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May 30, 2013

The Honorable Ron Wyden  
Chairman  
Committee on Energy &  
Natural Resources  
304 Dirksen Senate Building  
Washington, DC 20510

The Honorable Lisa Murkowski  
Ranking Member  
Committee on Energy &  
Natural Resources  
304 Dirksen Senate Building  
Washington, DC 20510

Dear Chairman Wyden and Ranking Member Murkowski:

These comments are submitted to the Senate Committee on Energy and Natural Resources (ENR) on behalf of the Independent Petroleum Association of America (IPAA) and Energy In Depth (EID) with regard to issues raised at the May 23, 2013, ENR round table discussion regarding natural gas production.

IPAA represents the thousands of independent natural gas and oil explorers and producers, as well as the service and supply industries that support their efforts. Independent producers drill about 95 percent of American oil and natural gas wells, produce over 54 percent of American oil, and more than 85 percent of American natural gas. EID is a research, education and public outreach campaign focused on getting the facts out about the promise and potential of responsibly developing America's onshore energy resource base – especially abundant sources of oil and natural gas from shale and other “tight” reservoirs across the country. It's an effort that benefits directly from the support, guidance and technical insight of a broad segment of America's oil and natural gas industry.

During the Committee round table, several issues were raised where the Committee solicited additional information. This document addresses the following:

1. Issues associated with hydraulic fracturing and drinking water contamination;
2. Regulatory “failures” and federal standards; and
3. Chemical disclosure and the role of FracFocus.

### **Hydraulic Fracturing and Drinking Water Contamination**

The question of underground drinking water contamination from hydraulic fracturing is a settled issue; *hydraulic fracturing has not caused underground drinking water contamination*. However, professional environmental organizations – notably the Natural Resources Defense Council (NRDC) and the Sierra Club – continue to allege

that fracturing not only poses a serious risk of contamination, but that the process has been linked to such contamination on numerous occasions. This is not based on scientific evidence (as the following examples will attest), but rather as one particular tool in a broader agenda to reduce or eliminate the development and use of natural gas.

Fracturing is a temporary part of natural gas development that has been effectively controlled by state-based well construction and completion regulations for decades. The following are but a handful of comments from a variety of experts, regulators, and analyses of hydraulic fracturing that speak directly to the question of whether the process contaminates drinking water aquifers:

- **Gradient Environmental Consultants:** “[I]t is implausible that the fluids pumped into the target formation would migrate from the target formation through overlying bedrock to reach shallow aquifers. ... there is no scientific basis for significant upward migration of HF fluid or brine from tight target formations in sedimentary basins.” ([May 2013](#))
- **U.S. Geological Survey** (press release): “A study that examined the water quality of 127 shallow domestic wells in the Fayetteville Shale natural gas production area of Arkansas found no groundwater contamination associated with gas production, according to a report released today by the U.S. Geological Survey.” ([January 2013](#))
- **U.S. Government Accountability Office:** “Fractures created during the hydraulic fracturing process are generally unable to span the distance between the targeted shale formation and freshwater bearing zones... [R]egulatory officials we met with from eight states – Arkansas, Colorado, Louisiana, North Dakota, Ohio, Oklahoma, Pennsylvania, and Texas – told us that, based on state investigations, the hydraulic fracturing process has not been identified as a cause of groundwater contamination within their states.” ([September 2012](#))
- **CardnoEntrix** (Inglewood Oil Field Study): “Before-and-after monitoring of groundwater quality in monitor wells did not show impacts from high-volume hydraulic fracturing and high-rate gravel packing.” ([October 2012](#))
- **John Hanger, former Pa. DEP Secretary:** “We’ve never had one case of fracking fluid going down the gas well and coming back up and contaminating someone’s water well.” ([2012](#))
- **Michael Krancer, former Pa. DEP Secretary:** “One of the primary areas of concern which has been raised about state regulation is in the area of groundwater and drinking water protection. There has been a misconception that the hydraulic fracturing of wells can or has caused contamination of water wells. This is false. My predecessor, former DEP Secretary John Hanger, told Reuters in October 2010 that ‘Pennsylvania has not had one case in which the fluids used

to break off the gas from 5,000 to 8,000 feet underground have returned to contaminate groundwater.” ([May 2012](#))

- **Lisa Jackson, former EPA Administrator:** “In no case have we made a definitive determination that [hydraulic fracturing] has caused chemicals to enter groundwater.” ([April 2012](#))
  - **Jackson:** “I’m not aware of any proven case where [hydraulic fracturing] itself has affected water.” ([May 2011](#))
- **Dr. Robert Chase, Dept. of Petroleum Engineering, Marietta College:** “Over a million wells have been fraced in the U.S. since the late 1940s, and over 60,000 wells in Ohio alone. There are no data to substantiate the claims made in *Gas Land* that hydraulic fracturing contaminates groundwater.” ([February 2012](#))
- **Ken Salazar, former Secretary, U.S. Dept. of Interior:** “There’s a lot of hysteria that takes place now with respect to hydraulic fracking and you see that happening in many of the states.... My point of view, based on my own study of hydraulic frackingis that it can be done safely and has been done safely hundreds of thousands of times.” ([February 2012](#))
- **Dr. Stephen Holditch, Dept. of Petroleum Engineering, Texas A&M University:** “I have been working in hydraulic fracturing for 40+ years and there is absolutely no evidence hydraulic fractures can grow from miles below the surface to the fresh water aquifers.” ([October 2011](#))
- **Center for Rural Pennsylvania:** “[S]tatistical analyses of post-drilling versus pre-drilling water chemistry did not suggest major influences from gas well drilling or hydrofracturing (fracking) on nearby water wells...” ([October 2011](#))
- **Dr. Mark Zoback, Professor of Geophysics, Stanford University:** “Fracturing fluids have not contaminated any water supply and with that much distance to an aquifer, it is very unlikely they could.” ([August 2011](#))
- **Elizabeth Ames Jones, former Chair, Railroad Commission of Texas:** “We have never had any instance of groundwater contamination from hydraulic fracturing – ever. For any fluid, frac fluid, to migrate up a mile, two miles to the water table is impossible. You are more likely to hit the moon with a Roman candle.” ([June 2011](#))
- **Scott Perry, Director of Pennsylvania’s Bureau of Oil and Gas Management:** “I’ve yet to see a single impact of fracking actually directly communicating with fresh groundwater resources...Again and again and again, I never see a single incidence of fracking causing this direct communication that we keep hearing about.” ([June 2011](#))

