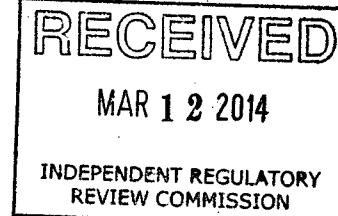


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Charles Evans Hunnell
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P.O. Box 548
Waynesburg, PA 15370-0548
ceh65471@windstream.net



22 January 2014

Good evening, my name is Charles Hunnell. I am a retired high school teacher of US History and Economics. My home is in Greene County. I own 136 acres of land, the property our family moved to when I was 12 years old. The property was long-wall mined during the decade of the 1980's. I have my own water system consisting of a spring and a well.

We are in trouble in our state and our local region of Washington, Greene, and Fayette Counties. Our leaders and regulators have welcomed in unconventional slick-water drilling and have permitted them to proceed with outdated regulations and with less than strenuous oversight. Citizens in each of our counties have suffered from this rush to new jobs such as: a) exposure to carcinogenic and other gases from well sites, condensate tank vents, and venting associated with the increased number of compressor stations just starting to be constructed. Family members have become sick due to exposure. b) Home potable water, both private and public, has been tainted by flow-back and produced water. Water authorities have to face the problem of increased bromide and trihalomethane. Home water systems have been contaminated. Farmers have lost livestock and families have lost pets when farm ponds and streams have been tainted with flow-back and produced water. We are just at the beginning of this process and many of our citizens have suffered because of an apparent lack of concern for the SAFETY and HEALTH of the people of Pennsylvania by our government and by the involved industries.

I have read DEP lab reports that verify that four sites on Greene County streams have been polluted through mine discharges of Alpha Resources' Emerald Mine and Cumberland Mine not with typical mine discharges but with excessive levels of bromides, strontium, and chlorides which are bi-products of unconventional slick-water drilling. DEP's Clyde Mine discharges the same excessive levels of the same chemicals. Greene County's Smith Creek, Whitely Creek, Frosty Run, and Ten Mile Creek continue to receive the same unregulated discharges with no apparent concern for the HEALTH and SAFETY of the citizens. How are unconventional slick-water drilling flow-back and produced water chemicals coming out of mine discharges? Why is no one in our government or the industries concerned with this? These discharges have already affected water quality of local water authorities. Citizens have had to boil water and authorities have been out of compliance because of the high levels of bromides and the increase in trihalomethanes. We have no knowledge of what the long run problems for our citizens may be with continued exposure to these chemicals in our water.

26

We need to be concerned with radiation associated with flow-back and produced water. The Duke study, released in October 2013 stated that radiation was a problem that was identified in sediment in Blacklick Creek in Indiana, County. Why has the DEP not responded to requests to come to Greene County hotspots and run radiation tests? Since the DEP has shown that flow-back and produced water is being discharged through mine discharges do we not have to be concerned with the health and safety of miners? Are miners being exposed to all the flow-back and produced chemicals and radiation? How about all the workers at drill sites? Should we not be concerned with the HEALTH and SAFETY of the gas and oil workers who may be exposed to flow-back and produced water and radiation?

Our neighbors in West Virginia are experiencing the end results of a lack of active regulation and industry concern in the current water crisis that has impacted 300,000 citizens. Do we not have a potential water and air crisis ahead of us? Without government, industry, and regulation concern are citizens in our counties and the Monongahela Valley and Pittsburgh not potentially in danger? We need modern regulations written specifically for unconventional slick-water drilling and applied equally to all forms of drilling. The industry is here; are we going to keep our communities and our culture by insisting that the process only moves forward provided the HEALTH and SAFETY of ALL Pennsylvanians are protected; or will we relegate our children to a future in a state transformed into a green chemical wasteland?

On specific proposed changes:

The public comment period should be expanded to 120 days and more hearings should be held in counties where drilling impacts have actually occurred.

