DMRM report, three different factors contributed to this incident:
  - The first contributing factor and the root cause of the incident was inadequate cementing of the production casing in a nearby gas well. The cement should have sealed off high pressure gas found in a formation several hundred feet above the formation from which the operator intended to produce gas. The improper cement job of the well allowed gas to enter the space between the wellbore and the production casing (the “annulus”) and to travel up that space toward the ground surface.
  - The second contributing factor was the operator’s decision to proceed with hydraulic fracturing of the well even though the operator knew, from test results such as a cement bond log, that the cementing of the production casing did not meet accepted industry standards. DMRM stated that because of the improper construction of the well, the fractures created during the hydraulic fracturing operations could have provided another avenue for gas to enter the space between the well bore and the production casing.
  - The final and - according to DMRM – “most critical contributing factor leading to the incident” was a decision by the operator to close valves at the surface of the

gas well for a period of 31 days while the well was “shut in.” This caused gas pressure to build up in the annular space between the surface and production casings of the gas well. As a result, when it reached this area of high pressure the gas traveling up the space between the wellbore and the production casing migrated laterally into the surrounding rock. This gas infiltrated local aquifers which discharged into local water wells. The gas in turn entered some area homes through water wells (which in some cases are found in the basements of homes), resulting in the explosion in the basement of one house.

- While the operator’s decision to commence the hydraulic fracturing operation was a mistake in light of the problems with the construction of the well, DMRM found no problems with the way in which the hydraulic fracturing operation was conducted. In fact, DMRM pointed out in its report that the over-pressurization of the natural gas well did not occur until after the fracing operation had been completed because “the valves on the surface production casing annulus remained open before, during, and after the hydraulic fracturing operation in accordance with standard industry practice.”
- Over the course of its investigation DMRM collected and analyzed water samples from 79 drinking water wells in the area and determined that none of those wells “had been contaminated or polluted by . . . hydro-fracture fluids.”
- The report also stated that “the DMRM has concluded that it is highly unlikely that fluids used in the hydraulic fracturing process, or flow back fluids escaped from the borehole or entered into local aquifers.”
- This was the first and only documented incident where natural gas invaded groundwater aquifers in Ohio since the State established a groundwater investigation program in 1984.

### CONCLUSION

Any allegation that this incident was caused by hydraulic fracturing is improper and not supported by DMRM’s investigation or report. Instead, this incident, which easily could have been prevented, was the direct result of several poor decisions made by the operator of a natural gas well: the operator should have corrected the improper cement job; the operator should not have undertaken hydraulic fracturing operations knowing that the cement job was inadequate; and finally, the operator should not have left the well “shut in” for 31 days.

In addition, the DMRM investigation definitively determined that local drinking water sources were not contaminated by hydraulic fracturing fluids as a result of this or any other hydraulic fracturing operations conducted in the area.

# **HYDRAULIC FRACTURING HAS NOT CONTAMINATED WATER WELLS IN SUBLETTE COUNTY, WYOMING**

## **SUMMARY OF ALLEGATIONS**

Sublette County, Wyoming is the location of significant natural gas exploration and development activities. The claim has been made that hydraulic fracturing operations conducted in this area are contaminating local sources of drinking water with benzene and other petroleum hydrocarbons. However, since 2000, this area has been the site of an extensive groundwater monitoring program that is overseen by the Bureau of Land Management (“BLM”). Water quality sampling and analysis associated with this program indicate that neither benzene nor any other petroleum hydrocarbon has ever been detected in a drinking water well. While contaminants have been found in some industrial wells and a well used to provide water for livestock, there is no evidence that hydraulic fracturing is responsible for the presence of these contaminants and federal officials have not identified hydraulic fracturing as a potential source of the contamination.