- **State Review of Oil and Natural Gas Environmental Regulations, Inc. (STRONGER):** “Although an estimated 80,000 wells have been fractured in Ohio, state agencies have not identified a single instance where groundwater has been contaminated by hydraulic fracturing operations.” ([January 2011](#))
- **State of New York, Revised Draft Supplemental Generic Environmental Impact Statement (dSGEIS):** “Hydraulic fracturing is engineered to target the prospective hydrocarbon-producing zone. The induced fractures create a pathway to the intended wellbore, but do not create a discharge mechanism or pathway beyond the fractured zone where none existed before. The pressure differential that pushes fracturing fluid into the formation is diminished once the rock has fractured, and is reversed toward the wellbore during the flowback and production phases. Accordingly, there is no likelihood of significant adverse impacts from the underground migration of fracturing fluids.” ([2011](#))
- **Massachusetts Institute of Technology:** “In the studies surveyed, no incidents are reported which conclusively demonstrate contamination of shallow water zones with fracture fluids.” ([2010](#))
- **Nick Tew, Alabama State Geologist & Oil and Gas Supervisor:** “There have been no documented cases of drinking water contamination that have resulted from hydraulic fracturing operations to stimulate oil and gas wells in the State of Alabama.” ([June 2009](#))
- **Cathy Foerster, Commissioner, Alaska Oil and Gas Conservation Commission:** “There have been no verified cases of harm to ground water in the State of Alaska as a result of hydraulic fracturing.” ([June 2009](#))
- **David Neslin, former Director, Colorado Oil and Gas Conservation Commission:** “To the knowledge of the Colorado Oil and Gas Conservation Commission staff, there has been no verified instance of harm to groundwater caused by hydraulic fracturing in Colorado.” ([June 2009](#))
- **Herschel McDivitt, Director, Indiana Department of Natural Resources:** “There have been no instances where the Division of Oil and Gas has verified that harm to groundwater has ever been found to be the result of hydraulic fracturing in Indiana. In fact, we are unaware of any allegations that hydraulic fracturing may be the cause of or may have been a contributing factor to an adverse impact to groundwater in Indiana.” ([June 2009](#))
- **James Welsh, Commissioner of Conservation, Louisiana Department of Natural Resources:** “The Louisiana Office of Conservation is unaware of any instance of harm to groundwater in the State of Louisiana caused by the practice of hydraulic fracturing.” ([June 2009](#))

- **Harold Fitch, Director, Office of Geological Survey, Michigan Dept. of Environmental Quality:** “There is no indication that hydraulic fracturing has ever caused damage to ground water or other resources in Michigan. In fact, the OGS has never received a complaint or allegation that hydraulic fracturing has impacted groundwater in any way.” ([June 2009](#))
- **Lori Wrotenbery, former Director, Oil and Gas Conservation Division, Oklahoma Corporation Commission:** “You asked whether there has been a verified instance of harm to groundwater in our state from the practice of hydraulic fracturing. The answer is no. We have no documentation of such an instance. Furthermore, I have consulted the senior staffs of our Pollution Abatement Department, Field Operations Department, and Technical Services Department, and they have no recollection of having ever received a report, complaint, or allegation of such an instance. We also contacted the senior staffs of the Oklahoma Department of Environmental Quality, who likewise, have no such knowledge or information. ([June 2009](#))
- **Victor G. Carrillo, former Chair, Railroad Commission of Texas:** “Though hydraulic fracturing has been used for over 60 years in Texas, our Railroad Commission records do not reflect a single documented surface or groundwater contamination case associated with hydraulic fracturing.” ([June 2009](#))
- **U.S. Dept. of Energy and Ground Water Protection Council:** “[B]ased on over sixty years of practical application and a lack of evidence to the contrary, there is nothing to indicate that when coupled with appropriate well construction; the practice of hydraulic fracturing in deep formations endangers ground water. There is also a lack of demonstrated evidence that hydraulic fracturing conducted in many shallower formations presents a substantial risk of endangerment to ground water.” ([May 2009](#))
- **U.S. Environmental Protection Agency:** “EPA did not find confirmed evidence that drinking water wells have been contaminated by hydraulic fracturing fluid injection...” ([2004](#))
- **Carol Browner, former EPA Administrator:** “There is no evidence that the hydraulic fracturing at issue has resulted in any contamination or endangerment of underground sources of drinking water.” ([May 1995](#))

Faced with this overwhelming body of analysis, why do the NRDC and Sierra Club continue to target fracturing? Put simply, hydraulic fracturing – and especially its abbreviated version, “fracking” – sounds scary. The NRDC and the Sierra Club use the term to describe the entire natural gas industry, even segments and processes that have nothing to do with the fracturing process – including but not limited to pipelines, compressor stations, and even facilities processing liquefied natural gas (LNG) exports.

It was instructive that, when pressed for concrete evidence during the ENR roundtable on May 23, 2013, neither representative from NRDC nor the Sierra Club could identify any specific example of hydraulic fracturing contaminating drinking water aquifers.

In summary, a consensus of regulatory and scientific opinion contradicts claims that hydraulic fracturing has contaminated or poses a serious risk of contaminating underground drinking water supplies.

## **Regulatory “Failure” and Federal Standards**

Another common assertion about shale development is that it is under-regulated or even unregulated – particularly by federal environmental law. These are false assertions, and yet, thanks to organizations spending millions of dollars across the country to promote such a message, the effort has resulted in anxiety in communities throughout the nation. Examination of the issues, however, demonstrates its mendacity.

There are two specific themes within this assertion. The first alleges incidents of harm, attributable to supposed regulatory failure. The second asserts a failure of federal action.

Turning to the first assertion, it hinges on two factors – first, that all instances of damage are true and that they result from fracturing; and second, that a single incident is an indication of inadequate regulation. During the ENR round table on May 23, 2013, the Sierra Club tried to use the Dimock, Pa., ground water example to trick the Committee into believing the incident was related to fracturing. It is an outdated and easily refuted claim, based upon a comprehensive review by none other than the U.S. EPA.

In July 2012, the EPA concluded its third and final round of water sampling in Dimock. From the Agency’s release:

“Based on the outcome of that sampling, EPA has determined that there are not levels of contaminants present that would require additional action by the Agency.”

E&E News also covered EPA’s test results, in a story dated July 26, 2012:

“U.S. EPA yesterday ended the latest chapter in the turbulent drilling dispute in Dimock, Pa., finding that contaminant levels in its water show no health threat and no connection to hydraulic fracturing chemicals.”

Mischaracterizing incidents involving oil and natural gas production is a regular practice of the NRDC and Sierra Club. What follows is a list of examples\* and allegations that

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\* NRDC, “Incidents where hydraulic fracturing is a suspected cause of drinking water contamination,” Switchboard Blog, [2011](#); responses were adapted from the EID blog post, “Energy In Depth Responds to NRDC’s Running List of Conjectures & Distortions,” [2011](#).

organizations opposed to or critical of hydraulic fracturing have leveraged, but which similarly have been shown to be false:

**Arkansas:** *In 2008, Charlene Parish of Bee Branch reported contamination of drinking water during hydraulic fracturing of a nearby natural gas well owned by Southwestern Energy Company. Her water smelled bad, turned yellow, and filled with silt.*

**Arkansas:** *In 2009, a family in Bee Branch, who wishes to remain anonymous, reported changes in water pressure and drinking water that turned gray and cloudy and had noxious odors after hydraulic fracturing of a nearby natural gas well owned by Southwestern Energy Company.*

**Arkansas:** *In 2007, a family in Center Ridge reported changes in water pressure and water that turned red or orange and looked like it had clay in it after hydraulic fracturing of nearby wells owned by Southwestern Energy Company. They told their story on YouTube.*

**Arkansas:** *In 2008, a homeowner in Center Ridge reported changes in water pressure and water that turned brown, smelled bad, and had sediment in it after hydraulic fracturing of a nearby well owned by Southwestern Energy Company. He also told his story on YouTube.*

**REALITY:** “Tests on complainants’ water found no traces of the chemicals used in the drilling fluids, officials said. Dick Cassat, chief lab supervisor at the Arkansas Department of Environmental Quality, said that water he’s tested after residents complained about nearby gas drilling was simply higher in iron and manganese, two naturally occurring substances in Arkansas groundwater sources.” (Northwest Arkansas Newspapers, [7/09](#))

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**Arkansas:** *In 2007, the Graetz family in Pangburn reported contamination of drinking water during hydraulic fracturing of a nearby natural gas well owned by Southwestern Energy Company. The water turned muddy and contained particles that were “very light and kind of slick” and resembled pieces of leather.*