Pre-drilling testing should be conducted by non-industry associated labs and should include testing for Bromides, Toluene, Benzene, Salt Levels, Arsenic, Methane both Biogenic and Thermo genic, Bacteria, Styrene, Strontium, Barium, Glycol, Phenol, and Cadmium.

There should be no open pits or any burying of anything on site.

Disposal of brine, drill cuttings, and residual waste: Pennsylvania should apply U.S. Resource Recovery and Conservation Act standards to regulate all aspects of the storage, transport, and use of hazardous materials contained in pits, centralized impoundments, and tanks. Residual waste/brine trucks should be marked with hazardous waste signs, numbered and tracked from point to point to ensure delivery to proper facilities.

It is critical, in this industrialization of a once primarily rural state, that the DEP become apolitical and be transformed into an independent agency.

CHEMICALS TO TEST FOR

**Chemicals to test for
in water wells and or springs:**

Bromides

Toluene

Benzene

Salt Levels

Arsenic

Methane

Bacteria

Styrene

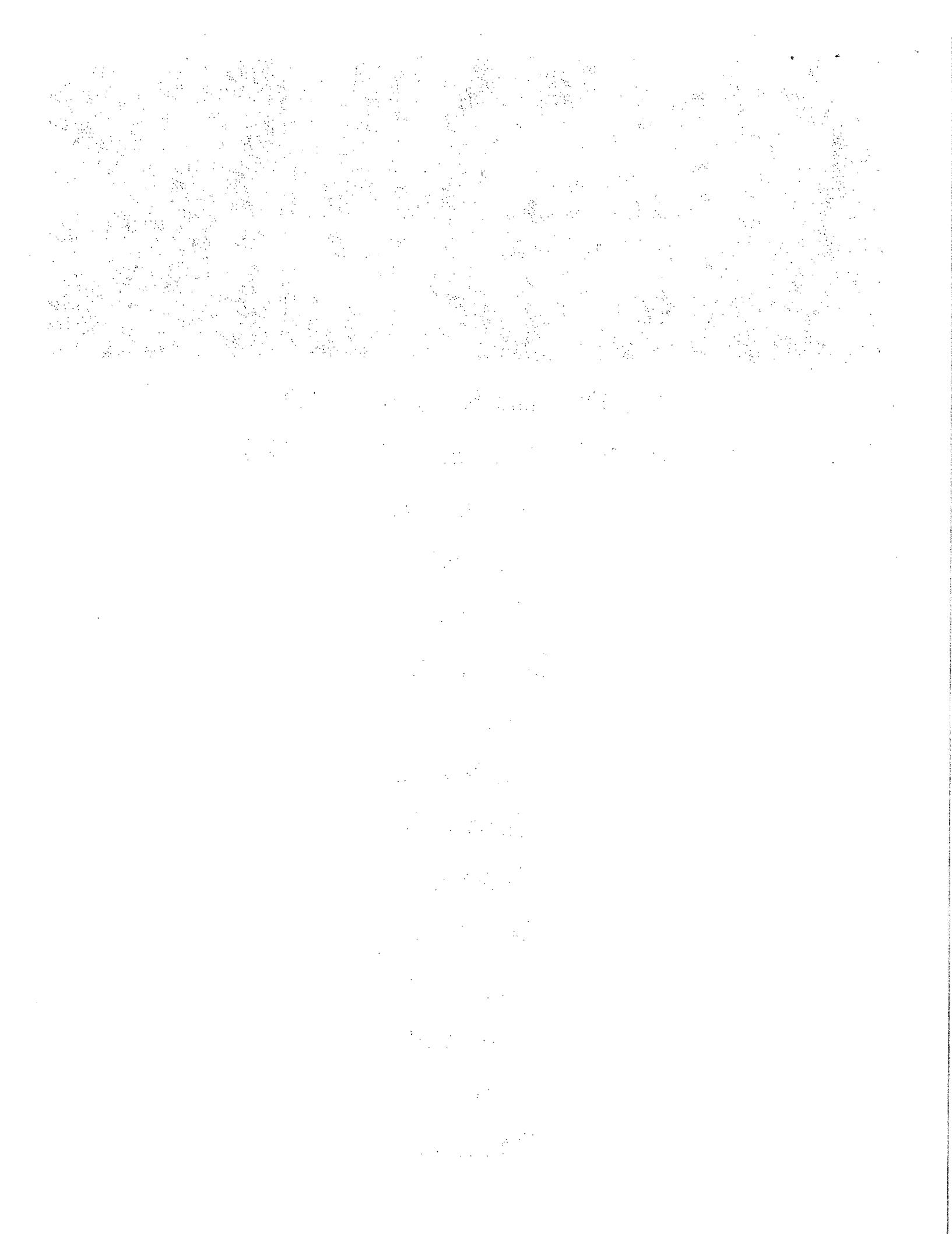
Strontium

Barium

Glycol

Phenol

Cadmium



January 6, 2014

Berks Gas Truth * Clean Water Action * Delaware Riverkeeper Network * Earthworks * Clean Air Council *
Damascus Citizens for Sustainability, Inc. * Sierra Club, Pennsylvania Chapter

Proposed changes to Pennsylvania's oil and gas regulations
Key concerns and talking points

In mid-December, the Department of Environmental Protection (DEP) issued proposed changes to the state's oil and gas regulations, known as Chapter 78 of the Pennsylvania Code. Act 13, the oil and gas law passed in 2012, requires DEP to make these changes. They are also necessary because regulations for conventional drilling are outdated and inadequate given the large amount of land and water used and waste and pollution produced in shale gas development.

Public participation is essential to making regulations stronger and more protective of air, water, and health! You have until February 12 to submit written comments or testify at hearings. You can use the analysis and talking points below (which cover key parts of the regulations) to prepare your comments. The regulations and public comment information are at:
www.portal.state.pa.us/portal/server.pt/community/public_resources/20303/surface_regulations/1587188

