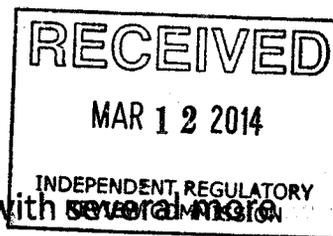


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My thanks to the EQB for providing the public with several more opportunities to comment on the proposed regulations.

I've now attended three of these sessions, and I think that several general conclusions can be drawn from the comments thus far. The first conclusion would be that many folks believe that there is a substantial risk of ground water pollution due to the use of pits for drill cuttings or completion fluid storage. The second conclusion can be drawn from the number of comments insisting that the conventional and unconventional wells are two altogether different animals, and cannot and should not be lumped together as one entity.

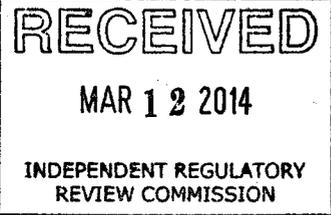
In regard to the first issue I would like to explain a little about how those of us in the shallow well, conventional industry utilize pits. First of all, in the early days of shallow oil well drilling with cable tools, the drill cuttings were mixed into a slurry by the drilling tools themselves, and then removed from the well bore with a tool known as a bailer; a laborous and time-consuming process. Over the course of the several weeks that it would normally take to drill the well to bottom, the drill cutting slurry would be discharged to the ground, normally on the downhill side of the well. Today, if you take a shovel and dig around the downhill side of one of these old wells, you may find evidence of these cuttings, otherwise known in the industry as sand pumpings. They will usually be found under years of ground and leaf cover, with tree and shrub roots growing all through them. My reason for mentioning this is so that you might understand that the drill cuttings removed from our shallow conventional wells are a pretty benign substance, mostly consisting of shale and sandstone. Dry, uncontaminated drill cuttings are harmless enough that many operators apply for a waiver that allows them to discharge them by a

method called dusting, and then land farming them into the surrounding surface. Prior to the fracturing phase of the well development, a small pit is excavated, which would probably average about 10' wide by 25' long by 8' deep. It is then lined with a 20 mil plastic liner. For those who may not understand that terminology, suffice it to say that a 20 mil liner is a pretty tough piece of plastic. Typically a frac job on a shallow well takes from five to ten hours to complete and during this time, frac return water will be discharged into this pit, and recycled by means of a water pump back into steel tanks on the wellsite. Once the frac operation is completed, the liquid fraction in the pit is vacuumed off. The remaining solids mostly consist of frac sand. The liner is then folded in on itself, encapsulating those frac sand returns. The pit is then reclaimed using the dirt that was excavated from it.

The point of this explanation is to emphasize the difference between large scale pits constructed for shale gas wells versus small scale pits used by the shallow well folks. This, of course, ties into the point that has been made by so many at these hearings. Small pits vs. large pits. Small locations vs. large locations. Small number of trucks vs. large numbers of trucks. Small amounts of drill cuttings vs. large amounts of drill cuttings. Small amounts of waste fluids vs. large amounts of waste fluids. Wells costing thousands vs. wells costing millions.

We're comparing apples to oranges here, and one size does not fit all. Common sense must prevail.

Raymond J. Stiglitz



**Environmental Quality Board Meeting
Warren, Pennsylvania
February 12, 2014**

My name is Mike Miller. I reside at 204 Teal Court, Kingsport, Tennessee (37663). I am a petroleum engineer and a licensed professional engineer and am currently a senior vice president with Cardno, Ltd., an international consulting and services firm with Pennsylvania offices in Pittsburgh, Philadelphia, Scranton, Harrisburg and York. I learned of this meeting last week after arriving in the area to visit with family and am speaking today as a concerned individual, not as a representative of my company.

As a youth, I worked in conventional oil drilling and production operations in McKean County, Pennsylvania and in Cattaraugus County, New York. After college, I taught high school math and science in Bradford, McKean County, before returning to school to obtain a graduate degree in petroleum engineering. Since then, I have been employed for 33 years in the petroleum industry with Getty Oil Company, Texaco, Equitable Resources (now EQT), and DTE Energy, prior to my current employment. With EQT, based in Pittsburgh, I served as an engineering manager and then as vice president - production.

Over the past 10 years as a consultant, I have provided services to oil and gas companies, landowners, accounting and legal firms, and financial institutions. I am extremely knowledgeable about all aspects of the petroleum industry, including its risks. Environmental services comprise a significant percentage of my employer's business and, in fact, Cardno was the principal environmental contractor for the BP oil spill cleanup in the Gulf of Mexico. In the environmental area, I have reviewed properties for The Nature Conservancy, prepared and certified Spill Prevention plans for produced oil and water facilities, and determined and certified carbon credits under protocols of the Chicago Climate Exchange.

I have worked on numerous conventional oil and gas, Marcellus Shale, and Utica Shale projects in Pennsylvania and in adjacent areas in Ohio and West Virginia, including in Warren County where this meeting is being held. Last year alone, I worked on oil and gas reserve and valuation projects in the Commonwealth, developed a degasification plan for an underground coal mine in Indiana County, and testified as an expert at trial in energy-related cases in both Greene and Indiana counties.

Based on knowledge and experience, I believe that bringing Pennsylvania's conventional oil and gas industry under the same regulatory requirements as the unconventional shale industry is both illogical and counter to the economic best interests of the Commonwealth. Current regulations already provide for safe and environmentally sound operations by the conventional oil and gas industry, including protection of valuable water resources. Imposition of pointless additional regulations and their high compliance costs on conventional oil and gas operators would only serve to close businesses and eliminate many jobs in already economically-depressed northeast Pennsylvania.

Although unconventional shale development has greatly benefitted Pennsylvania and our nation by providing abundant supplies of low-cost, clean-burning natural gas, it does entail greater risk than conventional oil and gas development and requires more regulatory control. However, no additional regulations are needed for conventional oil and gas development. The conventional oil and gas and unconventional shale industries are totally different in both scale and accompanying risks. Consider the following:

1. A typical conventional well is 500 to 4,000 feet deep. A typical shale well is drilled 5,000 to 8,500 feet deep and then another 4,000 to 8,000 feet horizontally.
2. A new conventional well typically produces between 1 and 20 barrels of oil per day and/or between 10 thousand and 100 thousand cubic feet of gas (Mcf) per day. Compare that to new horizontal shale wells, which initially produce between 5 and 15 million cubic feet of gas (MMcf) per day and, in liquids-productive areas, can produce from hundreds to thousands of barrels per day of oil, condensate and/or natural gas liquids.
3. The typical pressure in a conventional well is between 50 and 500 pounds per square inch (psi), compared to pressures from 3,000 to 5,000 pounds per square inch in Marcellus and Utica Shale wells.
4. A conventional well costs between \$60,000 and \$250,000. A horizontal shale well typically costs \$6,500,000.
5. Up to 60,000 gallons of water are typically used to hydraulically fracture a conventional well, compared to between 5 and 10 million gallons of water in a horizontal shale well.
6. Companies drilling conventional wells in Pennsylvania are mostly locally owned and operated, are frequently family-run businesses, and commonly have assets from a few thousand to several million dollars. Horizontal shale development is mostly conducted by out-of-state companies like Exxon Mobil, Chesapeake, Shell, Talisman, Range, Chevron and Cabot, each with market caps from many billions to trillions of dollars.

Need I say more? The comparisons are stark. Both the conventional and unconventional industries provide and can continue to provide tremendous benefits to the Commonwealth. However, they conduct vastly different types of operations and should be regulated accordingly.

Do we really want to drive locally owned and operated companies out of business and eliminate hundreds or thousands of jobs while not providing any discernible benefits to the Commonwealth? And this would occur while the large foreign and out-of state companies continue to operate unfettered due to their much greater financial resources.

Consider this analogy. Would it make sense to regulate and monitor construction of single-family homes in the same manner as construction of 30-story commercial office buildings? Of course not! It would drive the cost of new homes beyond the reach of most potential home buyers and cost many jobs in the home construction industry. This is analogous to what would be accomplished in the Pennsylvania oil and gas industry by the proposed regulatory changes.

Thank you.

Michael J. Miller, P.E.
Kingsport, Tennessee

Good evening. My name is Mark Cline. From 1 Longfellow Avenue, Bradford, Pa. I am a fourth generation oilman and on the board of Directors of the Pennsylvania Independent Petroleum Producers, but speaking for myself.

The regulation 78.56a6 which talks about securing our tanks from third party access has no environmental benefits. There are around 150,000 tanks used in the conventional industry. There is no history of problems. To equip 150,000 tanks with secure lids and valves would be quite a dangerous undertaking. They contain an explosive material. We would have to empty the tank and then fill it with water. Even then there is always a possibility for a problem to happen. Then we would have to haul the water that we used to the brine plant because now according to the Dep it would be contaminated. That in itself is another added cost. Securing tanks with locks doesn't do much as they can be cut very easily. Locking the doors on your home every day doesn't keep people from breaking in. Just ask the people from Bradford. This is just another burdensome regulation that will do more harm than good.

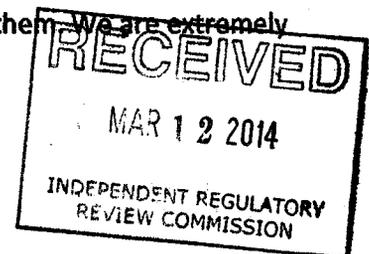
Regulation 78.56 Pits. The environmentalists are calling for no more pits because they say our waste is hazardous. The Environmental Protection Agency says it is not a hazardous substance. The environmentalists say there are studies that say there may be harmful health effects. They can talk about studies all they want, but there is no proof. There are 26,000 people working directly in the conventional oil and gas industry. 26,000 people working directly with this material on a daily basis. Not one of us is sick because of it.

I am 57 years old. My brother is 59. We have worked with this awful oil and gas since we were 7 years old. My father is 88 years old. He has worked with it for about 80 years except for the time he spent overseas fighting for our country. He still goes to work every day. A friend of ours is 82 years old and still working. He has fracked over 8,000 wells in his lifetime. Between all the oil field workers in this room there has been another 5,000 to 10,000 wells fracked. We are all still healthy except for life's normal little problems that come with age.