**REALITY:** “Representatives of the Arkansas Oil and Gas Commission and the Department of Environmental Quality told [Jeff Graetz] not to drink the water after they tested it, but they said Southwestern wasn’t responsible.” (Arkansas Democrat Gazette, [7/5/09](#))

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**Colorado:** *In 2001, two families in Silt reported a water well blow-out and contamination of their drinking water during hydraulic fracturing of four nearby natural gas wells owned by Ballard Petroleum, now Encana Corporation. Their drinking water turned gray, had strong smells, bubbled, and lost pressure. One family reported health symptoms they believe are linked to the groundwater contamination.*

**REALITY:** “The Amos/Walker water well has been sampled numerous times since [the Colorado Oil & Gas Conservation Commission] staff received the initial complaints in 2001. Benzene, toluene, ethylbenzene, and xylenes (BTEX), frac fluid constituents, or other oil and gas related contaminants have never been detected in any of the water samples collected from the Amos/Walker water well to date.” ([7/05](#))

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**Colorado:** *In 2007, the Bounds family in Huerfano County reported a pump house exploded and contamination of drinking water during hydraulic fracturing of nearby wells owned by Petroglyph Energy.*

**REALITY:** “Impossible to prove that fracing created pathways for methane to collect in Bounds’s domestic water system.” (Christina Science Monitor, [2/5/09](#))

“It’s not clear the drilling caused the methane leaks...Despite the methane mystery, [Petroglyph is] trucking water to 14 area homes and has supplied 15 homes with methane alarm systems.” (USA Today, [11/3/09](#))

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**Colorado:** *In June, 2010, the day hydraulic fracturing began on a nearby gas well in Las Animas County, landowner Tracy Dahl checked his cistern and found approximately 500 gallons of grayish brown murky water where water had previously run clear for years. The Dahls have extensive water testing documentation going back many years, verifying that their water has always been clean and clear. They were told by Colorado Oil and Gas Conservation Commission (“COGCC”) staff that the water could not be tested for chemicals in the hydraulic fracturing fluid because there is insufficient information about the chemicals used. Three monitor wells on the ranch are now producing methane at an escalating rate.*

**REALITY:** ““Our environmental staff has investigated hundreds of groundwater complaints over the years, to date we have found no verified instances of hydraulic fracturing harming groundwater,’ [Colorado Oil and



Gas Conservation Commission Director Dave Neslin] said.” (Trinidad Times, [7/16/10](#))

“Pioneer has funded hydrologic experts to conduct scientific investigations of domestic water wells in the vicinity of our natural gas wells,’ [Pioneer Natural Resource’s environmental advisor Gerald] Jacob said. ‘These investigations have discovered not impacts from hydraulic fracturing but problems from the ways in which domestic water wells have been drilled, constructed and produced. For example, we have found uncased, uncemented domestic water wells drilled into methane producing formations that provide a direct conduit for methane gas to reach the surface or to connect with shallow groundwater. We have found unsterilized bacteria breach the domestic water wells and produce biogenic methane gas, colonies of bacteria that clog these wells and prevent them from producing water.’” (Trinidad Times, [7/16/10](#))

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***New Mexico:*** A 2004 investigation by the U.S. Environmental Protection Agency found two residents who reported that the quality of their water was affected by hydraulic fracturing.

**REALITY:** Interestingly, the source of this “2004 investigation” is none other than the [2004 EPA report on hydraulic fracturing](#) – the one that found “no evidence” indicating a link between the use of hydraulic fracturing and the contamination of underground sources of drinking water.

As part of the agency’s due diligence in compiling that report, EPA stated in its concluding chapters that some residents with whom it had communicated postulated that hydraulic fracturing may have been the cause of problems with their wells. Although EPA included that testimony as part of its study, as per its charge, it concluded that “no confirmed cases” of water contamination related to hydraulic fracturing could be found.

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***New York:*** In 2007, the Lytle family in Seneca County reported contamination of drinking water the morning after hydraulic fracturing of a nearby natural gas well owned by Chesapeake Energy Corporation. The water turned gray and was full of sediment.

**REALITY:** “[Dept. of Environmental Conservation] Spokesman Yancey Roy said the DEC has a record of the Chesapeake well near Lytle’s house — but no record of a complaint, spill, or problem with Lytle’s well. ‘It is

likely that if any turbidity was experienced in a nearby water well, it occurred when the well was being drilled — not when it was hydraulically fractured. Also, turbidity essentially is stirred up sediment — and problems with turbidity do not involve toxicity,’ Roy said by e-mail.” (Press & Connects, [12/8/09](#))

Thus, the claim that water was contaminated after hydraulic fracturing is simply not true. The well operator also tested water at the Lytle residence on at least three separate occasions: prior to drilling, after drilling, and after the well had been hydraulically fractured. The operator found no contamination or degradation in water quality in those tests.

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***New York:*** *In 2009, the Eddy family in Allegany County reported contamination of drinking water during hydraulic fracturing of a nearby well owned by U.S. Energy Development Corporation. The water turned “foamy, chocolate-brown.”*

**REALITY:** “The commissioner of the state Department of Environmental Conservation has asserted that reports of accidents related to natural gas drilling in New York have been overblown and taken out of context.” (Ithaca Journal, [1/11/10](#))

“[In a letter](#) to Assemblyman William Parment, D-150th, a member of the Environmental Conservation committee, DEC Commissioner Pete Grannis said that of the 270 incidents highlighted by an Ithaca researcher, more than half have nothing to do with natural gas drilling — and they occurred while the DEC was overseeing 10,400 wells.” (Ithaca Journal, [1/11/10](#))

“Requirements in place since the 1980s have successfully rendered drilling associated methane migration so rare that there has not been a reported incident since 1996.” (DEC Comm. Pete Grannis letter to Assemblyman Parment, [12/30/09](#))

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***North Dakota:*** *The North Dakota non-profit organization Bakken Watch reports very serious health symptoms in humans, livestock, and pets after nearby hydraulic fracturing. Their website has photos of sick animals, pit leaks, and corroded tanks. North Dakota state legislators admit they are “understaffed and overwhelmed” and “struggling to provide adequate oversight amid an explosion of activity in North Dakota’s oil patch.”*

**REALITY:** “Lynn Helms of the North Dakota Department of Mineral Resources says that there has never been a case of fracturing causing

groundwater contamination. Helms says that in every instance that fracturing has been blamed for contamination has been found to have been caused by other sources like bacteria occurring in the water or poor well construction procedures.” (Plains Daily, [12/1/10](#))

“Much of our entire regulatory framework, from drilling to completion, production, and finally plugging and abandonment, is centered around measures to prevent any contamination of the water resource. ...Regulations alone don’t begin to provide the full measure of a regulatory program. The North Dakota Oil and Gas Division of the Department of Mineral Resources utilizes 8 performance measures to monitor our activity in the areas of drilling permitting, UIC permitting, wellbore construction, well bore mechanical integrity testing, spill containment and clean up, fluid measurement, oil and gas conservation, and customer satisfaction. At least five of these measures are directly related to protection of water resources. These performance measures are backed up by a staff of field inspectors who visit the wells every day from when the drilling rig moves in until the permanent wellhead is installed and at least quarterly after that.” (Lynn Helms, Director, North Dakota Dept. of Mineral Resources, congressional testimony, [6/4/09](#))

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**Ohio:** *“In 2007, there was an explosion of a water well and contamination of at least 22 other drinking water wells in Bainbridge Township after hydraulic fracturing of a nearby natural gas well owned by Ohio Valley Energy Systems. More than two years later, over forty families are still without clean drinking water and are waiting to be connected to a town water system.”*

**REALITY:** On December 15, 2007, an explosion occurred in the basement of a home in Bainbridge, Ohio. Neither the house nor its furnishings suffered any kind of fire or smoke damage. Subsequent to the event, the Ohio Division of Mineral Resources Management (DMRM) conducted an extensive, year-long investigation of the incident – at the end, publishing [a report summarizing its findings](#) and describing what it believed caused the incident. DMRM concluded the explosion was not caused by hydraulic fracturing. Moreover: “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.”