## **BACKGROUND OF EVENTS**

- The Pinedale Anticline Project Area (“PAPA”) is a natural gas field in west-central Wyoming (Sublette County) and is located near the city of Pinedale. The PAPA encompasses an area of approximately 308 square miles and is about 12 miles wide and 26 miles long. The uppermost gas-bearing geologic formations of economic significance are located approximately 8,000 feet below the ground surface.
- In July 2000 BLM issued a Record of Decision for the Pinedale Anticline Oil and Gas Exploration and Development Project based on Supplemental Environmental Impact Statement that BLM had prepared which examined the potential impacts of allowing oil and gas development activities on federal lands in the area. In that Record of Decision, BLM required operators of natural gas wells in the PAPA to implement an extensive groundwater monitoring program. This program, which continues today, requires monitoring and analysis of all water wells within a one-mile radius of existing and proposed natural gas wells.
- The monitoring program covers over 200 wells of all types. To date, water samples have been collected at 167 industrial wells, 50 domestic wells, and 22 stock wells located throughout the PAPA. Water extracted from industrial wells is used only for industrial purposes and is never consumed by either humans or animals. Water from stock wells is used to supply water for livestock but is never used for human consumption. Water quality requirements for stock wells are typically less stringent than those set for domestic wells. There are no water quality standards for industrial wells because such water, even in its natural state, is not fit for human or animal consumption.
- According to testing conducted as recently as July 2008, domestic wells in the PAPA have always met or exceeded applicable water quality standards for both benzene and other hydrocarbons.

- For the first time ever, a stock well within the PAPA recently tested positive for toluene. However, the level of toluene detected was well below the approved limit for drinking water. Additional water samples taken from this well demonstrate that the amount of toluene present has decreased to almost non-detectable levels (there was less than 1.0 microgram per liter of toluene detected in the most recent round of sampling for which data are available).
- A single industrial well in the PAPA recently tested positive for levels of benzene in excess of drinking water standards. However, water from industrial wells is not meant for human consumption and neither humans nor animals have ever consumed water from this well. Moreover, neither state nor federal regulators have expressed any concerns that this exceedance is related to hydraulic fracturing.
- The presence of petroleum hydrocarbons has been detected at other industrial wells in the area as part of the monitoring program. However, these hydrocarbon levels are typically sufficiently low that they do not exceed groundwater quality standards.
- Federal and state regulatory agencies, as well as private parties, are working together to determine the cause(s) of this contamination. However, neither state nor federal regulators have expressed any concerns that the contamination is related to hydraulic fracturing operations. Instead, they are focusing their investigative efforts on such things as the lack of backflow prevention devices between storage tanks and industrial water wells, the use of hydrocarbon-based pipe dope compounds used in well construction, problematic water well drilling techniques, and natural sources of contamination.

### CONCLUSION

Results from substantial groundwater testing demonstrate that drinking water wells in the PAPA remain uncontaminated by petroleum hydrocarbons. While hydrocarbons have been detected in some of the area's industrial wells there is no reason to believe this is related to hydraulic fracturing operations and BLM and other agencies involved have never identified hydraulic fracturing as a potential source of the contamination. In fact, BLM and other regulatory agencies have determined that other activities are the most likely cause of this contamination.

## **HYDRAULIC FRACTURING DID NOT CONTAMINATE WATER WELLS IN DIMOCK, PENNSYLVANIA**

### **SUMMARY OF ALLEGATIONS**

Residents of the town of Dimock, Susquehanna County, Pennsylvania have alleged that their water wells were contaminated by fluids used to hydraulically fracture several natural gas wells in the area. Many of these residents point to an incident earlier this year in which an explosion occurred within a private water well as proof of their allegations. However, the Pennsylvania Department of Environmental Protection (“PADEP”), which is the state agency that regulates oil and gas activities in Pennsylvania, thoroughly investigated this incident and specifically concluded that hydraulic fracturing activity has not impacted local water wells.