I keep hearing at these meetings that we only do this for the money. May I ask why you environmentalists go to work every day? I am pretty sure without doing a study that you go to work for money to support your families. Yes we do it for the money to support our families, but we also take great pride in doing our jobs and protecting the environment. Remember we live here and also have children.

Almost everyone in the conventional oil and gas industry was born and lived most of their lives in Pa. We work in and around the towns where we were born and raised. We have a vested interest in the environment in Pa. Most of the people in our industry also love to hunt and fish. We don't have to travel to another state to do that, as we have the best hunting and fishing right where we are working.

Oil and gas are not found everywhere in the world. There are 19 states in the US that have no oil. We must take advantage of these resources whenever we find them. We are extremely lucky to have these resources in our state.



Some of you are probably wondering what this thick book is I have been holding. It is a copy of the Pa. Department of Environmental Protection's Oil and Gas Operating Manual. I would say that we have had a lot of regulations written for us already!

The conventional industry should not be included in these regulations. Before I finish I would like to read the first sentence of the Dep handout for these hearings.

In 2012, Governor Corbett signed the 2012 Oil and Gas Act (chapter 32, act 13 of 2012), which significantly revised Pennsylvania's oil and gas laws to address unconventional well development in the Commonwealth. We should not be in these regulations!

Thank you

Mark J. Clive Sr.

**EQB PUBLIC HEARING COMMENTS
On
Proposed changes to Ch.78 of Act 13
Submitted by Gail Neustadt
January 22, 2014
Washington County - Washington Jefferson College**



Good evening,

I'm Gail Neustadt and live at 1503 Grand Cypress Lane, Presto, PA in Allegheny County. Thank you to Washington Jefferson College for hosting this evening's hearing and thank you to EQB for their efforts in drafting these proposed gas/oil regulations.

First off, The comment period as well as the number of public hearings must be extended because this new industry affects every citizen and all residents need an opportunity to speak. People have health concerns. People have property value concerns. People have land ownership concerns. People have climate concerns. The many risks associated with unconventional fracking make this a subject that warrants more public education, greater transparency and as much public response as possible.

Although Allegheny County has few if any unconventional wells and despite Pittsburgh's ban on fracking, we are surrounded by this developing new industry. Air and water don't stay in the same place. Clouds form, move and what develops miles away eventually is dumped as rain or dust elsewhere. We've seen in recent years, months, weeks, and now on a daily basis, repeated accidents. What happens in one place, is causing dire consequences in others in fact globally.

When I sat down to write my comments I was going to start out by saying that the proposed regulations fall short in many respects. Not only is each regulation lacking, but there are many others needed. For instance, nothing was said about cement casings, many of which start out with cracks that allow methane migration and the others break down over time.

I was going to say that when water is affected by any aspect of the fracking process, the industry should be held responsible for restoring it to its previous state. I was going to say that pre-drilling water baseline should be established by independent laboratories at the expense of the industry. I was going to say that because of the highly toxic nature of flow-back and the excessive violations regarding this byproduct, storage must be contained in tanks. The use of open pits must be prohibited. In fact I was going to say that all aspects of storage, transport and use of this poisonous substance be regulated. And while you're at it, please prohibit any land use for its disposal. The industry's claim that the use of brine for deicing roads or for dust abatement is part of their recycling program is ludicrous and playing foul. Oh yes, lest I forget, I was going to say that the identification of abandoned gas and oil wells on a proposed construction site must be identified before fracking takes place.

But ultimately, to say these things, reiterating what many have already said does not bespeak my true opinion.

So what should I say. It's easy, unconventional natural gas drilling should be banned. It should be banned because as is stated in Article I, Section 27 of the PA Constitution:

The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people."

Folks, this is just not happening!

Instead, the unconventional gas industry is being allowed to grow unrestrained. It's been given carte blanche access to our land, our homes and our health. It has fostered an unprecedented breakdown in the fabric of neighborhood cohesiveness. Our elected officials have turned their backs on the PA voters who entrusted them. Many citizens have been sickened by tainted water. Air pollution and with it lung conditions have increased. To say that our environment's scenic, historic and esthetic values are being preserved is a lie, rather they are being undermined and I mean that both figuratively and literally. And how can our elected officials say that PA's natural resources are the property of all the people when devision between mineral rights owners and surface rights owners is rampant?

However, there is a solution but we must all raise our voices to be heard. We must forgo our dependence on fossil fuels and instead embrace renewable energy. I will end by referencing two of my favorite songs, Bob Dylan's ... "The Answer My Friend is Blowin in the Wind," and "Let the Sunshine in" from the musical Hair." To understand the possibilities go to:

<http://grist.org/climate-energy/solar> and <http://www.awea.org>

"Oil is a product that arouses so much passion. A lot of people have a passionate fear, or distaste, or downright hatred almost for oil. There is no other product that so many people need so badly, yet so many people believe should be produced entirely without profits." -- Jeane Kirkpatrick, former U.N. Ambassador for the United States

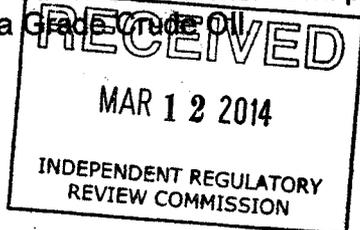
At the end of the pledge of allegiance we say "with liberty and justice for all." As Americans we have a strong sense of what is fair and what is not fair. It is **that** sense of fairness that compels us to say that today, we are faced with a situation where the environmental laws are not being applied fairly. Many people who consume petroleum products, have no idea how we get them, or how they are made into the products these people are using. Most people have no idea how drilling for oil and natural gas in Marcellus and Utica shale layers differs from drilling for oil in the more shallow layers like the Bradford Third Sand. This shallow well production, is what keeps in steady supply, Pennsylvania Grade Crude Oil, to the ARG refinery in Bradford. A unique product, Penn Grade Crude is different from the other petroleum in the world, since it is based on paraffin rather than tar or asphalt. This paraffin based Pennsylvania Grade Crude is very desirable in making high grade lubricants.

It has been a record breaking cold winter in the United States. The news reports many southern states are using brine (salt) water to spray on roads to reduce ice and snow. The Pennsylvania Department of Transportation uses salt to deice Pennsylvania highways. The use of salt has increased in rapid proportions in the last few years. Over 12 million tons of salt are dumped on the nations highways each year and eventually deposited into our earth and streams. When an oil well is pumped, salt water from pre-historic seas, far beneath the surface is recovered with the oil. This water was discharged into the earth or streams for many years. Today, it is a felony to discharge well water onto the ground and yet our highways can deposit millions of tons of mined salt directly into the environment. It just doesn't seem fair.

A typical site to produce Marcellus or Utica shall gas or oil is about five acres. For some of us this is hard to visualize so I will say it in terms we understand. A football field is about 100 yards. Five acres is more than eight football fields. The size of a shallow well site is about 50 X 50 feet square. You could fit 335 shallow well sites into one Marcellus or Utica drilling site.

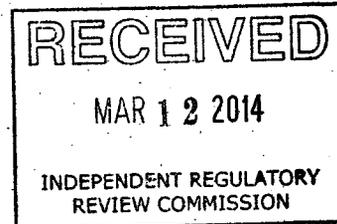
The regulations, we are considering tonight, are set to be the same for both the Marcellus / Utica drilling sites and the conventional oil well sites **unless** we make people understand how different these two industries are. Things such as traffic to the well site, site and approach forest clearing, production waste products, the time needed for completion are exponentially greater for the Marcellus/Utica sites. This new Marcellus/Utica industry needs to have their own regulations and not be lumped in with the shallow well industry, who have been good stewards of our Pennsylvania forests and streams for over 150 years. The pristine streams and beautiful forests of Venango County, perhaps the most drilled area of Pennsylvania, stand in testimony of the oil producers vigilance in caring for the environment. Our Earth has the wonderful property of healing. It was recently noted in a news story that an erupting volcano can negate all the efforts we have made so far in reducing global warming emissions in one single eruption. Volcanos have been erupting for eons and the Earth continues to heal itself.

I would ask that in fairness to this struggling industry of shallow well oil producers that you would reexamine the regulations that link them with the new Marcellus/Utica industry and make separate and appropriate regulations for the conventional well industry. Since so much of our lives depend on oil, we need to have laws that not only protect our environment but also protect the stability of our local economy, the security of our oil field workers and producers and the continued supply of products that come from Pennsylvania Grade Crude Oil.



Samuel Stocum
Box 21
Cyclone, Pa 16226

Louis F. Pochet
915 Essex Drive
Greensburg, PA 15601
Jan 22, 2014



Dear EQB (Environmental Quality Board).

As a citizens of Westmoreland County and the state of Pennsylvania – and a retired Chemist/Chem Engineer, I find myself concerned with the environmental laxity of the DEP and EPA in addressing the potential issues of harm to the environment that can be the collateral damage of the natural gas – fracking technology as it is currently regulated and practiced. We here in PA have been blessed with an environment that we can all be proud of but we must be extremely concerned about the impacts of this new industry.

A major concern has to be our water supplies – particularly after the poorly regulated situation in Charleston, WV that just occurred. A simple chemical spill took out the water supply for 300,000 people because of the lack of regulations and oversight. Open pits and wastewater impoundments, also lacking sadly in WV, have a tendency to fail – from poor construction or by forces of nature – which imply that the safest feature that would minimize environmental hazards would be the requirement for a closed loop system as a basic water handling technique. It must be appreciated that somewhere between 1 million and 7 million gallons of water are needed to frack a single well – which may be fracked over the course of its lifetime possibly up to 6 or 7 additional times. Water – even abundant here in PA compared to the western part of the US is still a valuable resource and must be protected from inadvertent mishaps.

An additional concern has to be the radioactive waste as generated from oil and gas operations. This is radon country – and radon gas will be released in the drilling process as well as contamination in the shale waste. As I recall several years ago, the interstate 99 portion of that road between Altoona and Penn State was held up for years because no one wanted to take the sulfur – pyrite contaminated shale fill that was being produced in the road cuts because of their acidic waste content, As a concerned citizen, This unwanted material needs to be disposed of properly not haphazardly and not permitted to blow around as an air pollutant

It is extremely important that the EQB and DEP act not solely in the interests of the gas industry but primarily in the interests of the citizens of our state in preserving our environment. This includes proper regulation as well as proper oversight. What I have found over my 40 years in industry is that environmental and safety directors when held accountable, will typically follow lawful regulations since they are primarily the fall guy and would be blamed for inadequacies by those further up the management tier. This implies again the need for real regulations.