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**Pennsylvania:** *In September, 2010, a lawsuit was filed by 13 families who say they have been and continue to be exposed to contaminated drinking water linked to hydraulic fracturing. Eight different properties in*

*Susquehanna County are said to have contaminated drinking water. One child has neurological symptoms consistent with exposure to toxic substances. Southwestern Energy, the company operating the well near these families, responded that it promptly investigated all complaints and that both the company and the Pennsylvania Department of the Environment independently tested the water and found no link between gas operations and the water quality and no problems with the integrity of the gas well.*

**REALITY:** “A cover letter from a DEP water quality specialist on one of the tests indicates that although he found elevated manganese, the department could not determine that the gas exploration activity ‘contributed to the degradation of your water supply.’” (Times-Tribune, [9/15/10](#))

“‘The data that we had from our samples did not allow us to conclude that the well had been contaminated by gas well drilling,’ DEP spokeswoman Helen Humphries said.” (Times-Tribune, [9/15/10](#))

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**Pennsylvania:** *In 2009, the Zimmerman family of Washington County reported contamination of drinking water after hydraulic fracturing of nearby natural gas wells owned by Atlas Energy. Water testing on their farm found arsenic at 2,600 times acceptable levels, benzene at 44 times above limits, naphthalene at five times the federal standard, and mercury and selenium levels above official limits.*

**REALITY:** “A recent blog from an environmentalist points to four cases in Pennsylvania...The Washington County case involved the appearance of arsenic at 2,600 times the EPA levels for safe drinking water. Arsenic is not an additive in fracture stimulation....there is no physical link to deep hydraulic fracturing.” ([Terry Engelder](#), Professor of Geosciences, Pennsylvania State University)

“George Zimmerman filed suit against Atlas Energy Inc., alleging that Atlas’ hydraulic fracturing methods had caused property damage to Zimmerman’s land...Causation will continue to prove a significant obstacle to plaintiffs’ claims of property damage and groundwater impact, especially since available information concerning the composition of frac chemicals does not generally support allegations of material concentrations of carcinogenic or otherwise toxic compounds.” ([11/17/09](#))

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**Pennsylvania:** *In 2008, two families in Gibbs Hill [McKean County] reported contamination of drinking water after hydraulic fracturing of a nearby natural gas well owned by Seneca Resources Corporation. Their water had strong fumes, caused burning in lungs and sinuses after showering, and caused burning in the mouth immediately upon drinking. The state found that the company had not managed the pressure in the well properly and had spilled used hydraulic fracturing fluids that contaminated the drinking water supply.*

**REALITY:** “A recent blog from an environmentalist points to four cases in Pennsylvania but the McKean County case was a clear case of methane migrations from shallow pockets, not deep hydraulic fracturing....there is no physical link to deep hydraulic fracturing.” ([Terry Engelder](#), Professor of Geosciences, Pennsylvania State University)

A Pennsylvania Dept. of Environmental Protection (DEP) investigation into other gas-migration issues in McKean County also demonstrated no link whatsoever to hydraulic fracturing, but rather implicated abandoned wells drilled around the turn of the century...the turn of the twentieth century!

“On April 1, DEP issued a notice of violation to George for his failure to plug the abandoned wells. Rogers 9 was drilled in 1881 and the other two abandoned wells were drilled nearly 90 years ago.” (PA DEP press release, [4/8/11](#))

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**Pennsylvania:** *In 2009, families in Bradford Township reported contamination of drinking water after hydraulic fracturing of nearby natural gas wells owned by Schreiner Oil & Gas. The drinking water of at least seven families has been contaminated.*

**REALITY:** To be clear, hydraulic fracturing was not to blame in this instance; but rather, the failure was associated with well design and construction:

“The department suspects the stray gas occurrence is a result of 26 recently drilled wells, four of which had excessive pressure at the surface casing seat and others that had no cement returns.” (Bradford Era, [5/4/09](#))

While the operator was cited under Pennsylvania state law, hydraulic fracturing had nothing to do with these violations. If well design and construction guidelines in place at the time of the incident had been followed, the incident would not have occurred. Nonetheless,

Pennsylvania has taken this issue head on, recently enacting new standards for well design and construction.

“We strengthened the rules governing the design and construction of gas wells and this rule became effective in January 2011... The [standards](#) are much stronger than the pre-existing rules and are now state of the art. The new gas drilling rules are essential to public safety, and they must be rigorously followed and enforced.” (*Former Pennsylvania Secretary of Environmental Protection, John Hanger, Business Journal, [1/14/11](#)*)

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***Pennsylvania:*** “In 2009, the Smitsky family in Hickory reported contamination of their drinking water after hydraulic fracturing of nearby natural gas wells owned by Range Resources. Their water became cloudy and foul-smelling. Testing found acrylonitrile, a chemical that may be used in hydraulic fracturing. The EPA is now investigating this incident.”

**REALITY:** A review of the MSDS information on-file with the PA Department of Environmental Protection (DEP) reveals that no acrylonitrile was used in the process of fracturing this well. According to reports, Ms. Smitsky expressed her concerns with the well a full five years after the drilling procedure had been completed.

Questions also remain about the quality of the well’s water prior to the operations taking place. According to the [Center for Rural Pennsylvania](#), an agency of the PA General Assembly, “approximately 41 percent of the [private water] wells tested [in PA] failed to meet at least one of the health-based drinking water standards.”

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***Pennsylvania:*** A family in Bradford County reports that its water turned black and became flammable from methane contamination in 2009 after hydraulic fracturing of a nearby well operated by Chesapeake Energy. The water cleared for a while but turned black again in 2010. Relatives living down the road also report their water turning black in 2010.

**REALITY:** “Many wells were never tested before Marcellus Shale drilling began and may have had ‘pre-existing’ problems such as methane contamination, making it difficult to know if the methane in them is the result of methane gas migration from nearby fracking operations, [Bruce Swistock, Ph.D., professor with Penn State University's Water Resources Extension] said.” ([3/21/11](#))

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**Texas:** *Larry Bisidas is an expert in drilling wells and in groundwater. He is the owner of Bisidas Water Well Drilling in Wise County, and has been drilling water wells for 40 years. Two water wells on his property became contaminated in 2010. When his state regulator stated that there has been no groundwater contamination in Texas related to hydraulic fracturing, Mr. Bisidas replied: “All they’ve gotta do is come out to my place, and I’ll prove it to them.”*

**REALITY:** “Casing seals wellbores. It prevents contamination of a fresh-water aquifer from non-potable aquifers or chemicals used by the oil and gas industry. The Texas Railroad Commission (TRC) has casing requirements set in place before fracking can occur. Ramona Nye, spokesperson for the commission, said failure to properly cement or case gas wells has not been a serious problem in Texas. Nye said there are ‘no documented cases of groundwater pollution’ in the Barnett Shale due to fracking.” (Wise County Messenger, [10/4/10](#))

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**Texas:** *In Wise County, Catherine and Brett Bledsoe report that their drinking water became contaminated in 2010 soon after hydraulic fracturing began on two natural gas wells bordering their property. The water stung their eyes during showers, and their animals refused to drink the water. Without any assistance from regulators, the Bledsoes paid for their own water testing. The testing found benzene, a known carcinogen, at double the safe levels.*