### **BACKGROUND OF EVENTS**

- On January 1, 2009, an explosion occurred at a residential water well in the town of Dimock, Pennsylvania. No injuries were reported as a result of this incident.
- Prior to the explosion, a company had been conducting drilling and hydraulic fracturing operations in the Marcellus Shale formation near the town of Dimock.
- After collecting and analyzing samples from dozens of private water wells PADEP conclusively “determined that nearby gas well hydro fracturing activity has not impacted local wells.” This determination was based on extensive laboratory analysis of the water samples taken from local water wells that specifically looked for indicators of impacts associated with hydraulic fracturing or other aspects of well drilling and production such as total dissolved solids, chlorides, specific conductivity, pH, alkalinity, hardness, sodium, calcium, barium, iron, manganese, potassium and aluminum.
- According to PADEP, which continues to investigate this incident, the explosion occurred when a build-up of methane was ignited by a spark from the water well’s pump. The explosion destroyed a concrete slab that was situated on top of the water well but caused no other damage.
- Nine water wells in the area were found to have methane and PADEP temporarily removed four nearby wells from service due to methane levels in excess of 25 parts per million.
- Isotopic analysis conducted by PADEP indicates that the methane which caused the explosion migrated from the Devonian Shale formation which is located about 1,500 feet underground and is significantly closer to the surface than the Marcellus Shale formation, which is located about 5,000 feet below ground.
- As a result of this incident PADEP issued a notice of violation to the operator for “unpermitted discharge of natural gas” into state waters, failure to prevent the discharge, and failure to submit records on time. Though no fines were levied, the operator was instructed to install gas detectors in nine homes where methane was



detected in water wells and to continue providing water to four of those homes. The operator continues to comply with the requirements of the NOVA and to date no indoor vapor problems have been encountered in any of the homes being monitored.

- PADEP has also required the operator to implement a new protocol for casing and cementing new gas wells. The new approach will address the unique geology of the particular area and will provide another barrier to migrating gas. For pre-existing wells, the operator will install an additional cement sealer to prevent gas from migrating.

### CONCLUSION

Allegations that hydraulic fracturing contaminated private water wells in and around Dimock, Pennsylvania are entirely inconsistent with the facts of this situation. Extensive water quality testing conducted by PADEP demonstrates that fracturing fluids never reached any private drinking water wells. In addition, any methane contamination effecting these wells came from a shale formation that is nearly a mile closer to the surface than the Marcellus Shale where hydraulic fracturing activities were taking place. In short, there is no factual evidence that would indicate that residents of Dimock were ever exposed to, or that their water wells were contaminated by fracturing fluids.

## **CATHY BEHR, COLORADO**

### **SUMMARY OF ALLEGATIONS**

Cathy Behr, an emergency room nurse at a hospital in Durango, Colorado, suffered significant health problems after allegedly being exposed to frac fluids that she claims were on the clothes of a gas field worker to whom she was rendering medical assistance. The claim has been made that the service company responsible for manufacturing the frac fluid refused to disclose to Ms. Behr's physician the specific chemicals contained in the frac fluid. However, it is not clear whether Ms. Behr was ever exposed to frac fluids. Moreover, the service company involved never refused to provide information to Ms. Behr's physician; in fact, the physician never contacted the service company to seek information.

### **BACKGROUND OF EVENTS**

- In April 2008, a hydraulic fracturing operation took place at a well site on tribal land about ten miles east of Durango, Colorado. According to published accounts, during that operation the valve on a tote containing frac fluid fell off, spilling frac fluid on an employee of the service company that was performing the frac job.
- The service company employee has stated that he was wearing protective clothing at the time of the spill, including a chemical suit, boots, gloves and a helmet with goggles. The employee further stated that he removed all of his protective clothing prior to being transported to the emergency room at Mercy Regional Medical Center in Durango and that he did not have any frac fluid on him when he arrived at the hospital. The service company employee – who experienced only mild nausea – was treated and released from the emergency room without complaining of or suffering from any significant health problems.
- The service company that was performing the frac job at the well site provided information to the medical professionals at the hospital to assist in the treatment of its employee. A supervisor who accompanied the worker to the emergency room provided the emergency room staff with a copy of the material safety data sheet (“MSDS”) associated with the frac fluid. MSDSs are required by federal law to contain significant health and safety information and must also contain the name of, and an emergency phone number for, the chemical's manufacturer.
- Ms. Behr, the emergency room nurse, attended to the service company employee when he was brought to the emergency room and handled his boots and other personal effects. At the time she was attending to the gas field worker, Ms. Behr experienced only a slight headache and, at the end of her shift, she returned home. Two days later Ms. Behr began to get sick and would ultimately spend 30 hours in an intensive care unit before being diagnosed with and treated for chemical exposure. Ms. Behr has now recovered from her illness and has returned to her job at the hospital.
- Ms. Behr claims that she was exposed to frac fluid when handling the industry employee's boots and other personal effects and that this exposure led to her illness.