As stipulated by the Pennsylvania state constitution, I would like to reiterate my concern in how the EQB and the DEP plans to address these areas to protect all of our rights to a clean and healthy environment. Several points that follow **MUST** be addressed properly:

- 1) Water supplies must be restored to Safe Drinking Water standards at a **MINIMUM** when a water source is impacted. We are still fighting the clean-up of many of our water resources after a century of mine acid water drainage.
- 2) The DEP must be required to proactively establish standards for pre-drill testing of the water in impacted areas using impact fees with cost burdens to be the responsibility of the drilling company. A fund needs to be established to handle future problems that may be generated by the driller.
- 3) The DEP can not allow the storage of wastewater in open pits or impoundments—and must be responsible for any contamination that they accidentally or knowingly caused. This also protects our wildlife, birds and fish from collateral poisoning.
- 4) The DEP needs to require drill cuttings to be tested for radioactivity and to find a way to dispose of those radioactive waste products.
- 5) Residual waste disposal on roads and land is not a beneficial use and common sense says that this is what happened at Times Beach, MO years ago and the disposal of residual waste from gas and oil development has many of the same problems. It spreads the waste far afield but byproduct wastes can pollute waterways and landscapes in a more significant manner than other residual wastes. DEP regulations must ensure that land spreading does not result in contamination of soil, vegetation, and groundwater, particularly near drinking water supplies, streams, and rivers.
- 6) Potential stray gas migration is also not being addressed by the proposed rules. Stray gas migration has been and continues to be a major problem in the gas fields of Pennsylvania. Old unplugged and abandoned wells are a source of gas which migrates and if and when the concrete casings crack, which is a 50% certainty over a decade even more problems will occur. There must be a means to eliminate potential pathways for fluid movement into groundwater before conducting hydraulic fracturing operations. The proposed rules for pre-fracking surveys must require on-site inspections and assessments for the purposes of identification of orphaned or abandoned wells prior to drilling.
- 7) There must be provisions in regulations to require the original driller – gas well owner to provide for the capping of all played out wells.

Thank You,

Lou Pochet

Good evening, my name is Mark Cline from Bradford, Pa and I am a fourth generation oilman. The first thing I want to do is read the first sentence of the Dep handout given at these hearings.

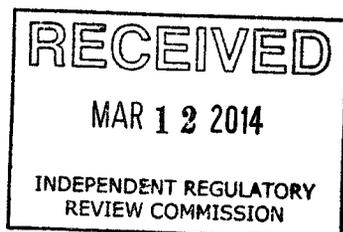
In 2012, Governor Corbett signed the 2012 Oil and Gas Act (chapter 32, Act 13 of 2012), which significantly revised Pennsylvania's oil and gas laws to address unconventional well development in the Commonwealth. I believe that sentence alone says it all! The conventional operators were not meant to be in these regulations.

The unconventional and conventional industries are completely different in many ways. The size of our locations are different. The amounts and types of waste products are different. The areas underground affected by the wells are different. The truck traffic and amounts of water used for frac jobs in both industries are extremely different. I believe the biggest difference is the amount of money the unconventional industry has to build their roads, make their locations and drill their wells. We in the conventional industry just don't have that much money available. We have to work with small budgets but then again we don't need the wide limestone covered roads, the five acre locations, the huge drill rigs that can drill not only deep vertically but also horizontally for great distances. I have seen some of the Marcellus locations after the wells have been put into production. They do a great job of reclaiming the land. When we get done drilling and fracking one of our conventional wells and reclaim our locations you can drive down the road right beside them and not even know they are there. We leave a very small environmental foot print. We try very hard not to disturb any more land or trees than possible.

At the hearing in Meadville last Wednesday there was a lady there from the Oil City Water Authority. She was concerned about drilling to close to their water shed. Does she not know that there were already hundreds of wells drilled there many years ago. Their water is still high quality water despite the old wells.

The city of Bradford's water shed is covered with old wells. One reservoir has at least two dozen old wells under the water. Bradford has some of the best drinking water in this state. Since 1986 there have been over three hundred new wells drilled on the Gilbert lane reservoir's water shed without any problems. Our industry works very hard at being environmentally safe.

During the time that I have been going around the city of Bradford to talk to people about what is going on with these regulations, and why we need to get letters written to have them exclude the conventional operators. I have heard many people tell me how the decline in drilling the last couple of years has already hurt their businesses. I am not just talking about the obvious stores such as oil field supply stores. I am talking about auto parts stores. Places that service company trucks. Stores that sell tires. The owners of restaurants and small diners that used to count on the oilman and his family to come and eat. The corner stores were the oilmen used to stop for coffee and the morning paper. They all have already been hurt because of the



decline in drilling. If these regulations pass the way they are now written these business will suffer even more. Pennsylvania needs every single job it can get!

While talking to all the oil and gas companies around the Bradford area, they have all told me that they have had to let people go. There are more people out of work with no new jobs available for them. Pennsylvania needs all the jobs it can get!

The steel mills, coal industry, manufacturing business, small family farms and timber have already been regulated so heavily that they have a very small presence left in our state.

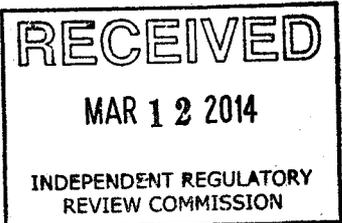
Tuesday morning of this week I received a phone call from the teacher of the petroleum production class at Bradford High School. His students have heard about what is going on with these regulations, and are concerned for their futures of working in the oil fields. They asked what they can do to help us keep our jobs and the jobs for their futures. There are 50 students in these classes that may not have jobs when they graduate. Not everyone is suited to go to college, and some people just love working outdoors and doing hard labor. This same teacher told me he has 40 students at the University of Pitt at Bradford in oil and gas related classes that have been voicing the same concerns for their futures. Are they also to become unable to find employment as most college graduates these days?

I am asking the Environmental Quality Board to rewrite these chapter 78 regulations leaving the conventional oil and gas operator out of them.

Thank you

Mark L. Cline
1 Longfellow Ave
Bradford PA

Kathryn Hilton
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hiltonkathryn@gmail.com x 803-646-8243



January 23, 2014

Comments of Kathryn Hilton on the proposed revisions to the Chapter 78 Oil and Gas Regulations

I believe additional comment opportunities are necessary in order to spur significant public discourse regarding the topic of oil and gas regulations. Notices could and should be sent to every township official in areas where drilling activities are occurring in order to heighten local awareness of the opportunity to comment. The Department has an obligation to ensure meaningful public participation in a way that is inclusive of those who may be most affected. Additional hearings in areas with heavy drilling activity should be scheduled.

I would like to offer our support for the submittal of electronic permit applications. Electronic permit files should be made available to the public upon request to limit the burden on affected citizens and interested organizations.

I likewise support the provision which will require permit applicants to consider the impact of a well site on public resources, including parks, water supplies, and protected species. Tourism is a significant economic driver in my area. The Laurel Highlands, Great Allegheny Passage bike trail, and Youghiogheny River draw visitors from all over the world. The consideration of state parks, protected species, natural amenities, and tourism-generating features is appreciated.

Open storage pits, of any kind, should never be allowed. A pit lined with plastic has an inevitability of failure. For example, WPX contaminated the well water of at least one family in Donegal Twp, Westmoreland County through the tearing, or forming of holes, in the liner of a waste pond. For over a year the impacted family has been utilizing a temporary source of water and the DEP has yet to issue a determination, in spite of having ample water tests which show an increase in barium after drilling activities began. From my review of O&G compliance reports, including inspector comments from site visits and violations issued, problems with waste pits are very common. Eliminating these pits would allow inspectors to spend more time monitoring other areas of concern and would remove the waste pit as a source of contamination.

A more complete suite of parameters must be established for baseline testing in order to protect the health of Pennsylvania residents; this suite should be the standard used by all drilling companies across the Commonwealth. A pre-drill test for e-coli and coliform will give the water user important data, but is not testing for parameters that would indicate contamination from industrial activity. Instead, testing for radioactivity, barium, strontium, and commonly used chemicals in the drilling, hydraulic fracturing and completion processes of a well is critical for accountability and for the protection of public health. In a November 2013 meeting with Department of Environmental Protection's (DEP) Oil and Gas staff in Harrisburg, DEP acknowledged water contamination cases are

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the most serious issue the Department faces. It is also a massive public health risk and as such, DEP should require operators to obtain ample baseline data in order to protect water supplies and public health.

Regarding the restoration of contaminated private water supplies, it is my position that any gas or oil company found to have contaminated a water supply should bear the burden of restoring the water system to Safe Drinking Water Act (SDWA) standards, regardless of whether the previous quality met this standard. Likewise, any water that exceeded SDWA standards prior to contamination should be restored to its previous quality. To take a company at their insistence of operating "in good faith" and "being a good neighbor" is not enforceable by either the Department or the water consumer, and the track record of every single operator's actions in Pennsylvania shows these statements are distractions and have no factual basis. I again use the example of WPX's contamination in Donegal Twp. For over a year the company has taken no steps to find a permanent solution for the well water they contaminated and has in public meetings obfuscated the truth by saying there has never been a case of water contamination because of fracking, an irrelevant statement in this case. I regularly see similar examples of unethical behavior. I will highlight the operator Chevron in Redstone, Springhill and Dunbar townships in Fayette County. Additionally, in my attendance of meetings I REGULARLY listen to gas drilling companies use false information as points of pressure. For example, at a meeting in Delmont Twp., Westmoreland County, a Huntley and Huntley landman told a room of prospective lessors that if they did not sign a lease to fill out Huntley and Huntley's units they would take the gas anyway. The Commonwealth does not have forced pooling in the Marcellus formation, making this point not only misleading and coercive but also downright intimidation. These are just a few examples of the behavior exhibited by companies profiting from this extraction. Clearly, public health is not a priority.

