



**Testimony Presented to the House Republican Policy Committee**  
**by the Marcellus Shale Coalition**  
**Kathryn Z. Klaber**  
**Thursday, May 20, 2010**

Chairman Saylor and members of the committee, thank you for the opportunity to appear here today. My name is Kathryn Klaber. I was hired just four months ago as the first President of the Marcellus Shale Coalition (MSC). The MSC was formed in 2008 and has since grown to include 92 members, representing the majority of companies now operating in the Marcellus. We are a young organization, we are vibrant and growing – a reflection of the growing recognition of the benefits that the Marcellus brings to Pennsylvania’s businesses and residents.

The Marcellus Shale Coalition was founded to advance the responsible development of natural gas from the Marcellus Shale geological formation in Pennsylvania and the enhancement of the Commonwealth's economy that can be realized by this clean-burning energy source. The members of the coalition work with our partners across the Marcellus play to address issues with regulators, government officials and the people of the Commonwealth about all aspects of producing natural gas from the Marcellus Shale formation. All of us are dedicated to developing natural gas resources safely and efficiently.

Given the economic and environmental issues to be addressed at today’s hearing, I wanted to provide you with some details of my related background. My undergraduate degree is from Bucknell University in Central Pennsylvania. While at Bucknell, I created a major that was not yet common on campuses – Environmental Science. Through my coursework at Bucknell and two summers of research funded through the Katherine Mabis McKenna Foundation on water quality in the Chesapeake Bay, I gained an early appreciation of the critical importance of water quality to our Commonwealth. Spending



the next 10 years in environmental consulting in Pennsylvania and around the nation, I obtained hands-on experience in permitting, designing and installing environmental treatment technologies for a wide range of industries. Combined with a Masters in Business Administration from Carnegie Mellon University and seven years in public policy and economic development at the Allegheny Conference on Community Development, these experiences form the foundation of my passion for working in this place, and this time, in the development of the Marcellus Shale for the benefit of all Pennsylvanians.

The natural gas industry is bringing huge investment capital and the associated job creation to Pennsylvania. The Marcellus presents a very special opportunity for all of us in the Commonwealth, and we must take care to foster this development with modernized statutes and a competitive regulatory framework. We also must continue to keep public safety and environmental protection as the cornerstone of how we conduct business in the Commonwealth. With the industry's contribution of more than 100,000 jobs and \$1 billion in revenues<sup>1</sup> for state and local governments this year alone, there is a lot riding on our collective deliberations and actions.

Many of you have heard the results of the analysis that the Pennsylvania State University conducted for the industry last year. It projected more than \$8 billion in economic value and more than 100,000 jobs created by Marcellus development in 2010 alone – a year in which about 1,300 wells were projected to be drilled. That study has been updated and the numbers are even higher going forward. Whereas this macro-economic assessment is important for many uses, it may not capture the hearts and minds of Pennsylvanians. It will take the direct experience of thousands of landowners who are collecting revenues from wells on reclaimed well sites. It will take stories of family members and neighbors in good-paying jobs in the industry and its supplier companies. Yesterday, at a United

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<sup>1</sup> Represents tax revenues to state and local governments without a severance tax. The MSC believes that it is still too early in the development of the play to institute a severance tax and a tax model such as the one proposed in the Governor's last two budget addresses would result in less drilling in Pennsylvania and therefore less economic impact in the Commonwealth from the industry.



States Steel facility in the Monongahela River Valley south of Pittsburgh, business owners from trucking, to steel, to coating, told their stories – how their companies are growing jobs and making investments in Pennsylvania because of new business from Marcellus shale development.

There are many other issues we could discuss today, but I would like to highlight two that related directly to safety and environmental protection:

1. Well construction and
2. Hydraulic fracturing and water management

### **Well Construction**

First, I will address the development of a well and the associated casing and cementing of well bores. Industry knows from drilling thousands of gas wells that proper drilling, casing and cementing of those wells is essential to secure the maximum yield and protect the water tables. That is why we are working so closely with DEP as the lead regulatory agency to determine and impose best practices as it relates to this activity.

As you probably know, this issue has recently been addressed in significant detail by the Oil and Gas Technical Advisory Board (TAB) of the Department of Environmental Protection. That group of regulators, industry representatives, academia and representatives of the public interest spent many hours and multiple sessions developing a sound approach to updating to 25 PA Code, Chapter 78, covering the construction of oil and gas wells. The proposed rulemaking was published in the Pennsylvania Bulletin on January 30, 2010 and proposes numerous modifications regarding the drilling, casing, cementing, testing, monitoring and plugging of oil and gas wells to enhance the protection of drinking water supplies. The Environmental Quality Board will be considering the proposed rule on Monday, May 17. More than 35 MSC member companies and 85 individuals met with the DEP in Harrisburg on May 13 to discuss next steps in



implementing these standards and making Pennsylvania ‘World Class’ with respect to how we construct and regulate natural gas wells.