**REALITY:** “Government and third-party regulators of the natural gas industry take chemical testing and safety seriously. After all, they live and work in the area too. Air testing continues to go on near every drilling location—all over the Barnett Shale area. The Texas Commission on Environmental Quality ([TCEQ](#)) and individual energy companies have each completed [studies](#) searching for benzene and all groups are committed to continued, regular testing. The Barnett Shale Energy Education Council plans to conduct its own study as well. Factual research and unbiased studies demonstrate that residents can be certain that unsafe levels of benzene are not being released into the North Texas environment.” ([Barnett Shale Energy Education Council](#))

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**Texas:** *In 2007, three families who share an aquifer in Grandview reported contamination of drinking water after hydraulic fracturing of a nearby well owned by Williams. They experienced strong odors in their*

*water, changes in water pressure, skin irritation, and dead livestock. Water testing found toluene and other contaminants.*

**REALITY:** Toluene is a chemical widely used as an industrial feedstock and as a solvent in common products such as paint thinners; as well as a gasoline additive and a component of dynamite. Private consultants hired to test the water well in question found toluene levels to be within federal government standards:

“Dr. Judy Reaves, a hydrogeologist with almost 20 years’ experience, said the level of toluene ‘doesn’t exceed the Environmental Protection Agency’s level of risk.’” (Fort Worth Weekly, [4/30/08](#))

“Richard S. Record, a geologist and Cirrus’ Dallas operations manager, also noted that toluene in the sample from Sayers’ well falls below the level that the EPA labels as unsafe.” (Fort Worth Weekly, [4/30/08](#))

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**Texas:** *The Scoma family in Johnson County is suing Chesapeake Energy, claiming the company contaminated their drinking water with benzene and petroleum by-products after hydraulic fracturing of natural gas wells near the Scoma home. The family reports that its drinking water sometimes runs an orange-yellow color, tastes bad and gives off a foul odor.*

**REALITY:** “Based on his role as special projects director for the Ground Water Protection Council, Mike Nickolaus says he doesn’t believe that fracking poses a serious threat to groundwater. ‘Groundwater contamination from other sources is a far greater risk to human health and the environment,’ said Nickolaus, a Granbury resident who has a geology degree and was director of the oil and gas division of the Indiana Department of Natural Resources from 2000 to 2005. Among those other sources, he cites storm water runoff, large septic systems that don’t operate properly and the improper disposal of industrial waste by injecting it into zones above or within underground sources of drinking water. ... Nickolaus said the risk of groundwater contamination from fracking is exceptionally remote in areas like the Barnett Shale and the Marcellus Shale, where more than a mile of dense rock typically separates shallow freshwater aquifers from petroleum deposits.” (Star-Telegram, [10/4/10](#))

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**Texas:** *Tarrant County Commissioner J.D. Johnson, who lives in the Barnett shale area, reported groundwater contamination immediately after*



*two gas wells on his property were hydraulically fractured. His water turned a dark gold color and had sand in it.*

**REALITY:** “The Texas Railroad Commission, which regulates the oil and gas industry, investigated but did not find any problems that appeared to be related to drilling and hydraulic fracturing of the gas wells, according to Michael O’Quinn, a commission district director. By the time the commission re-inspected it 40 days later, Johnson told the agency that he had his water tested and that it was drinkable, O’Quinn said. The specific cause of Johnson’s well problem has not been conclusively determined. ...the Barnett drilling boom also has provided ‘lots of pluses,’ [Johnson] said, including jobs, tax revenue and extra income for many thousands of mineral owners.” (Star-Telegram, [9/4/10](#))

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**Texas:** *Carol Grosser, in south Texas, noticed changes in her water after a neighbor told her a nearby well was being hydraulically fractured. Carol noticed changes in her water pressure and rust-colored residue in her stock tanks. The fish in her tanks died, and some of her goats had abnormal milk production and produced kids with unusual birth defects.*

**REALITY:** Many similar allegations have been made in Texas, often producing an outcome such as this: “Texas Railroad Commissioners found that Range Resources’ natural gas wells be allowed to continue to produce as the wells are not causing or contributing to contamination of any Parker County domestic water wells.” (Texas Railroad Commission, [3/22/11](#))

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**Texas:** *The Executive Director of the Upper Trinity River Groundwater Conservation District in north Texas stated that the District “gets ‘regular reports’ from property owners who said that ‘since a particular [gas] well had been fracked, they’ve had problems’ with their water wells, such as sand in them, saltier water or reduced water output...”*

**REALITY:** “Bob Patterson, executive director of the Upper Trinity River Groundwater Conservation District, which encompasses Parker, Wise, Hood and Montague counties, said hydraulic fracturing has never been confirmed as the cause for contamination of any of the 40,000-plus private water wells within the district.” (Star-Telegram, [10/4/10](#))

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**Texas:** *Susan Knoll in the Barnett shale reports that last year her drinking water became foamy right after hydraulic fracturing of a well adjacent to her property. Since that time, additional gas wells have been fractured near her home and her drinking water has continually gotten worse. It sometimes foams, becomes oily, and has strong odors that burn Susan's nose when she smells her water. Susan has a lot of videos and more information on her blog.*

**REALITY:** “[The Texas Railroad Commission and the Texas Commission on Environmental Quality] have visited [Knoll's] property but have found no violations. ... The agency found nothing wrong.” (Denton Record-Chronicle, [3/30/11](#))

A separate charge of water contamination in Denton County proved unfounded: “At Smith's well, though, testing by the Texas Railroad Commission, which regulates drilling, found no high levels of toxic materials. Contaminants detected in the water were not at a level that would violate state or federal water quality standards, officials said. ‘Therefore, we would not expect any adverse health effects after ingestion of water with these concentrations,’ Railroad Commission spokeswoman Stacie Fowler said.” (Star-Telegram, [7/01/10](#))

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**Texas:** *Grace Mitchell, a resident of Johnson County, Texas, is suing Encana and Chesapeake. According to her lawsuit, soon after drilling and hydraulic fracturing took place near her home in 2010, her water became contaminated, feeling slick to the touch and giving off an oily, gasoline-like odor. Testing results performed on her well water confirmed it was contaminated with various chemicals, including C-12-C28 hydrocarbons, similar to diesel fuel.*

**REALITY:** “Although the lawsuit states that Mitchell is a resident of Johnson County and that the property in question is in Johnson County, a map sent to the Times-Review along with a copy of the suit shows that the property is north of Farm-to-Market Road 1187 and west of Crowley in Tarrant County. ‘We have no record of her ever attempting to contact us with concerns about her water quality, so we have no information to assess her claims at this time,’ [Julie H. Wilson, Chesapeake's vice president for urban development] said. ‘The lawsuit states her property is in Johnson County, but the map attached to her pleading shows property in Tarrant County, so even the most basic facts contained in this suit are inconsistent.’” (Cleburne Times Review, [12/21/10](#))

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**Texas:** *The Harris family of Denton County, Texas, is suing Devon Energy. They say that their water became contaminated soon after Devon commenced drilling and hydraulic fracturing near their home in 2008, and that their water became polluted with a gray sediment. Testing results performed on the well water found contamination with high levels of metals: aluminum, arsenic, barium, beryllium, calcium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, nickel, potassium, sodium, strontium, titanium, vanadium, and zinc.*