Disposal of liquid and solid waste is of major concern. First, the application of brine on roads is a public health issue for those living near where this occurs. Transfer of toxic materials into areas where children and the elderly are exposed will increase their risk of developing illness associated with chemical exposure. The addition of compounds such as barium, strontium, radium 226 and unidentified chemicals used in the gas drilling process only increase the negative impact this runoff has on our rivers and streams. Disposal of brine, drill cuttings and residual waste exclusively in hazardous waste approved facilities is critical to protect public health. DEP's current "beneficial use" policy allowing drill cuttings and residual waste to be solidified and used as odor cover in municipal landfills is an unsafe practice. Allowing toxic materials admittance to a municipal landfill will most certainly lead to negative health impacts for residents on adjacent properties who are breathing the now contaminated air. Additionally, there is potential for contamination of public water from landfill leachate lines which are attached to municipal water authorities and or waste treatment facilities. These authorities do not have the proper equipment to filter out contaminants should they enter the leachate. If a landfill liner becomes compromised there is also the potential for private water supplies to become polluted through groundwater contamination. Land application or burial in a location other than a hazardous waste facility should not be allowed for these toxic materials. Already there are

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a plethora of citizen complaints from municipal landfills receiving this material in Bell Vernon and German Twps., Fayette County.

I am supportive of the proposed revisions regarding the documentation of orphaned and abandoned oil and gas wells. The documentation of these wells prior to the commencement of drilling will minimize hazardous incidents. We do, however, encourage DEP to consider expanding the radius for these surveys from 1000' to 2500' from the entire length of the horizontal legs.

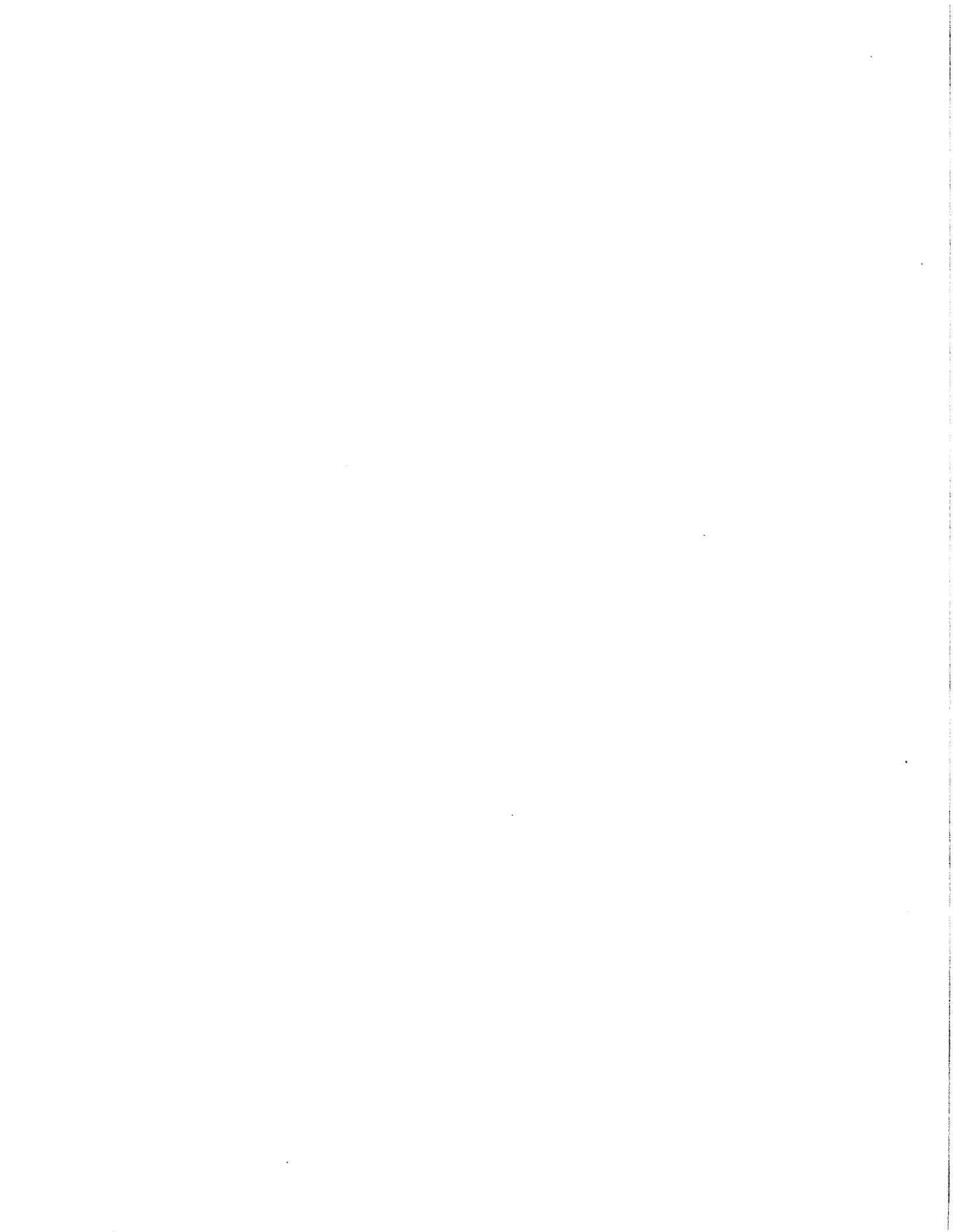
Finally, the southwest region of DEP has a total of twelve Oil and Gas inspectors. These twelve individuals cannot possibly provide adequate oversight of the approximately 30,000 conventional and unconventional gas wells located in the region. DEP should immediately halt the issuance of new permits and suspend drilling on existing sites until DEP can effectively monitor existing operations.

Thank you for the opportunity to provide input regarding the proposed revisions to the Oil and Gas Act.

Please feel free to contact me at 803-646-8243 with any questions you may have.

Sincerely,


Kathryn Hilton



Good evening, my name is Mark Cline and I am a fourth generation oilman. We in the conventional industry should not be regulated the same as the unconventional industry. So I am asking the Environmental Quality Board to not pass these regulations the way they are now written.

After being at the EQB hearing in Williamsport on Monday and hearing how harmful our oil and gas is according to the environmental people who were there, I thought I would tell you about how every one's day was probably like.

This morning as every morning probably is, we all picked our heads up off of our pillows when the alarm clock went off. We then swung our feet to the side of the bed and put on your slippers and headed to the kitchen to eat breakfast. We take a plastic bowl out of the cupboard and pour in our cereal. Then pour ourselves a glass of milk or juice. After eating and reading the morning newspaper we go brush our teeth and jump into the shower. After enjoying the hot water, we shampoo our hair or what's left of our hair. Then we open the shower curtain and get out. Next most people blow dry their hair and comb it. Some women use hair curlers. Men put on shaving cream to shave. Then the women start with their makeup, lip stick, deodorant, nail polish and perfumes. If they are older they use denture adhesive, then perhaps put on their glasses to see what they are doing better. Some people wear soft contact lenses instead of glasses. Now people are taking their clothes off of the hanger and getting dress. Women put on either panty hose or nylons, then comes the shoes. Now everyone is ready to go jump into their car and drive to work.

I could go on and on with this story but hopefully I will have gone far enough to have made my point. The point is that the pillows, alarm clock, slippers, plastic bowls, milk or juice container, the newspaper and how it got there, tooth paste and tooth brush, the hot water heated by gas, shampoo, the shower curtain, blow dryer, the comb, hair curlers, make up, lip stick, deodorant, nail polish, perfumes, shaving cream, razors, the denture adhesive, glasses, soft contact lenses, the clothes hanger, panty hose or nylons, shoes, next comes almost every part of the car and it's fuel. Everyone one of these items I have mentioned come from paraffin based crude oil which is what Penn Grade Crude Oil is.

From the way you people describe it, I think it's a miracle we are still all alive. Crude Oil is in every part of our lives every day.

Most of the environmental people were calling for no drilling and no fracking in Pa. and I'm sure you don't want it anywhere in the United States.

In 2012 there were 124,092 automobile accidents in Pa. 87,846 people were injured. 1,310 were killed. 168 pedestrians were killed. 4,548 were injured in car accidents in 2012. 210 motorcyclist were killed and 3,919 were injured. 16 bicyclist died and 1,377 were injured.

I could not find 1 death directly connected to health issues from oil and gas. If you people want to save the world find a way to reduce automobile accidents in the state and leave us to do are job and help this country become less reliant on foreign oil.

Are you willing to send your sons and daughters to the Middle East to keep peace and fight a war so we can have a supply of oil?

At Monday's meeting you talked about how you are doing this for your children. Let me tell you this secret, we in the oil and gas industries have children also. Do you really think that we would harm our own children?

The people of the United States need to start working together to become energy independent. The attitude of not in my back yard is destroying our country. Energy can be produced in an environmentally safe way. It would help this country if you spent time trying to find new forms of energy, instead of trying to destroy the only sources of energy that actually works.

We are proud Oil and Gas people, but we are also proud to be environmentalist. We try our best every day to protect the earth and still do our job. We want a healthy world for our kids also.

Thank you

Mark L. Clive



Rev. William C. Thwing
610 Luzerne Street
Johnstown, PA 15905
814-539-9333
istchurch1@verizon.net

PAIPL Presentation to DEP at Shale Gas Hearings (January 23, 2014)

My name is William Thwing. I am United Church of Christ Pastor in Johnstown, PA and past President of Pennsylvania Interfaith Power and Light

Our family has a cottage in Ogletown, PA which is one the recharge areas for the Mauch Chunk Aquifer in the Clear Shade Watershed. We draw our water from the Mauch Chunk which is one of the largest purest aquifers in the Eastern USA. The nine thousand citizens of Windber and many more from communities who live along the Allegheny Front from Jim Thorp in the North to West Virginia in the South – tens of thousands of Pennsylvania's citizens, draw their water directly from the Mauch Chunk Aquifer. It takes 40 years for rain water to percolate thru 800 feet of earth to recharge the Mauck Chunk. One gallon of Deisel fuel will render undrinkable 750,000 gallons of Mauch Chunk Water. We have a neighbor in Windber whose water well went bad. Over the hill from his home 2700 feet away, out of sight, a deep shale well was being put in. He went up there every day, made notes, and took photographs. He noted a tanker truck of diesel fuel, apparently going into the well. Just before the drillers packed up, he noted a flowback pit there one day and the next day it was gone.. bulldozed over. How long will it take before all that diesel and that toxic flow back leach into Mauck Chunk Aquifer and it is destroyed forever and all those people along the Allegheny Front have to move away or get from bottled water. How many truckloads of bottled water will it take daily to serve the needs of 9000 people of Windber and everybody else along the Allegheny Front. We are creating a disaster unnecessarily. The same applies to aquifers and ground water all over the state.