This is a current and prime example of how the natural gas industry is developing the Marcellus Shale in Pennsylvania while working with regulators to establish the most protective and workable rules. Let me provide several examples of how the process worked and the outcomes of that are reflected in this draft rulemaking:

- the parties needed to establish an enforceable way to make sure that the initial well casing was properly positioned - the industry committed to using a technology called a centralizer to ensure that the casing cement is evenly distributed around the well casing;
- the parties identified new reporting and recordkeeping, with the industry supplying more data to the agency and inspectors;
- the industry will develop casing and cementing plans for each well and these will be available for review and inspection on site by DEP inspectors;
- new inspection requirements would be established to require operators to perform mechanical integrity tests at least quarterly, with the results recorded and retained, and available for review by the department,
- operators will include information on their hydraulic fracturing chemicals to DEP in each well completion report – yet another example of the fact that these chemicals are not a secret, but have been, and will continue to be available to regulators and the public.

As you know from an announcement made earlier this year by the Governor, DEP will be hiring even more staff to help implement these rules. The Marcellus Shale Coalition issued a statement following that announcement, including:

“The Marcellus Shale Coalition has consistently supported the hiring of additional DEP staff to monitor natural gas wells in the commonwealth, as



reflected in its proactive endorsement of permit fee increases in 2009 to add and train new inspectors. Our support continues with today's announcement of an additional 68 DEP staff dedicated to the oil and gas program. This sustainable approach is working and will help to ensure the continued responsible development of the Marcellus Shale in Pennsylvania."

### **Hydraulic fracturing and water management**

The second topic relates to the fluids used for hydraulic fracturing. This is another area where Pennsylvanians deserve to get the facts about water management for Marcellus Shale development. The actions of industry, the regulatory agencies and the legislature must be based upon the facts. Furthermore, we must all work together to make certain we are responsive to the concerns of the public.

The fact is that Pennsylvania's regulations governing the use and management of water needed to drill a Marcellus Shale well are among the most stringent in the nation, and ensure the protection of the Commonwealth's water resources. Water withdrawals from streams and rivers must be approved, including the withdrawal location and amount of water required for each well, as well as detailed storage and treatment plans.

The industry currently treats or recycles all of its flowback water. Recycling accounts for approximately 60 percent of the water used to complete Marcellus Shale wells, with greater percentages predicted for the future. Some companies already achieve recycling rates of 90 percent or better. Recycling greatly reduces the amount of water that is treated and returned to the waterways of Pennsylvania and also reduces the amount of fresh water that is withdrawn. There are more than a dozen approved water treatment facilities available to treat flowback water, with plans for additional capacity underway.



Companies are working with international water quality experts and are funding research and development projects to develop mobile and permanent treatment technologies such as evaporation and crystallization. These efforts will enhance the Commonwealth's overall water treatment capabilities – beyond just the natural gas industry – while bringing more commerce into Pennsylvania. We're also researching the viability of using deep underground injection well technology, which is a proven, safe disposal method in other regions of the country and which has been endorsed by Secretary Hanger as an important wastewater disposal in Pennsylvania.

The industry is committed to the use of Best Practices in all aspects of its operations, including significant investment in advanced flowback water treatment capabilities and recycling technologies, and will continue to innovate in this important area for natural gas production and environmental protection.

With respect to the disclosure of the components of the fracturing fluid, and notwithstanding the misleading statements to the contrary by those who would appear want to see this Marcellus opportunity for Pennsylvania fail, this information is available in multiple places. Just like in other regulated industries, the natural gas industry complies with the federal Occupational Safety and Health Administration rules that require up-to-date Material Safety Data Sheets to be on site, disclosing the components of the products in use.

Furthermore, I urge the Committee and the entire General Assembly to spend some time reviewing another website – [www.energyindepth.org](http://www.energyindepth.org) – which confronts a host of misleading arguments that anti-Marcellus Shale groups and individuals have made with respect to the hydraulic fracturing process, with a particular emphasis on the following notion (that far too many continue to ignore): “no groundwater pollution or disruption of underground sources of drinking water has been attributed to hydraulic fracturing of deep gas formation.” Importantly, this statement comes from our own Pennsylvania Department of Environmental Protection, and has been echoed by state and federal environmental agencies on many occasions.



Energy in Depth also addresses the federally-proposed “FRAC Act”, which in short is a solution looking for a problem, but a “solution” that would effectively eviscerate DEP’s current permitting role, as well as, add tremendous costs and significant delays to the permitting process. If enacted, the FRAC Act will directly hurt landowners in Clearfield County, as well as, other Marcellus producing counties throughout the Commonwealth, and I urge you all to reach out to the Pennsylvania delegation and convey your opposition to this short-sighted legislation.