**REALITY:** “The Texas Railroad Commission had the Harris’ water tested for chlorides and a variety of minerals associated with oil and natural gas production, but the test came back negative, according to railroad commission correspondence to Devon provided by Devon spokeswoman Alesha Leemaster. ‘While we cannot comment directly on pending litigation, it is important to note the Harris well was reported and the family’s concerns were investigated by the Texas Railroad Commission in 2009,’ Leemaster said in an e-mail. ‘That investigation found no evidence linking the Harris water well to natural gas drilling operations.’ The Texas Railroad Commission investigation found ‘no past or current oilfield related source’ of contamination in the Harris water...” (Journal Record, [12/17/10](#))

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**Virginia:** *Citizens reported drinking water contamination after hydraulic fracturing. Water was murky and had oily films, black sediments, methane, and diesel odors. Individuals experienced rashes from showering. The Buchanan Citizens Action Group reported over 100 documented complaints of adverse effects of hydraulic fracturing and the Dickenson County Citizens Committee reported ground water quality deteriorated throughout the county as a result of the large number of hydraulic fracturing events.*

**REALITY:** It’s tough to know where to begin here, simply due to the astounding dearth of facts, evidence and science to support the accusation. In 2000 and 2001, the Buchanan Citizens Action Group and the Dickenson County Citizens Committee provided public comment to EPA during their previous study of hydraulic fracturing. In 2002 the NRDC prepared and submitted a report to the U.S. Senate while incorporating the Virginia groups’ claims as supposed evidence of fracturing’s liabilities. But in 2004, upon submitting their [final report](#), EPA “determined that fracturing posed ‘little or no threat’” to groundwater. (E&E News, [2/24/11](#))

To summarize: this formless claim relies upon decade-old assertions fed into the very 2004 EPA report concluding that fracturing posed “little or no threat” to groundwater.

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**West Virginia:** *The Hagy family in Jackson County, West Virginia, is suing four oil and gas companies for contaminating their drinking water. They say their water had “a peculiar smell and taste” and the parents as well as their two children are suffering from neurological symptoms. A news article reports that the lawsuit makes the connection between the drinking water contamination and the hydraulic fracturing process.*

**REALITY:** “As far as issues with groundwater contamination and some other problems raised by others, [secretary of the West Virginia Department of Environmental Protection Randy] Huffman said horizontal drilling and hydraulic fracturing is ‘not new’ and has been done for some time. ‘We just haven’t seen the kind of problems that people are raising as issues,’ Huffman said. ‘This fracking is taking place at such depths, we don’t really have a concern or evidence of reason to be concerned over groundwater at a couple hundred feet being impacted by hydraulic fracturing taking place at eight or nine thousand feet.’” (Register-Herald, [2/24/11](#))

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**West Virginia:** *In Marshall County, Jeremiah Magers reported in October, 2010, that “As soon as they ‘fracked’ those gas wells, that’s when my water well started getting gas in it.” He also lost all the water in his well.*

**REALITY:** “‘We have been to [Magers’] residence. Comparisons were made between different water samples,’ [West Virginia Department of Environmental Protection’s Office of Oil and Gas Chief James] Martin said, noting he cannot yet pinpoint the cause of the methane release.” (The Intelligencer, [10/17/10](#))

“Our test results, from a third-party lab, indicated that the methane present [in] the water sample did not match the gas from our oil and gas operations.” - *Chesapeake Director of Corporate Development Stacey Brodak* (The Intelligencer, [10/17/10](#))

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**West Virginia:** *In Wetzel County, Marilyn Hunt reported to the EPA in 2010 that “frac drilling is contaminating the drinking water here.” Residents report health symptoms, such as rashes and mouth sores, as well as*

*illness in their lambs and goats, which they suspect is linked to drinking water contamination.*

**REALITY:** “People complain a lot about gas in their wells and stuff like that, but in West Virginia that is a fairly common thing,’ said Tim Carr, West Virginia University geology professor. Carr said that before a nearby gas well can be blamed, the contamination needs to be investigated. Thermogenic natural gas is often found in wells and septic systems.” (Register-Herald, [2/24/11](#))

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**Wyoming:** *Families in the small town of Pavillion have been reporting contamination of their drinking water for at least ten years. Hydraulic fracturing has been used in the many wells in the area owned by Encana Corporation. Drinking water has turned black, smelled bad, and tasted bad. Individuals report medical symptoms they believe are related to water contamination. The U.S. Environmental Protection Agency is investigating and has found contamination in 11 water wells, including toxic chemicals that may be from hydraulic fracturing fluids. Further tests are needed to determine the source of contamination.*

**REALITY:** “Lind said the [Powder River Basin Resource Council], unlike some nationally based environmental groups, does not allege that fracking fluids are the cause of groundwater contamination anywhere in Wyoming. ... [T]he Wyoming-based group is not trying to draw a link between fracking and incidents of groundwater contamination in the small town of a Pavilion, Wyoming ... ‘We don’t want to accuse them of something they cannot prove. We’re their neighbors,’ he said.” (Platts’ Gas Daily, 4/20/10)

Tests completed by the U.S. Geological Survey in the summer of 2012 [differed from EPA’s findings](#) in at least 50 separate measurements. The USGS also effectively disqualified one of EPA’s two monitoring wells due to poor flow rates. A letter from the U.S. Bureau of Land Management, written in spring 2012, also faulted EPA for potentially introducing “[bias](#)” into its own samples due to flawed testing and monitoring techniques. The BLM letter further observed of EPA’s findings:

*“These observations are anticipated and should not be prematurely used as a line of evidence that supports EPA’s suggestion that gas has migrated into the shallow subsurface due to hydraulic fracturing or improper well completion until more data is collected and analyzed...”*

This pattern of accusation without scientific evidence is intended to create anxiety and opposition to natural gas production, and to discredit the effective regulatory programs

that manage the environmental risks associated with such production. To be clear, no one suggests that the extraction of natural gas is a risk free process. In fact, it requires effective regulation, which currently exists in the states, which themselves have long managed natural gas exploration and production.

However, natural gas opponents want to suggest that even a single failure or incident constitutes such a crisis that the only solution is to overturn the entire regulatory structure and replace it with aggressive federal regulation. No regulatory system can meet the standard of zero failures. Regulatory systems are designed to assure that proper management of industrial activities is required, which in turns minimizes risk. This is true for any industry subject to regulation in the United States.

State oil and gas programs meet this test, and through efforts of organizations like the Interstate Oil and Gas Compact Commission (IOGCC), the Ground Water Protection Council (GWPC) and the State Review of Oil and Natural Gas Environmental Regulations (STRONGER), they have continued to respond to new conditions and alter their requirements to effectively manage environmental risks.

But, the NRDC and Sierra Club, among others, seek federal regulations to manage natural gas production, and therefore must demean the current regulatory programs. Consequently, they pursue tactics denigrating state programs and asserting that federal regulation is nonexistent, which – they claim – has resulted in scores of environmental incidents. They also allege that natural gas production is treated differently under federal law, and assert that these distinctions must be eliminated. This demonstrates a fundamentally flawed and dishonest assessment of the nature of federal environmental laws.

There are two key factors in federal environmental law that the NRDC and Sierra Club either willfully ignore or grossly mischaracterize. The first is the federal-state relationship. Most federal environmental regulatory laws inherently rely on a partnership with the states, wherein the states become the daily regulatory body. This partnership is also known as “delegation” or “primacy.” The federal Environmental Protection Agency (EPA) is neither structured nor funded to bear the burden of daily regulation in the states. Consequently, federal environmental laws presume a delegation to the state regulators to carry out their objectives.