Both the Center for Sustainable Shale Development in their 2013 Performance standards and the International Energy Agency in their "Golden Rules for the Golden Age of Gas" report, mandate that diesel should never go into a well, and that thorough geological and hydrological baseline back ground studies should always be conducted on all areas of operation before any drilling is permitted. Neither of these **best practices** are mentioned in your regulation except briefly under the section on Centralized impoundments.

Water is essential for life. Without clean pure water, we would all die as would all of God's creatures, as would our Earth. Pennsylvania has some of the best water in the world... What's left of it after an unregulated Coal Industry spoiled a significant percentage of our surface waters. Why risk our aquifers too. The same applies to our soil. We depend upon good soil for agriculture which produces our food. Without food we die. Pennsylvania has some of the best soil in the world. Agriculture is the #1 industry in PA, Tourism is #2. Both depend on fresh air, clean water and good soil. These God given assets have nourished the citizens of Pennsylvania for the last 350 years and the previous native populations that for 10,000. Why risk those God-given natural assets unnecessarily in a mad rush for wealth for a few greedy unprincipled politicians and their out-of-state wildcat driller managers, at the risk of disease, suffering & poverty for our children and all the generations that follow them. What a legacy we leave them!

The Pennsylvania Constitution in in article 1, section 27 Article I, Section 27 of the Pennsylvania Constitution provides: "The people have a right to clean air, pure water, and to the preservation of the natural scenic, historic and aesthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As Trustees of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people."

We want a rule of law in Pennsylvania.. "Best Practices or Nothing. Best Practices or Nothing"

**Comments On
Proposed Environmental and Protection Performance Standards
At Oil and Gas Well Sites**

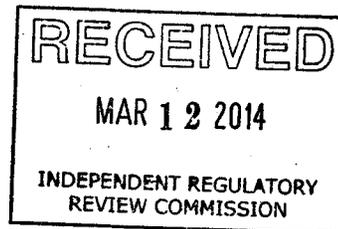
TO:

Environmental Quality Board
16th Floor, Rachel Carson State Office Building
P.O. Box 8477
Harrisburg, PA 17105-8477

**RE: Proposed Environmental Protection Performance Standards
at Oil and Gas Well Sites (25 Pa Code, Chapter 78)**

BY:

Jack W. Milburn
114 Mountain Road
Ligonier, PA 15658
(724) 238-4968
jackmilburn174@gmail.com



Introduction: Research out of Duke University found that water wells within 1 mile of fracked gas wells had 17 times the methane as reference sites. Another Duke University study found methane 6 times higher and ethane 23 times higher if a home was within a kilometer of a gas well. Dr. Warner of Duke University expressed concerns about natural pathways that might allow gases from gas wells to put drinking water supplies at risk. Kevin Schug of University of Texas found elevated levels of arsenic and selenium in water closest to gas extraction sites. Avner Vengosh of Duke University, found that brine from Marcellus shale contains bromide and radium which is radioactive.

The Texas Commission on Environmental Quality analyzed fracking fluids. Associated health problems found included: 65% of the chemicals were associated with serious health effects, 94% with skin, eye, and respiratory harm, 93% with gastrointestinal problems, 87% with respiratory system damage, 83% with brain and neurological effects.

Many of the chemicals used to frack are known carcinogens, neurotoxins, and endocrine disruptors. Many, such as the BTEX group, have long been known to be linked to disease.

40% of frack chemicals have been found to be endocrine disruptors. A recent University of Missouri study done by a team of researchers, including Susan Nagel, head of the Endocrine Disruptors Group, found that water samples collected from sites in a drilling dense region of Colorado exhibited more estrogenic, anti-estrogenic, or anti-androgenic activity than reference sites. Disrupting the endocrine systems of our born and yet unborn children is serious business with the potential to lead to a multitude of diseases and developmental disruption. Yet in the state of

Pennsylvania, we have well sites located within 2 miles of at least 190 day care facilities, 223 schools, and 5 hospitals.

Disposal, Brine and Drill Cuttings: "Fracking industry truck drivers have been blowing the whistle for some time, saying that radioactivity alarms are going off "all the time." Workers report that the radioactivity levels are sky-high, even in empty trucks that have already dumped their load of drill cuttings at landfills." According to PA Department of Environmental Protection data, radiation alarms went off more than 1,000 times in 2012 from oil and gas waste. (Tribune Review)

Mac Sawyer, a former fracking truck driver and environmental cleanup worker in the Marcellus Shale industry in Pennsylvania, has stated that sometimes "they just disable the alarm" rather than treating flowback or drill cuttings waste with the special care required of radioactive waste. Uranium and radium 226 are mobilized by fracking.

Disposal of brine, drill cuttings, and any residual waste should meet the standards of the US Resource Recovery and Conservation Act. Presently, the fracking industry is exempt from the regulation of hazardous substances that other industries must abide by. Those standards should be applied to all aspects of handling of hazardous materials.

Because Marcellus shale is more radioactive than other shale plays, the drill cuttings can be more radioactive, as evidence by alarms activated at waste disposal sites and the high measurement of radioactivity in a study downstream from the Josephine Treatment Plant in Indiana County which treats wastewater from oil and gas drilling. Radium levels of sediment samples collected in Blacklick Creek, downstream from the plant, were 200 times greater than background samples. Researcher Vengosh noted that levels exceed thresholds for radioactive waste disposal and pose "potential environmental risks of radium bioaccumulation in localized areas of shale gas wastewater disposal."

The storage of contaminated (to any degree) frack waste on-site, including radioactive drill cuttings, should be prohibited.

There should be no processing of drill cuttings on site nor should cuttings be stored in pits. There is no mention that evidence of positive radioactivity or chemical toxicity tests preclude the storage of drill cuttings in a pit or on-site burial.

Due to toxicity and radioactivity concerns, there should be no burial of drill cuttings on site.

Brine: No brine from hydraulically fracked wells should be used for road application due not only to salinity loads, but to the possible presence of toxic chemicals and radioactive particles that may be contained in flowback water.

Land Application: No wastewater or drill cuttings should be applied to land areas.

The US EPA is aware of the risks involved with fracking wastes. A confidential Environmental Protection Agency draft document on the environmental impacts of the oil, gas and coal industries was obtained by the New York Times. It shows that federal authorities are concerned about public drinking water supplies especially in

the regions of the Marcellus Shale. According to the EPA, "As oil and gas development encroach on suburban and urban areas, human health and environmental impacts are expected to escalate." The document cites waste disposal as the main "bottleneck for the industry." The study was provided to The Times by an EPA official who said it shows that dilution of drilling waste does not always succeed in eliminating the health risks posed by that waste. The study is marked confidential and was conducted on behalf of the American Petroleum Institute in 1990. It found a potential increased risk of cancer among people who often eat fish from waters where drilling waste is discharged. The study is relevant because state regulators in Pennsylvania have said that dilution is effectively removing the risks posed by drilling waste that is discharged into rivers. Importantly, this study found an increased risk of cancer when drilling waste was dumped into a body of water that was larger than Pennsylvania rivers. Furthermore, state records indicate that the radium levels found in Pennsylvania wastewater are much higher than those used in this study.

In a study by the Pennsylvania Department of Environmental Protection on Marcellus Shale wastewater discharge to the South Fork Tenmile Creek in Southwest Pennsylvania, state regulators concluded that even after treatment plants reduced the amount of hydrofracking wastewater that they were accepting, the water discharged from these treatment plants still had a negative impact on aquatic life in the streams that received the discharge."

Condensate Tanks 78.56 (17): How will condensate tanks be monitored? All gas facilities including tanks, pits, wells, and compressor stations should have monitors designed and operated by a third party, functioning 24 hours a day, and recording findings that are directly available to the DEP and public. The gas industry should not be responsible for conducting this monitoring but should be financially responsible for payment of the implementation and conduction of that process.

Fresh water: The term "fresh water" should no longer be used to define both uncontaminated previously unused water, and wastewater left over from fracking that is then recycled to be reused.

Abandoned Wells: There are thousands of abandoned wells in PA, increasing the possibility of the migration of methane and other contaminants from fracked wells up abandoned well bores to ground water. Those wells must be identified and sealed prior to any Marcellus gas wells being drilled. Drillers are financially responsible for protecting the waters of Pennsylvania via the identification and plugging process.

Wildlife: As an avid archery deer hunter, there is another matter of significant importance to me and, to the extent they soon become aware of it, to over 1 million PA deer hunters. Contamination of deer meat may be yet another issue (along with a growing list of other issues) related to the impacts of drilling for natural gas by hydraulic fracturing (or fracking) in the Marcellus shale. I say that this may be an issue because, according to the PA Game Commission, this issue (like many others regarding fracking)

is not being studied or even monitored in Pennsylvania. Why should this be a concern for over 1 million PA hunters and their families? The process of fracking requires millions of gallons of water at each well site and up to 50% of that water comes back out of the well—hence the term “flowback”. This flowback, held in open frack pits, contains large quantities of salt brine which as all hunters know attracts deer. Unfortunately, the brine also contains heavy metals (cadmium) and sometimes radioactive materials that come from deep within the earth. The brine likely contains other extremely toxic and carcinogenic chemicals but those are kept secret by the gas industry thanks to legislation pushed through by the Bush/Cheney administration—the so called “Halliburton loophole”.

Deer store all of their fat before the mating and hunting season. The fat and possibly the liver store the carcinogens. How much of that gets into the meat is a concern to me. The salt that attracts the deer could come from several potential sources in areas where Marcellus drilling is occurring—spent and uncapped wells, frack ponds (which store frack flowback water in open pits for a year or more at the well site), contaminated streams, public water sources, spills, leaking trucks and pipes and even road runoff where brine is used to treat roads in the winter. Note that, incredibly, frack waste has been declared a “beneficial use” in PA.