- According to recent statements made by Ms. Behr to the *Durango Herald*, her doctor attempted to determine what constituent chemicals were contained in the frac fluid by conducting various internet searches. However, the doctor did not undertake a thorough search for information. Most notably, her doctor never attempted to contact the energy services company that manufactured the frac fluid for information concerning the constituents of the frac fluid.
- Had Ms. Behr's physician contacted the energy service company it would have been required, under the OSHA hazard communication standard, to disclose the "specific chemical identity" of the frac fluid, including all of the constituent chemicals that it contained.

### CONCLUSION

No one disputes that Ms. Behr became seriously ill. However, questions remain about the source of her illness; it is not clear that she was in fact ever exposed to frac fluid in the course of treating the gas field worker. Regardless of the source of her illness, it is *not* the case that the service company employee involved refused to provide information concerning the constituents of its frac fluid in an emergency medical situation. In fact, Ms. Behr's doctor never tried to contact the service company directly to try to determine the makeup of the frac fluid to which Ms. Behr had allegedly been exposed.

**HYDRAULIC FRACTURING OPERATIONS  
DID NOT CONTAMINATE A DRINKING WATER WELL  
IN VARICK, NEW YORK**

SUMMARY OF ALLEGATIONS

Environmental activist Walter Hang claimed that he uncovered the “first documented case” of groundwater pollution caused by hydraulic fracturing. According to Mr. Wang, the drinking water well of Laurie Lytle – located in the Seneca County town of Varick, New York – became contaminated after a nearby natural gas well was hydraulically fractured. However, Ms. Lytle noticed a difference in her water quality before the natural gas well in question was hydraulically fractured. Moreover, results from at least three separate water quality analyses demonstrate that no contamination ever occurred to Ms. Lytle’s well.

BACKGROUND OF EVENTS

- Drilling commenced on the “Swartley 2” natural gas well on October 28, 2007 (API Well Number 31099260420000).
- The well was drilled to a total depth of 2,350 feet and isolated from groundwater by three casing strings (layers of steel pipe), each of which was cemented into place.
- Ms. Lytle noticed a difference in her water quality after drilling had commenced, but before the Swartley 2 well had been hydraulically fractured.
- Any turbidity that was noted by Ms. Lytle was due to the shallow depth of her drinking water well (approximately 50 feet) and temporary sediment disturbance related to the drilling of the Swartley 2 well. Such turbidity was unrelated to any hydraulic fracturing activities.
- The well operator paid for a filter to be installed in the Lytle water well to capture any residual sediment. Filters are typically needed for only a few days following drilling.
- The well operator has tested water at the Lytle residence on at least three separate occasions and has found that no contamination or degradation in water quality has ever occurred. Testing of Ms. Lytle’s water took place prior to drilling, after drilling and after the Swartley 2 well had been hydraulically fractured.
- The well operator recently contacted Ms. Lytle to reassure her through additional water quality testing that no additives from any hydraulic fracturing fluids has encroached into her well water.

CONCLUSION

The allegations made by Mr. Hang with regard to contamination of Ms. Lytle’s drinking water well are not supported by the facts of this situation. Any change in water quality that

might have been noted by Ms. Lytle occurred before the nearby natural gas well was hydraulically fractured. Furthermore, numerous water quality analyses demonstrate that the Lytle well has not been contaminated by any hydraulic fracturing fluids nor has there been any degradation in the water's quality.