The effectiveness of primacy is why former EPA administrator Lisa Jackson said in November 2011:

*"We have no data right now that lead us to believe one way or the other that there needs to be specific federal regulation of the fracking process."*

A few months later, in February 2012, Jackson also said:

*"Let me speak really plainly: There is no EPA setup that allows us to oversee each and every well that's drilled."*

Ironically, by demeaning state regulators, environmental groups are casting doubt on their own agenda of federalizing natural gas production regulation.

The second key element of federal environmental laws is that it is structured around a manufacturing factory model, and as such must be adjusted for industries that do not fit that model. Federal environmental laws use, as the typical regulated source, a factory with concentrated emissions and direct discharges, or a hazardous waste management operation with highly-concentrated, low-volume wastes. Because not all industries fit these models, federal environmental laws have provisions that reflect these differences. For example, industries like agriculture, mining, silviculture and – yes – oil and natural gas production have provisions that reflect their differences. The NRDC and Sierra Club attack these distinctions as “loopholes” and “exemptions,” which they quite clearly are not.

In reality, federal environmental laws do apply to natural gas production, and suggesting otherwise is both misleading and demonstrably false. What follows is a number of the items routinely mischaracterized by opponents of development regarding the nature of oil and gas regulation, and a response outlining why the proposed change is unnecessary or out of sync with well-established regulatory precedent.<sup>†</sup>

***Proposal:*** *Require oil and gas exploration and production companies to report to the Toxic Release Inventory to provide information to the public regarding chemicals that may pose a risk to the health of local communities.*

**Response:** The Toxic Release Inventory (TRI) was created by Congress to obtain information on chemical releases from the manufacturing sector, where concentrated operations at facilities pose a potential risk if releases occur. Oil and natural gas E&P operations are scattered throughout the country in mostly rural areas, and individually do not pose significant risks. While EPA has the authority expand the scope of the TRI reporting requirements and considered the issue in the mid-1990s, it has not added oil and natural gas E&P operations because there is no compelling reason to create a new reporting burden that provides no real additional information.

***Proposal:*** *Subject all hydraulic fracturing by the oil and gas industry to the Underground Injection Control program of the Safe Drinking Water Act;*

**Response:** The Safe Drinking Water Act (SDWA) Underground Injection Control (UIC) program is intended to manage the disposition of wastes into geologic repositories. Hydraulic fracturing is a well stimulation technology that has been used for more than 60 years and over one million times. It has been regulated for decades by states and never posed an environmental risk. It is essential to the

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<sup>†</sup> This particular list comes from the NRDC, but is indicative of broader allegations regarding so-called “exemptions” for oil and gas.

development of American natural gas and oil. There are no environmental benefits to additional federal regulation.

**Proposal:** *Increase daily fines for violations by the oil and gas industry to equal those for other industries; Require that the underground injection of materials associated with the oil and gas industry that meet RCRA's definition of hazardous waste meet the standards of Class I injection.*

**Response:** The SDWA regulates the disposal or use of produced water as Class II Underground Injection Control (UIC) wells. These two items appear to be related to the elements of the Class II UIC program that relate to produced water as a secondary or tertiary recovery technology to enhance production of American oil and natural gas. In 1980, Congress amended the SDWA to provide greater flexibility to states that had operational programs to manage the use of produced water for this purpose. The structure of the SDWA and its subsequent regulations for Class II wells proved so burdensome that states were unwilling to seek primacy under the SDWA to run the federal program. The law was changed to allow states to show that their programs provided comparable levels of protection rather than meet the specific federal program requirements. Without these changes, enhanced oil recovery would have been crippled – serving also as a cautionary tale against the proposal from opponents to use SDWA to control hydraulic fracturing.

**Proposal:** *Require stormwater permits for all oil and gas industry activities.*

**Response:** Stormwater permits are required for both construction and operations related to oil and gas industry activities when the stormwater is contaminated. The change in the Clean Water Act (CWA) in the Energy Policy Act of 2005 did not exclude the industry from regulation; it assures that regulation would be based on the same standard for both construction and operations.

**Proposal:** *Apply the Clean Water Act definition of "pollutant" to all materials used in oil and gas operations.*

**Response:** This item must refer to the definition of "pollutant" in the CWA which excludes "produced water" (water that is produced with oil and natural gas) that is injected under State programs for secondary and tertiary recovery of oil and natural gas. The definition was written in 1972. In 1974, Congress passed the Safe Drinking Water Act that provided federal authority on Underground Injection Control (UIC) and these operations are covered under Class II wells – largely run by states. Thus, it would be redundant (and illogical) to include these operations in the CWA. Additionally, produced water discharges to the surface are already regulated under the CWA.



**Proposal:** *Require aggregation of the emissions of oil and gas exploration and production activities under the National Emission Standards for Hazardous Air Pollutants.*

**Response:** When Congress passed the 1990 Clean Air Act Amendments, it specifically prohibited aggregation of oil and gas E&P sites under the Hazardous Air Pollutants title because these sites operate as separate facilities and are frequently under different ownership. EPA has taken action to regulate the principle source of concern at E&P sites – i.e. glycol dehydrators emitting benzene – but there is no compelling basis to broaden regulation.

**Proposal:** *Add hydrogen sulfide to the list of hazardous air pollutants.*

**Response:** Hydrogen sulfide is an acutely toxic gas; however, it has not been considered a toxic air pollutant in low concentrations. Congress removed hydrogen sulfide from the Clean Air Act toxic substance list in 1991. EPA studied hydrogen sulfide in the context of oil and gas operations and concluded in 1993 that it should be regulated with regard to accidental releases but not low level emissions. Hydrogen sulfide can be produced with oil and natural gas, and states have regulated it to protect against its acute effects.

**Proposal:** *Include all toxic wastes associated with oil and gas exploration and production under RCRA's cradle to grave hazardous waste provisions.*

**Response:** This issue relates to EPA's implementation of the 1976 Resource Conservation and Recovery Act (RCRA) law. In 1978, EPA produced a series of new requirements designed to address the management of concentrated hazardous wastes in landfills and other management options. However, these regulations did not adapt well to a series of high volume, low toxicity wastes. In 1980, Congress suspended regulation of these various wastes – oil and gas drilling fluids and produced water, utility coal ash, mining wastes, cement kiln dust, etc. – and required EPA to study them and their existing regulatory structure. In 1987, EPA determined that RCRA (Subtitle C) hazardous waste regulations were inappropriate for oil and gas drilling fluids and produced waters; that they were adequately regulated by the state management programs; and, that regulation under Subtitle C would significantly impair the development of American oil and natural gas. Since then, EPA has participated in recurring reviews of the state programs (currently conducted by STRONGER) to improve them when necessary. Simply put, RCRA Subtitle C is not an appropriate regulatory structure for these wastes – according to the EPA itself.

**Proposal:** *Include oil and gas under the Superfund law – CERCLA.*

**Response:** When Congress passed CERCLA in 1980 and amended it in 1986, it considered the appropriate scope of the new and extensive liability provisions of these acts. Among its decisions was that federally permitted releases should not

be subject to Superfund, and that wastes that Congress had specifically excluded from regulation should not be included. Moreover, Congress specifically passed oil spill legislation in 1990. More broadly, with all the real challenges facing Superfund, there is no indication that the hundreds of thousands of oil and natural gas wells sites in the country pose anything close to a risk that necessitates coverage under Superfund.

Natural gas production is tightly regulated by state agencies that are most familiar with the specific circumstances and environmental management challenges in their particular regions. The geology and public concerns in Texas differ from those in Pennsylvania, and the types of risks to be managed in Louisiana and Wyoming vary considerably. There are no compelling reasons to suggest that the current regulatory structure is inadequate and, clearly, no compelling basis to suggest that greater federalization of natural gas production regulation is justified.