Pennsylvania needs to thoroughly study this issue. If the gas industry, PA agencies, or our politicians say “There’s no problem here”, then they should be willing to prove it! What are they worried about—finding something wrong with our deer herd?

In closing, virtually all of the issues I’ve discussed can be mitigated or indeed eliminated by the use of currently available technologies and alternative operating procedures by drill companies. Closed loop systems, for example, should be used by all NG operators within PA. With the incredible amounts of money generated by NG operations (with most operations conducted by major multi-national oil and gas companies), the costs of such technologies and alternative operating procedures are fair and reasonable. Pennsylvanians deserve nothing less.

Thank you for your consideration.

Jack W. Milburn

NOTE: All specific recommendations set forth herein are highlighted in yellow.

January 22, 2014 Public Hearing

DEP/Environmental Quality Board members,

Regulations are necessary to ensure industries are provided the necessary governmental guidance to conduct themselves in a responsible manner. Regulations are typically "written in blood" so to speak in that they are intended to prevent the reoccurrence of negative events having already occurred or those having an extremely high probability of occurring.

Over regulation is a dangerous phenomenon that occurs when regulators through totally honorable intentions raise the noble purpose of regulations beyond their legitimate need to that of creating a perfect world. This dangerous departure from real regulatory needs has a much more detrimental effect than no regulation at all as it can literally kill an industry.

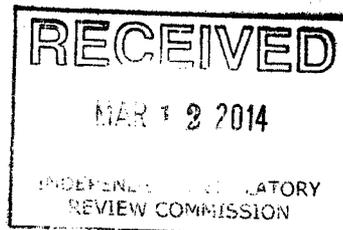
As such, I ask the Environmental Quality Board to revisit their proposed regulatory package and subject each section to the litmus test of "Reality versus Perfect World". If there is adequate past history to support a section, then, so state this specific history and adjust the measured regulatory response as deemed appropriate however, if the basis for requirements in each specific section serve rather to create a perfect world as opposed to a measured response for preventing reoccurrence of a negative event, then these sections must, by definition of a truly needed regulation, be deleted.

Propaganda regarding the environmental effects of drilling are rampant in both camps. It is the role of good government to seek out the truth and act on facts, not emotions of a vocal few.

Thank you for the opportunity to share my assessment and suggestions.

Respectfully submitted,

**Joe Judeikis
105 Mingo Church Rd
Finleyville PA 15332**



**Environmental Quality Board Testimony on Oil & Gas
Regulations: J. Stephen Cleghorn, PhD**
January 23, 2014
Indiana University of Pennsylvania
Indiana, PA



Good evening. I am Dr. J. Stephen Cleghorn of Reynoldsville, PA. I own an organic farm up in Jefferson County. I have placed a unique conservation easement on my farm that asserts and defends the Rights of Nature - on the surface and below the surface - from violation by an extreme industrial practice such as fracking for shale gas.

We are here tonight to consider proposed regulations of shale gas extraction to better control activities that occur at the surface, but there is a fundamental flaw with that.

The problem is this: The Earth is One. It is above us in our climate, under our feet and around us as an ecosystem sustaining our lives, and below us as the deep, living biosphere. To limit these hearings on regulations to what happens on the surface of the Earth for an activity whose essential nature requires penetration far below the surface of the Earth truncates all too much the discussion we should be having.

So before addressing the proposed regulations, I'd like to speak about what happens from below that will affect surface living for generations to come.

GIVEN that oil and gas industry data show that well casings (both steel and concrete) can fail at a rate up to a 50% over just 30 years time;

- AND given that these casings must hold up IN PERPETUITY to protect the groundwater aquifers under Pennsylvania;
- AND that the gas industry plans to drill more than 100,000 wells for the next 50 years that will put at risk groundwater aquifers under half the land mass of PA;

THEREFORE, DEP should require that casings of the type and engineering that are failing now be immediately PROHIBITED, and cause the following to happen:

- All casings henceforth shall employ fail-safe engineering that will prevent the degrading and failure over time so that they can contain completely, in perpetuity, all gas, fluids and shale elements from below;
- Chemical markers and physical monitors shall be placed in every well that will provide evidence of such leakage over time and who is responsible for that leakage;
- All gas companies shall provide a bond adequate to pay in full for whatever is needed to achieve remediation of groundwater supplies, or replacement of water supplies, when the wells leak methane or chemicals into the aquifers.

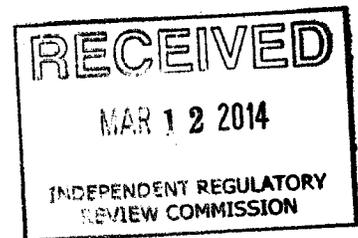
To do anything less than this is to risk irreparable harm to the water sources of the Commonwealth and to the human, animal and plant life that depend on that water.

Water is Life, and this industry poses an existential threat to us because it will inevitably ruin, as it is practiced now, the water sources by which we live at the surface.

TESTIMONY BY RON GULLA TO THE
PENNSYLVANIA ENVIRONMENTAL QUALITY
BOARD REGARDING PROPOSED REVISIONS TO
PENNSYLVANIA'S OIL & GAS REGULATIONS,
CHAPTER 78 OF TITLE 25 OF THE PENNSYLVANIA
CODE

Washington County, PA

January 22, 2014



Good Evening. My name is Ron Gulla. I am here tonight as a concerned citizen dedicated to protection of public health and the environment from impacts caused by oil & gas development.

Before raising a number of substantive issues, there are two procedural points:

First, the comment period established by the Board currently is 60 days. This is grossly inadequate. The comment period should be extended to at least 120 days to afford the public adequate time to comment.

Second, additional hearings should be held so that there is at least one hearing in each county that has been or will be impacted. It is unconscionable to us that there are no hearings in several of the most heavily impacted counties such as Bradford, Butler and Susquehanna. The best way for this Board to learn what negative impacts may occur is to hear directly from those most heavily impacted to date.

Turning to the substantive issues, I want to highlight four important aspects of the proposal:

First, the protection of drinking water supplies requires further revisions. Documents obtained from the Oil and Gas Division of DEP show that, through 2012, at least 161 drinking water wells have been contaminated by oil & gas development activities. What must be required is that existing water quality be documented before any development activity takes place. Pre-development water testing should involve a comprehensive and consistent set of parameters. The required parameters must be far more inclusive than merely the primary and secondary Safe Drinking Water Act standards. Both DEP and agencies in other states have identified hundreds of different

chemicals that have been used in hydraulic fracturing fluids. Drinking water wells should be tested for the broadest spectrum of chemicals known to be used in fracking operations.

When contamination of drinking water wells does happen, the oil & gas well operator must be required to restore that drinking water to at least the water quality standards required for public water supplies. If the pre-construction water quality was better than these standards, then the operator must be required to restore that quality at a minimum.

Second, it is well known that there are hundreds of thousands of orphan and abandoned oil & gas wells spread across the Commonwealth. Each of these wells is

a potential conduit for contamination. Before any development should be allowed, the applicant for a permit should be required to conduct an onsite survey extending at least one mile from the edge of the proposed site, one mile radially from any horizontal well bore, and one mile from the end of each well bore to identify orphan and abandoned wells. The permit application must document that such a survey has been performed and any wells identified have been properly plugged.

Third, the regulations should prohibit the use of open pits or impoundments for storage of fluids, drill cuttings and other wastes. Anything less than closed loop fluid management should not be allowed. These restrictions should not only apply to new operations but should be

applied to continued use of existing pits and impoundments as well.

Fourth, the regulations should include a comprehensive waste management system such as that adopted under Subtitle C of the federal Resource Conservation and Recovery Act. Although the RCRA program now has limited application to the oil & gas industry at the federal level, there is no restriction in federal law that precludes a state from applying more stringent waste management requirements. It is essential that there be a true “cradle to grave” waste management program applicable to oil & gas development.

Finally, as it considers these proposed regulations this Board should apply a standard for its review and a policy

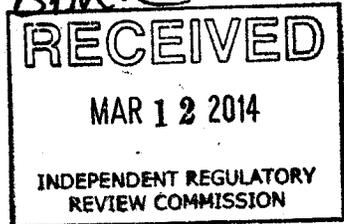
for decision that is fully faithful to its trust responsibilities under the Environmental Rights Amendment of the Pennsylvania Constitution. As the Supreme Court recently stated in striking down parts of Act 13 as unconstitutional;

“The benchmark for decision is the express purpose of the Environmental Rights Amendment to be a bulwark against actual or likely degradation of our air and water quality.

As trustee, the Commonwealth has a duty to refrain from permitting or encouraging the degradation, diminution, or depletion of public natural resources, whether such would occur through direct state action or indirectly, because of the state’s failure to restrain the actions of private parties.”

Thank you for this opportunity to provide comments on the proposed Chapter 78 revisions.

Laurie Barr



25 PA. CODE CH. 78

§ 78.52a. Abandoned and orphaned well identification

This proposed section requires operators to identify orphaned and abandoned wells in proximity to the vertical and horizontal well bore prior to hydraulically fracturing a well. The section outlines how operators shall conduct this identification, including consulting with the Department's database, farm line maps and submitting a questionnaire to surface landowners. The results of this survey shall be provided to the Department

In addition to the United States Geological Survey (USGS) 'farmlines' maps,

The Department of Conservation and Natural Resources (DCNR) has been working to digitize their records. These should be consulted also.

Also USGS survey reports and USGS topography maps. Thousands of legacy well locations are identified in these records.

During an appointment with a geologist at the DEP Meadville I obtained copies of maps that identified over a thousand legacy wells in Lawrence County. 16 are listed on the DEP's orphan and abandoned list. (ATTACHED) Until the PADEP database reconciles their records and maps permits should not be authorized in areas known by the DEP to have large numbers of potential pathways.

IN 2010 STRONGER, State Review of Environmental Regulations recommended:

"The review team recommends that DEP consider whether there are areas or situations in which wells (active and abandoned) in the vicinity of hydraulic fracturing operations provide pathways for fluid movement into groundwater. In such areas or situations, DEP should require operators to identify and eliminate these potential pathways for fluid movement into groundwater before conducting hydraulic fracturing operations."