FIRST please state that the public comment period should be expanded to 120 days minimum and more hearings should be set in affected counties. This is an important and far-reaching rulemaking and more time is needed for people to participate in a meaningful way. 59 Pennsylvania organizations and housands of people have signed a petition calling for more time.

1. Pre-drill water testing and the restoration and replacement of contaminated water supplies (Sections 78.51 and 78.52). We learned through DEP's determination letters that natural gas drilling operations have impacted at least 161 water supplies statewide. The natural gas industry has fought to have water restored to only pre-contamination conditions—even if it is not safe to drink. In addition, DEP leaves it up to the driller to decide when, where, and how to conduct water quality tests before drilling starts. DEP should require:

Operators to restore contaminated drinking water to a quality that meets Safe Drinking Water Act standards, no matter what the quality of the water prior to drilling. If the quality of a water supply prior to drilling was above these standards, the operator must restore the water to that higher standard; otherwise, good water supplies will be degraded.

All drillers to use a consistent list of parameters for pre-drill water testing, which DEP must establish before the proposed regulatory changes are adopted. The parameters should be as comprehensive as possible, but at a minimum match what DEP uses when it conducts full contamination investigations and to ensure that complete baseline data is available.

All drillers make pre-drill data available to the public, while protecting individual homeowners' privacy, through an online platform, which DEP must establish before the proposed regulatory changes are adopted.

2. Standards for frack pits and impoundments (Sections 78.56, 78.57, 78.58, and 78.59). Mounting violations and the potential for water and air pollution have already led some companies to transition away from pits and standardize the use of closed loop systems which utilize tanks to store wastewater. DEP should:

Prohibit operators from using open pits for storage of regulated substances, including wastewater, drill cuttings, and substances (like gels and cement) that return to the surface after fracking. Many spills, leaks, and other problems involving pits have occurred statewide that contaminate water, soil and air. Waste should be stored only in closed systems.