To highlight this point, during the ENR round table, Sen. John Barrasso (R-Wyo.) inquired with the Bureau of Land Management's Tim Spisak about BLM's proposed federal rule for hydraulic fracturing on federal and Indian lands. Senator Barrasso asked Mr. Spisak if the Bureau "can assure us that BLM's hydraulic fracturing rule will not push oil and gas production off Federal public lands and off of Indian lands." Mr. Spisak responded that additional changes could be coming, but not before admitting, "I'm not sure I can make that particular assurance."

That quote is particularly relevant in examining proposals to impose new federal requirements on oil and gas development. Such proposals must be seen in the context of the goals of the groups who are pushing for them. In her prepared testimony submitted to the Senate ENR committee, Amy Mall of the NRDC opined that "the goal of energy policy should be to move the U.S. away from fossil fuels," and the Sierra Club's Deb Nardone said "no amount of regulation will make fracking safe, nor acceptable." These official position statements should raise concerns, especially when those individuals are recommending new specific rules and requirements for a process that they openly admit they would like to see banned. That BLM itself could provide no assurance that its proposed federal rule on hydraulic fracturing would not push oil and gas development off federal and Indian lands is a cautionary note about the real-world implications of such proposals.

### **FracFocus and Chemical Reporting**

Over the past several years the issue of the chemical composition of hydraulic fracturing fluids has drawn excessive attention from environmental groups like the NRDC and Sierra Club. While there has been no history to suggest that fracturing fluids have migrated from depth into underground sources of drinking water, these groups have used the fact that chemical additives are necessary to fracture shale gas formations as a tool to frighten communities. As a result, state regulators initiated efforts to develop chemical composition reports that provide public access to lists of the chemical

additives used at individual wells. The reporting system, launched in April 2011, is named FracFocus.

FracFocus demonstrates the ability of state regulators to initiate and implement actions in direct response to public needs. Begun as a voluntary disclosure process by the IOGCC and GWPC, FracFocus is now required by more than a dozen states as part of their regulatory systems, and the Bureau of Land Management (BLM) is proposing it for use in new federal regulations. FracFocus is now implementing its second phase, FracFocus 2.0, to make access to information even easier.

In response, the NRDC and Sierra Club have found fault with FracFocus and demanded – as usual – a federal program. While they have found fault with virtually every element of FracFocus, several specific accusations have drawn the greatest attention. These are:

1. FracFocus is privately run and funded by industry.
2. FracFocus data cannot be verified.
3. FracFocus data cannot be aggregated.
4. FracFocus data presents information after the well is drilled.

To be clear: None of these points is meaningful. None of them diminishes the success of FracFocus. None of them justifies a new, costly federal reporting system.

The argument that FracFocus is privately run hinges on the subtle distinction that the GWPC is a 501(c)(6) organization. It fails to recognize that the organization is comprised of state agencies and the Board is made up of state environmental or oil and gas regulatory agencies. It fails to recognize that the IOGCC is also an organization comprised of states. Consequently, the private organization argument is a hollow one.

As far as FracFocus funding is concerned, management of the data base is done by GWPC staff and is not affected by the funding source. In a broader context, industry funding allowed FracFocus to be up and running in a timely manner. This also comes at a time when deliberations over federal funding raise questions about whether such a new program would have been initiated if it needed federal money.

The issue of data verification pivots on the NRDC's and Sierra Club's premise that industry would purposely submit false data. While reporting errors have occurred as a result of the rapid development of FracFocus, there is no basis to suggest that intentionally false reporting has happened.

There is also no value for such action on industry's part. If purposely false information were submitted, states would have a basis to question future drilling permits based on the integrity of the company. Moreover, for states that require the use of FracFocus for chemical reporting, these regulations would place false reporting under general state regulatory authority and subject such actions to enforcement. Additionally, system upgrades and growing interest from regulatory agencies at the state and federal level

suggest future reporting will be even more carefully done as it becomes a more integrated part of the U.S. regulatory system.

Questions over the nature of FracFocus data have occurred since its inception. Many of the questions arise as opponents attempt to set a purpose for FracFocus different from the one that led to its creation. FracFocus was created to provide chemical information to people located near drilling operations, people who might have concerns about the nearby wells and would like specific information about those operations. It was *not intended* as an enforcement tool for state regulators, who already have ample authority to acquire whatever information is needed to manage the risks of natural gas production, including proprietary information if it is necessary. At issue was what information is needed for the local community.

Similarly, FracFocus has not been designed to provide for the aggregation of data on all wells simultaneously because there is no meaningful value to such information. Chemicals used in a natural gas well are consumed in the operation, remain in the well or are managed locally as a part of the produced water flowback. As such, the FracFocus system was designed to allow for a well-by-well search, and to provide information on a well-by-well basis.

The NRDC and Sierra Club, however, want the ability to aggregate information on the site (which they neither created nor supported, pushing instead for EPA regulation of hydraulic fracturing under the Safe Drinking Water Act). Given these and other groups' stated interest in shifting our economy away from oil and natural gas, it is difficult to see any purpose for such aggregation other than to create new tools to inflate the risk of development.

As for the timing of disclosure, the issue of supplying chemical information prior to fracturing reflects the lack of understanding of the fracturing process. The chemical mixture of fracturing fluid – while similar within a formation – will always be created when the fracturing occurs and may change while the fracturing process is underway because of specific drilling conditions at the well. Therefore, requiring chemical information before the fracturing operation occurs is neither a realistic nor feasible policy objective. The only conceivable option to meet this requirement would be to provide a list of additives that contains a large number of items that will not be used – rendering such a list (and by extension the rule requiring it) entirely useless.

FracFocus has been a successful effort – one that continues to evolve to provide information to local communities, and which the Obama administration has openly praised as providing “transparency to the American people.” Its evolution reflects changing needs by states and communities. There is no question that the ability of state regulators to use their expertise and ability to move rapidly allowed this process to unfold, which in turn underscores the inherent efficacy of state-based regulation.

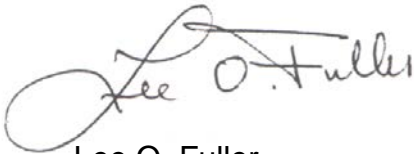
## Conclusion

Watching the Committee's round table discussion one can readily conclude that state regulators, natural gas producers and the natural gas production service industry believe the current regulatory system managing hydraulic fracturing and other production activities provides for the effective management of environmental risk. Some environmental activists believe that, working within this system, actions can be taken to assure continuing improvement as information and technologies advance. In fact, the industry has willfully engaged in that dynamic process of improvement, and continues to do so.

But there are outliers – groups that wish to end natural gas development in the United States, and yet ironically continue to offer recommendations for regulatory reform. These cannot be taken as serious recommendations, both for their lack of basis in actual operations (as these comments have demonstrated) and the fundamental problem of asking individuals who want to ban a process how best it can be regulated. In colloquial terms, this is tantamount to asking the fox how to construct the hen house.

Taken together, the ENR round table produced no credible indictment of the current system that justifies a broader, more pervasive federal role. Instead, it demonstrated that current regulatory structures (i.e. state-led) and the involvement of industry in that regulatory process are meeting America's natural gas production environmental management challenges effectively.

Sincerely,

A handwritten signature in black ink that reads "Lee O. Fuller". The signature is written in a cursive style with a large, looping initial "L".

Lee O. Fuller  
Vice President of Government Relations  
Independent Petroleum Association of America

Cc: Members, Senate Committee on Energy and Natural Resources