Page 16 of the 2010 Stronger review is attached and it is also available online here:

<http://www.strongerinc.org/sites/all/themes/stronger02/downloads/PA%20HF%20Review%20Print%20Version.pdf>

The proposal to identify and monitor the wells within 1000 feet does not comport with the recommendation made by STRONGER to the DEP. § 78.52a proposals simply ignores STRONGER recommendations and does nothing to prevent communication between wells.

The Thomases, of Duke Center have been searching for wells for 20 years. They discovered another well two weeks ago.

Shell hired professionals to search for wells on Maggy Henry's farm in Lawrence County. DOZENS are identified on a farmline map and they gave up, They were led to the area and couldn't locate any of the 27 and there were pipes all over the place.

The equipment used for surveys is expensive and takes training. Surveys are not free.

Surface owners should be provided funding to conduct these surveys and a reasonable amount of time (at least 30 days per acre) to respond to the *questionnaire to surface landowners* to search for abandoned wells. This would be a good use of the impact fees.

If abandoned wells are found, and an operator decides to drill and frack, nearby water sources should be monitored before and after drilling and fracking, and the operator should be required to replace the well water to pre-drill standards, if impacted.

In Erie, pa Presque Isle, Hammermill/ international paper injected waste into a well and it migrated over 4 miles and came to the surface through an abandoned wellbore.

Requiring operators to watch unplugged wells within 1000 feet of new wells to see if the flux/ flow of odorless and colorless gas changes, *is a gift from the commonwealth to operators.*

— Original Message —

From: Neville, Richard
To: Cheryl Thomas
Sent: Wednesday, January 15, 2014 10:57 AM
Subject: RE: settlement with Brenan estate

Here is what I have found out. The Department has been working with the Estate on a settlement that provides for the Estate to plug 7 of the 19 wells. The 7 wells that the Estate would plug are the wells that DEP issued drilling permits to Norris Oil Company. The remaining 12 unpermitted wells will be placed on the Department's abandoned well list. These wells will be plugged using the abandoned well plugging fund administered by the Department. As of today, there is an agreement in principal with the Estate, but the settlement will not be confirmed until we have a legal document that says as much.

From: Cheryl Thomas [mailto:thomcat364@zoominternet.net]
Sent: Monday, December 30, 2013 6:49 PM
To: Neville, Richard
Subject: settlement with Brenan estate

Hi Rich, we are just checking in to see what is going on with the Brenan estate and the clean-up on our land. Can you give us any info yet? We would appreciate any and all information you can give us.

Thanks for your time.

Cheryl & Joe Thomas

Finding 9.2.1.4.

The review team noted that DEP has not required operators to identify potential conduits for fluid migration (such as active and abandoned wells) in the area of hydraulic fracturing.

Recommendation 9.2.1.4.

DEP should consider whether there are areas or situations in which wells (active and abandoned) in the vicinity of hydraulic fracturing operations provide pathways for fluid movement into groundwater. In such areas or situations, DEP should require operators to identify and eliminate these potential pathways for fluid movement into groundwater before conducting hydraulic fracturing operations. (STRONGER Guidelines Section 9.2.1.)

Finding 9.2.1.5.

The review team commends DEP for requiring the PPC plan.

Recommendation 9.2.1.5.

The review team recommends that DEP finalize its Proposed Rulemaking to include the requirement to keep a copy of the PPC plan at the well site during drilling and completion activities so that specific chemical information can be obtained during an investigation. (STRONGER Guidelines Section 9.2.2.)

Finding 9.2.1.6.

The review team commends DEP for requiring MSDS as part of the PPC plan.

Recommendation 9.2.1.6.

The review team recommends that the Commonwealth of Pennsylvania adopt provisions necessary to assure that information on chemical constituents used in fracturing fluids is available to medical personnel in the event of a medical emergency related to hydraulic fracturing. (STRONGER Guidelines Section 9.2.2.)

Finding 9.2.1.7.

Under the Proposed Rulemaking operators will be required to develop and maintain on site a casing and cementing plan. BOGM can require the casing and cementing plan to be submitted for approval prior to drilling. However, no casing information is required to be submitted with the well permit application.

Recommendation 9.2.1.7.

The review team recommends that the depth of surface casing be added to the well permit application so that BOGM can assure that groundwater protection concerns are addressed. (STRONGER Guidelines Section 9.2.1.)

DEP OFFICE OF OIL AND GAS MANAGEMENT
ORPHAN AND ABANDONED WELLS

1/12/2014 8:10:38 PM

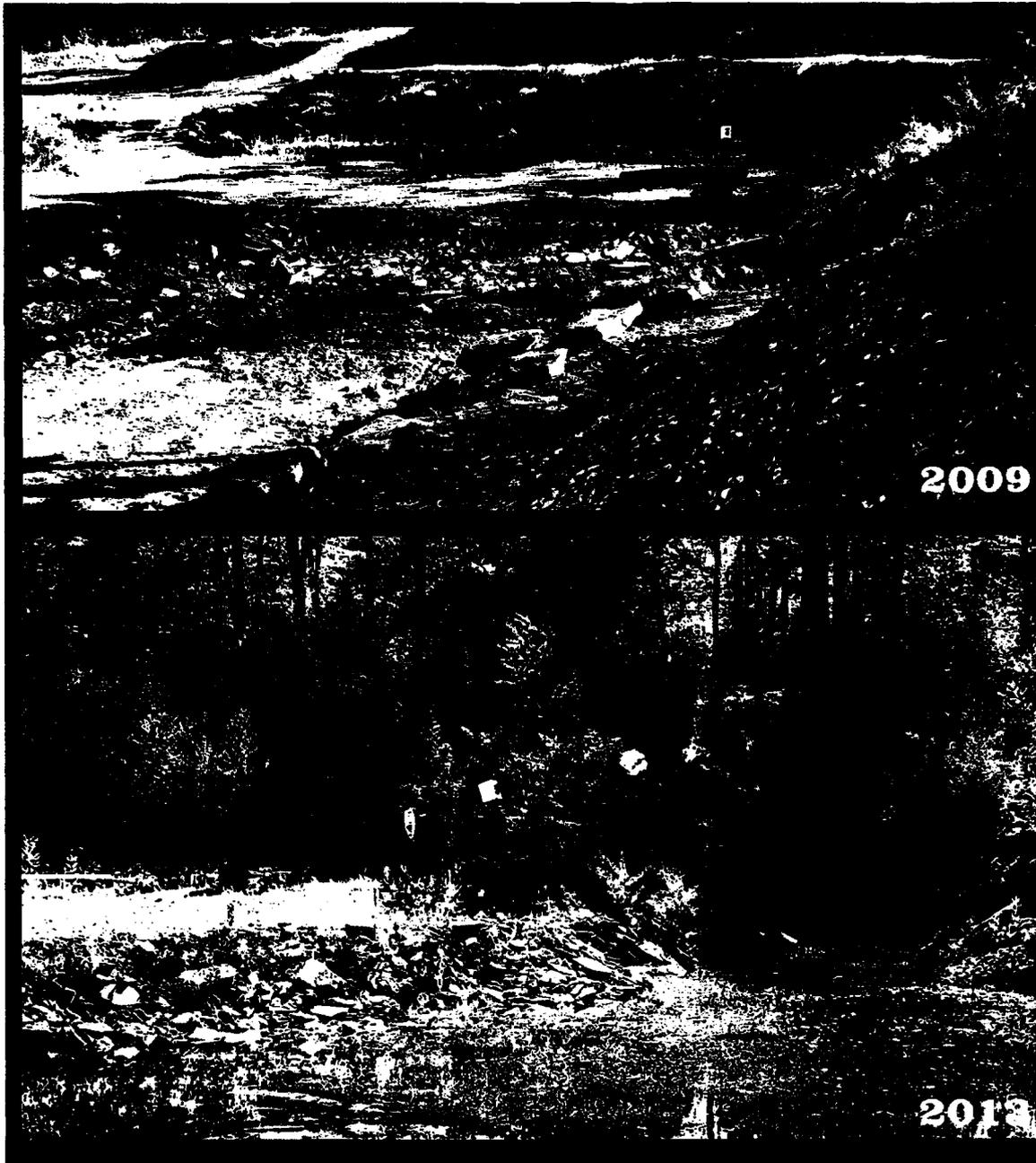
County: 37 - Lawrence; Municipality: All; Region: All
Well Status: All
Well Count: 16

REGION	COUNTY	MUNICIPALITY	API	WELL STATUS	FARM NAME	WELL TYPE	USGS QUAD	QUAD SECTION	LATITUDE	LONGITUDE	LATITUDE OFFSET (FEET)	LONGITUDE OFFSET (FEET)	GPS LATITUDE	GPS LONGITUDE	LATITUDE DECIMAL	LONGITUDE DECIMAL
EP DOGO NWDO Dstr Off	Lawrence	Mahoning Twp	073-00009	DEP Abandoned List	Pa & Lake Erie Rr 1	Undetermined	Edinburg	7	410230	802730	5,485.00	10,775	41° 1' 36.035"	-80° 29' 49.097"	41.026676	-80.49
EP DOGO NWDO Dstr Off	Lawrence	Mahoning Twp	073-00012	DEP Plugged	Wampum Hardware 1	Undetermined										
EP DOGO NWDO Dstr Off	Lawrence	Mahoning Twp	073-00013	DEP Plugged	Wampum Hardware 2	Undetermined	Edinburg	8					41° 1' 8.5371"	-80° 26' 47.496"	41.019038	-80.44
EP DOGO NWDO Dstr Off	Lawrence	Mahoning Twp	073-00014	DEP Plugged	Wampum Hardware 3	Undetermined										
EP DOGO NWDO Dstr Off	Lawrence	Mahoning Twp	073-00015	DEP Plugged	Wampum Hardware 4	Undetermined										
EP DOGO NWDO Dstr Off	Lawrence	Mahoning Twp	073-00020	DEP Abandoned List	Stavich Bike Trl 1	Oil	Edinburg	8	410230	802500	8,602.00	5,135	41° 1' 5"	-80° 26' 7"	41.018055	-80.43
EP DOGO NWDO Dstr Off	Lawrence	Mahoning Twp	073-20400	DEP Abandoned List	Beyond Corp 1	Oil	Edinburg	7					41° 1' 33"	-80° 29' 51.30"	41.025833	-80.49
EP DOGO NWDO Dstr Off	Lawrence	North Beaver Twp	073-00010	DEP Plugged	James Korab 1	Gas	Bessemer	3					40° 58' 40.756"	-80° 23' 34.395"	40.977987	-80.39