January 6, 2014

Prohibit the onsite processing of shale drill cuttings. which often contain hazardous substances and radioactive materials and require thorough analysis and special handling.

Define "freshwater" that is used in oil & gas operations. Water leftover from fracking and contaminated fluids being recycled for fracking (such as from mining or sewage) is often mixed with clean water for additional operations. The lack of a clear definition allows operators to avoid regulations on the use and disposal of polluted substances.

3. Disposal of brine, drill cuttings, and residual waste (Sections 78.60, 78.61, 78.62, and 78.63, and 78.70) Operators currently escape the strict federal regulation of hazardous substances that other industries have to follow. Yet drilling and fracking generate large amounts of solid and liquid waste that can harm water supplies, air quality, land, health, and wildlife. Pennsylvania should apply U.S. Resource Recovery and Conservation Act standards to regulate all aspects of the storage, transport, and use of hazardous materials contained in pits, centralized impoundments, and tanks. In addition, DEP's proposed Chapter 78 changes don't address the risks posed by hazardous waste and do little to improve current regulations or ensure safe disposal. DEP should:

Prohibit the burial or land application of drill cuttings, which can contain polluting and radioactive substances. DEP proposes different conditions for disposal of drill cuttings from above and below the well casing, but neither makes the practice safe. Cuttings from deep underground may contain more pollutants, but chemical additives and contaminated fluids are also found in drill cuttings from shallower areas.

Prohibit the onsite burial of waste pits. Buried pits can leak and pollute groundwater over time, yet burial allows operators to walk away from any responsibility after completing operations.

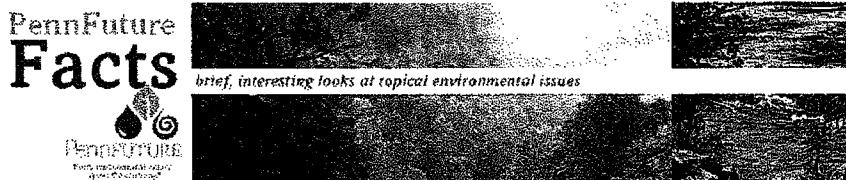
Prohibit the use of brine for dust suppression, de-icing, and road stabilization. Stormwater runoff carries brine into nearby waterways and wetlands. Not allowing the use of brine from shale gas wells is a positive step, but brine from conventional wells can also push salinity loads far above any naturally occurring conditions.

Prohibit the land application of tophole water, pit water, fill, or dredged material. These substances can contain chemicals and sediments bound with pollutants that pose risks to water, air and soil.

4. Identification of orphaned and abandoned gas and oil wells (Section 78.52(a)) This is an important change and should be supported. About 200,000 abandoned wells exist statewide. As drilling spreads and intensifies, so does the chance of accidents, blowouts, and pollution from the intersection of new wells with old ones. DEP should expand these changes and require operators to:

Identify existing wells before site and well construction and drilling (not just fracking), so that the location of a new well can be changed if needed. Identified wells should be mapped on a publicly available web platform.

Plug and seal abandoned and orphaned wells according to state safety standards *prior* to well site construction. The state lacks funding to address the large number of old wells, so drillers should be responsible for preventing pollution of adjacent water wells and air pollution from accidents when they occur.



Monday, January 6, 2014

Speak now: Public hearings on new oil and gas regulations

The Pennsylvania Environmental Quality Board (EQB) has scheduled seven public hearings in January throughout the state on new regulations around oil and gas development, and is encouraging public comment during the rulemaking process.

At issue are the protection of streams and waterways from drilling operations; storage or freshwater and other fluids related to fracking; and the proper collection, analysis and disposal of waste materials at well sites, among many other concerns.

The first hearing is scheduled on Tuesday, January 7, in northeastern Pennsylvania. A complete listing of hearing dates and locations, as well as registration information, can be found [here](#).

Listed below are a series of concerns we have with the proposed regulations. We encourage you to use these talking points to guide your testimony. If you do testify, keep in mind that you are only allotted five minutes so you will want to speak to the issues that resonate with you the most.