Before closing, I would like to briefly mention Dunkard Creek – given the tragic consequences of water contamination in this water body, it is understandable that sadness was followed by outrage. But the headlines and content that ran in the media used baseless suppositions to try and blame Marcellus drilling for the tragedy. Even after the December headline *EPA pins killing of Dunkard Creek on mine discharges*, the innuendos had created a connection in the public’s mind that somehow the Marcellus drilling was at fault. This is simply not the case and has been deemed so by both the West Virginia and Pennsylvania agencies. So whereas we agree emphatically that the regulation and proper management of Marcellus Shale water is a critical part of developing this clean-burning energy resource, we need to focus on the science involved and create our policy accordingly.

### **Conclusion**

I appreciate the opportunity to appear here today to discuss issues relating to the development of the Marcellus Shale. The MSC looks forward to continue to work with this committee on all of the issues that will be key to responsible and prosperous development of the Marcellus into the future.

This concludes my prepared comments. I am available to answer questions in the time remaining and happy to follow up after this hearing.



# MARCELLUS SHALE COALITION

# The Marcellus Multiplier Powering Pennsylvania's Supply Chain



## SITE CONSTRUCTION & PREPARATION

- **DESCRIPTION:** Prepare site for the drilling process
- **BUSINESSES INVOLVED:** Excavation equipment manufacturers, contractors and dealers; pump manufacturers and dealers; painters and haulers; mulch and fertilizer suppliers; safety equipment manufacturers and suppliers; electrical equipment suppliers and contractors; surveying and engineering companies; aerial mapping services
- **FACT:** 5,000 tons of aggregate per location, using full-time operation of dozer, excavator and roller
- **LOCAL COMPANIES:** Cleveland Brothers, Mine Safety Appliances, Eaton Corp., Filtrxxx, Sunnyside Supply, John Gleim



## PRODUCTION & SITE COMPLETION

- **DESCRIPTION:** Restoration of the site and maintenance of the producing well
- **BUSINESSES INVOLVED:** Solar panel manufacturers; metering device manufacturers; landscaping companies; top soil suppliers; road aggregate suppliers; fencing suppliers
- **FACT:** One Marcellus Shale well can produce enough clean-burning natural gas for 24,000 homes a year
- **LOCAL COMPANIES:** PPG, Eaton, Exterran, FLABEG, Caterpillar, Ariel Corporation



## WELL PRODUCTION

- **DESCRIPTION:** Casing and drilling of the well
- **BUSINESSES INVOLVED:** Crane manufacturers and dealers; drill bit manufacturers; steel and associated manufacturers; cement producers; chemical manufacturers; safety equipment manufacturers and suppliers
- **FACT:** 125 tons of locally produced cement per well
- **LOCAL COMPANIES:** Kennametal, United States Steel, Cleveland Brothers, Mine Safety Appliances, WireCo, JLG Industries, Inc., Vallourec SA, Nalco Chemical Co.



## PIPING

- **DESCRIPTION:** Construction of flow lines at the site before natural gas enters gathering lines
- **BUSINESSES INVOLVED:** Steel pipe manufacturers; compressor engine manufacturers
- **FACT:** A single MSC company has invested \$75 million in PA for midstream Marcellus development (25% to local companies, 11% to landowners, 8% to national suppliers with outlets in PA, and the remainder to contractors with personnel working in the Commonwealth)
- **LOCAL COMPANIES:** United States Steel, Vallourec SA, Kennametal, Durabond, Otis Eastern, Precision Pipeline



## TRANSPORTATION & LOGISTICS

- **DESCRIPTION:** Moving materials to and from the well site
- **BUSINESSES INVOLVED:** Rail, barge and trucking; asphalt producers; road grading and paving companies; sand and water suppliers
- **FACT:** 180 rail cars of sand used for a single well
- **LOCAL COMPANIES:** Norfolk Southern, CSX Transportation, Reading & Northern Railroad Co., GE Corning Railroad, Lycoming Valley Railroad Co., Lehigh Valley Railway, McJunkin-Redman Corp., Pipeco, Sooner



## WATER MANAGEMENT

- **DESCRIPTION:** Water and materials management
- **BUSINESSES INVOLVED:** Steel coil manufacturers; welding equipment manufacturers; pump manufacturers; crane manufacturers and assemblers; chemical manufacturers and suppliers; welding companies; sand suppliers; tank constructors
- **FACT:** \$50,000 per well paid for water to local governments to reinvest
- **LOCAL COMPANIES:** United States Steel, Air Products and Chemicals, Inc., Siemens, Highland Tank, GE, Nalco

### FAST FACTS

- \$4 million is invested in producing each Marcellus Shale well
- At 2,500 produced annually, Pennsylvania can expect to see \$12 billion invested in well site operations alone
- Each mile of Marcellus pipeline represents a nearly \$1 million investment into PA's economy