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EP DOGO NWDO Dstr Off	Lawrence	North Beaver Twp	073- 00016	DEP Abandone d List	Bartalone 1	Dry Hole	Bessemer	4	405730	802730	12,397.00	1,934	40° 58' 27.558"	-80° 27' 54.404"	40.924321	-80.46
EP DOGO NWDO Dstr Off	Lawrence	North Beaver Twp	073- 00018	DEP Abandone d List	Quear 1	Oil	New Middletown	3	400000	803000	9,078.00	3,750	40° 58' 30.30"	-80° 30' 48.90"	40.975083	-80.51
EP DOGO NWDO Dstr Off	Lawrence	Scott Twp	073- 00007	DEP Orphan List	Rennie 1	Undetermined	Harlansburg	8	410230	801000	10,650.00	7,300	41° 0' 44.76"	-80° 11' 35.22"	41.012433	-80.19
EP DOGO NWDO Dstr Off	Lawrence	Slippery Rock Twp	073- 00008	DEP Orphan List	Meeder 1	Undetermined	Portersville	5	405730	801000	3,050.00	5,200	40° 56' 59.225"	-80° 11' 6.8309"	40.949784	-80.18
EP DOGO NWDO Dstr Off	Lawrence	Wilmington Twp	073- 00004	DEP Orphan List	John & Barbara Reed 1	Undetermined	New Castle North	3	410730	801500	6,320.00	8,500	41° 6' 28.788"	-80° 16' 52.192"	41.107996	-80.28
EP DOGO NWDO Dstr Off	Lawrence	Wilmington Twp	073- 00005	DEP Orphan List	John & Barbara Reed 2	Undetermined	New Castle North	3	410730	801500	6,530.00	8,450	41° 6' 26.812"	-80° 16' 49.578"	41.107447	-80.28
EP DOGO NWDO Dstr Off	Lawrence	Wilmington Twp	073- 00006	DEP Orphan List	John & Barbara Reed 3	Undetermined	New Castle North	3	410730	801500	7,800.00	6,100	41° 6' 13.473"	-80° 16' 45"	41.103742	-80.27
EP DOGO NWDO Dstr Off	Lawrence	Wilmington Twp	073- 00017	DEP Abandone d List	Camp Elliott 1 Og Well	Comb. Oil&Gas	New Castle North	3	410730	801500	7,823.00	5,029	41° 6' 12.751"	-80° 16' 4.8789"	41.103541	-80.28



**The
Allegheny
National
Forest**

2009

Borrow Pit

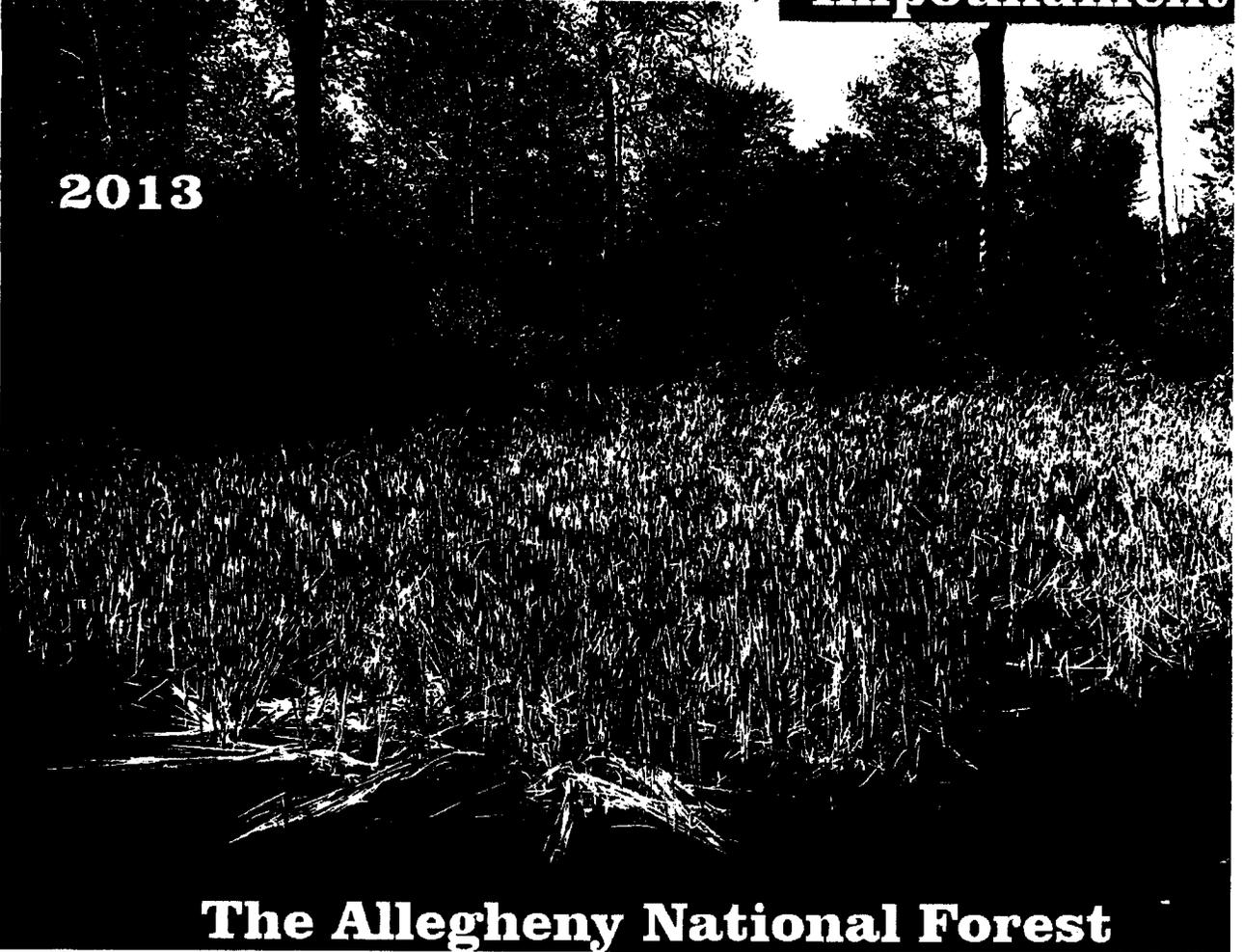
2013

2009



Impoundment

2013



The Allegheny National Forest



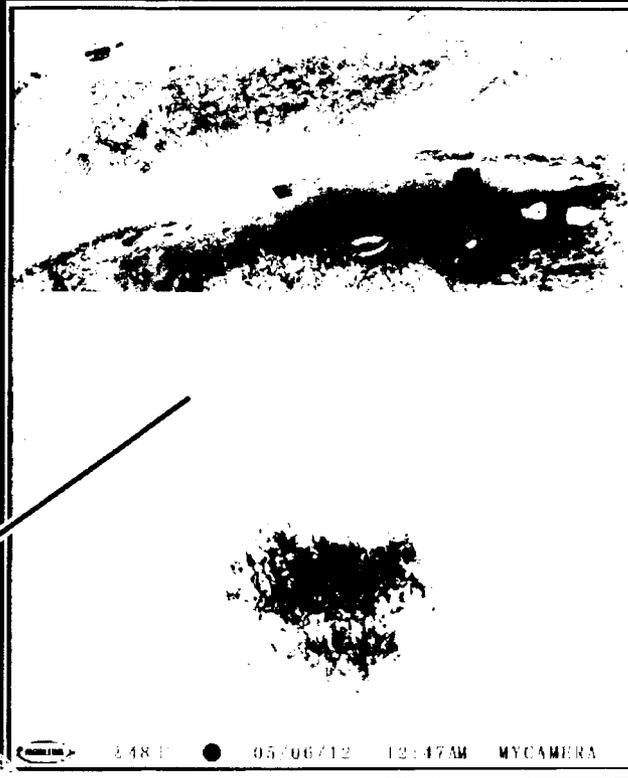
**State Game Land 59,
Potter County,
Wastewater Pipeline**

**Wastewater
Pipelines leak.**

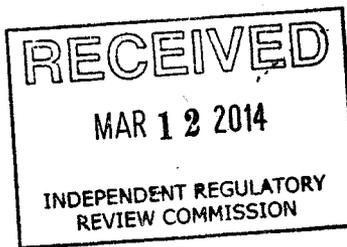
**They should not be
permitted.**



Deer consume oil and gas well brines.



Venison with Saucy Marinade A La Pennsylvania
(speeds up cooking time)



Environmental Quality Board
P.O. Box 8477
Harrisburg, PA 17105-8477

Dear Board Members:

I am writing to ask that the proposed revisions to PADEP's oil and gas rules not be finalized in their current form. My brother's job relies on Pennsylvania having a healthy, robust oil and gas industry, and I am concerned that the added burden of as much as \$100 million per year could significantly harm the industry while providing little or no added benefit to the environment.

On a daily basis, I see that Pennsylvania's environment is in good hands with the oil and gas industry. Those I encounter in this industry live, work and play in the same areas where the oil and gas industry operates, and they all share a passion for protecting the Commonwealth's natural resources. It is obvious that they -- like me -- want to pass on the legacy of a clean, healthy environment to our children and grandchildren.

I understand that regulations are necessary and must be updated periodically to match current laws and industry best practices. At the same time, however, the costs of regulations cannot outweigh their benefits. Many parts of these proposed rules go beyond what is called for under existing laws and impose requirements that go further than what is needed to effectively protect our environment. I am concerned that the result will be fewer oil and gas wells drilled, which will mean fewer jobs in the industry and in the communities that support the industry, at a time when we desperately need more jobs. It will also mean less tax revenue for all levels of government, placing even greater burdens on already-stressed government services.

Please vote "no" to adopting this rule unless it is substantially revised to reflect full consideration of the costs and benefits of the regulation. Show us that the wellbeing of our people and the prosperity of our communities are every bit important as Pennsylvania's natural resources.

Sincerely,

Briana K. Banner