All fluids related to oil and gas development should be contained in engineered facilities, not "natural depressions." (Section 78.1, definition of "freshwater impoundment" and "pit," Section 78.56)

Our streams and groundwater should be secure from pollution caused by the storage of wastes and fluids associated with oil and gas production operations. The definitions of "pit" and "freshwater impoundment" raise questions about that objective because they continue to incorporate the concept of "natural topographic depressions" within the definitions. We should not even suggest that Pennsylvania will allow fluids related to oil and gas operations to be managed in "natural depressions." All facilities used to hold fluids that may contain potential water pollutants should be specifically engineered for the task.

The definition of "seasonal high groundwater table" should be retained in the proposed regulations, because the term continues to play a key role in regulating oil and gas activities. (Section 78.1)

Proposed section 78.1 deletes the definition of "seasonal high groundwater table" even though that term is still used throughout the regulations, including in sections 78.56(a) (11), 78.59b(e). This definition should be maintained to ensure clarity and consistent enforcement.

The permit applicant, not the Department of Environmental Protection (DEP), should be responsible for determining whether proposed oil and gas operations would affect threatened or endangered species. (Section 78.15(d))

Protecting the habitat and physical safety of vulnerable species is a critical part of ensuring biodiversity and the quality of our environment. The federal Endangered

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climate action plan
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coal community
complete streets
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Corbett cracked
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Species Act was designed to achieve these goals by making it unlawful for any person to harass or take a listed species, including adversely affecting the habitat of a listed species in a manner that effects a take. Similarly, state law currently imposes the obligation on operators to ensure that their activities will not adversely affect listed species or their habitat.

The proposed regulations change that obligation by only requiring gas operators to mitigate the impact of their operations on threatened or endangered species if the DEP determines that the well site location will adversely impact species or "critical habitat."

Because an operator proposing an oil or gas project stands to gain financially from the project, and is in the best position to understand the scope and potential impact of its proposal, the operator (and not the DEP) should have the burden of determining whether its project would affect listed species and their habitat.

The DEP should respond to comments received about a permit that may affect an important public resource. (Section 78.16(d))

The proposed regulations allow for a public resource agency to receive notice of, and submit comments about, a proposed well permit that would affect its resources. The regulations, however, do not require the DEP to respond to those comments. To ensure that comments are adequately considered and that public resources are fully protected, the regulations should require the DEP to respond to comments submitted by public resource agencies.

The DEP should not compromise its obligation to protect the environment by balancing the citizens' constitutionally guaranteed right against private interests in oil and gas. (Section 78.16(g))

The DEP is required by the Pennsylvania Constitution to protect the public's right to a clean environment. The proposed regulations provide that even though the DEP determines that a proposed well will have a probable adverse impact on a public resource, the DEP still cannot impose conditions that will prevent or mitigate that harm without first considering the impact of the condition on the individual mineral right owner's ability to "optimally" develop his or her oil and gas rights. This regulation inappropriately places the DEP, whose mission is supposed to be to protect and conserve Pennsylvania's environment, in the position of balancing protection of important public resources against individual property rights. Furthermore, it inappropriately, and potentially illegally, elevates the "optimal" development of oil and gas over the protection of important public resources against likely adverse impacts. These draft regulations do not give proper weight to the DEP's constitutional obligation to protect the environment. So long as the DEP's actions do not affect a taking of private property, the DEP should be obligated to take whatever actions are necessary to condition permits in a manner that protects important public resources.

The DEP's duty to investigate water pollution should extend to the all oil and gas activities. (Section 78.51(c)).

The Chapter 78 regulations require the DEP to investigate instances of water pollution that occur near oil and gas wells. As part of its investigation, the DEP may determine that water pollution was caused by the "well site construction, drilling, alteration or operation activities." This set of activities is much more limited than the list of activities defined as "oil and gas activities" in Act 13. To ensure maximum protection of water resources, the DEP's investigation should extend to all oil and gas activities.

The prohibition on construction of fluid storage areas within 100 feet of certain water bodies should be extended to all water bodies. (Section 78.59c)

The current draft regulations prohibit well operators from building "centralized impoundments" for wastewater within 100 feet of any "solid blue line stream" identified by the United States Geological Survey. Solid blue line streams flow consistently year round. This 100 foot buffer is important, but it should be extended to other streams that do not flow continuously. Although we recognize that Act 13 unwisely referred to "solid blue line streams," intermittent and ephemeral streams need to be protected as well. Some of our most vulnerable waters are intermittent portions of high quality streams. Those waters would not be adequately protected by these regulations. Furthermore, the DEP has an obligation to protect intermittent streams under the Clean Streams Law. Rather than attempt to make that decision on a case by case analysis, the DEP should extend this buffer to all Pennsylvania streams.

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The DEP should stop promoting the disposal of residual waste at well sites. (Section 78.62)

The draft regulations would allow well operators to dispose of residual waste in pits on well sites as long as they comply with certain minimal requirements. Because waste generated at oil and gas sites is exempt from the hazardous waste regulations, the result is that hazardous waste can be managed as residual waste and disposed at well sites with a single synthetic liner and no long-term groundwater monitoring. These minimal protections are inadequate.

As the DEP knows, many well-site disposal pits have leaked in recent years, contaminating surface and groundwater and dotting the Pennsylvania countryside with brownfield sites. Given the high risks of these mini-landfills, and the fact that their one and only advantage is fewer truck trips to landfills (and reduced cost for operators), the DEP should prohibit well site disposal of residual waste entirely. To the extent that the DEP continues to allow this method of waste disposal it should, at a minimum, require long-term groundwater monitoring and public notice of existing and future disposal sites.

The DEP should strengthen its regulatory mechanisms for ensuring that pits and impoundments are constructed in a structurally sound manner and according to regulation. (Section 78.69c(m))

The rulemaking proposes to allow engineer certifications that pits and impoundments have been correctly constructed in lieu of DEP inspections. If the DEP is not itself capable of ensuring proper construction of facilities such as centralized impoundments, these certifications should be submitted under penalty of law for unsworn falsification to authorities (18 P.S. § 4904) so that any intentional falsification can be prosecuted criminally. The DEP should also mandate better self-monitoring by requiring that photographs or video be taken of the finished construction so that there is evidence of the site construction that can be reviewed after the fact.

Any disposal of waste materials at well sites should require that representative samples of the material be taken and analyzed and submitted to the agency to demonstrate that, for example, the drill cuttings are not contaminated, or that residual waste meets the regulatory standards. (Sections 78.61 and 78.62)

If waste is disposed at well sites, a sample of the material should be taken and analyzed. This sample should be sent to the agency to demonstrate that drill cuttings are not contaminated, and that any residual waste does not exceed legal limits. The regulations do not currently require that the operator use any scientific methodology to demonstrate compliance.

The collection and analysis of chemical samples of waste that the operator intends to dispose on site should not be discretionary; the regulations should be clear that it is a mandatory obligation. This is particularly of concern where the disposal site does not need to be inspected by the agency prior to closure, and there is no long-term groundwater monitoring. (Section 78.63(19))

Collection and analysis of chemical waste samples that are intended to be disposed of onsite needs to be a mandatory requirement. The draft regulations leave this to the discretion of the operator, which should not be permitted. This is particularly important where a disposal site does not need to be inspected by the agency prior to closure, and there is no provision for long term monitoring of ground water.

The DEP's proposed regulations for the road-spreading of brine pose unacceptable threats to the Commonwealth's water resources – and would be unlawful. (Section 78.70a)

Section 78.70 of the DEP's proposed oil and gas regulations would authorize the road-spreading of brine from conventional wells for dust control on dirt and gravel roads. Proposed section 78.70a would authorize the road-spreading of brine for de-icing purposes. Both sections would deem any operator that spreads brine on roads to have a "permit-by-rule" for the beneficial use of residual waste as long as the operator complies with the proposed Chapter 78 regulatory scheme.

DEP's approach is troublesome for two reasons. First, because the proposed regulations do not ensure compliance with the DEP's anti-degradation program or contain adequate chain-of-custody requirements, the risks of spreading brine on roads outweigh the benefits, which are largely confined to disposal-cost savings for the industry.

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standards	Shale-gas
environmental	Streams
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penns	fracking
bank	fracked
Thomas	UACC Energy
United	United Church of Christ
vacant	Uniteethers
vacant	vacant-property-scouts
soil	wastewater
water	West Virginia
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gas	Witter-Barce
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Yale	Yale

PennFuture has staff throughout Pennsylvania.

The Philadelphia Inquirer called PennFuture the "state's leading environmental advocacy organization;" the Pittsburgh Post-Gazette named the organization "one of the 10 most influential groups on the issue of natural gas drilling;" and StateImpact Pennsylvania, an online collaboration of NPR stations across the state, called PennFuture "the commonwealth's main environmental advocate."

The second problem with sections 78.70 and 78.70a is a legal one. All wastewaters from oil and gas operations, including brine, are residual waste under the Pennsylvania Solid Waste Management Act ("SWMA"). It follows that any beneficial use of brine, including dust suppression and de-icing, is subject to regulation under the DEP's SWMA regulations at 25 Pa. Code Chapter 287. These regulations do not currently allow permits-by-rule for road-spreading or any other beneficial use of brine. Beneficial uses of brine may be approved only under the general permit scheme set forth in Subchapter H of Chapter 287. Thus, the permit-by-rule scheme proposed in sections 78.70 and 78.70a is not only imprudent; it would also be illegal.

The DEP's revisions to Chapter 78 should establish meaningful standards for the restoration of well sites and impoundment sites. (Sections 78.65, 78.59b, and 78.59c)

Act 13 requires two stages of restoration for well sites. On the one hand, section 3216(c) requires partial restoration after the conclusion of drilling and fracturing operations. On the other hand, section 3216(d) requires final restoration after the last well on the site has been plugged. The DEP is proposing to implement these sections in proposed regulation 78.65, which provides that a well site will be considered restored if it is returned to its "approximate original conditions, including preconstruction contours," and if it "can support the original land uses to the extent practicable." Similar language appears in the DEP's proposed regulations for freshwater impoundments (78.59b) and centralized wastewater impoundments (78.59c), which also contain restoration requirements.

A return to original conditions, contours, and uses is a laudable goal for the restoration of well sites (both post-drilling and post-plugging) and impoundment sites. Currently, though, the DEP's general restoration standards are practically unenforceable because the DEP's regulations (i) fail to require environmental baseline site assessments, (ii) fail to require site-specific standards and criteria for restoration, (iii) fail to require environmental professionals to sign off on site restorations, and (iv) establish no process whereby the DEP can finally approve or disapprove restoration. The DEP should require site-specific baseline assessments and restoration plans for all well sites and impoundment sites, require professional certification that restoration goals have been met, and require DEP approval before a site can be considered to be restored.

The DEP's proposed regulations regarding bonding are inadequate, because they fail to ensure that well sites and impoundment sites will be finally restored before they are released from operators' bonds. (Subchapter G)

Under Act 13, an operator can obtain one blanket bond in the amount of \$600,000 that covers all of an operator's well sites in the Commonwealth. Despite the extremely low amount of this bonding requirement (and of all of Act 13's bonding requirements), the bond is supposed to secure all of the operator's legal duties regarding water supply replacement, restoration and well-plugging.

The DEP may not have the power to require higher amounts for bonds than the Act 13 amounts, but it can and should establish a process to ensure that operators are not released from liability for particular well sites until those sites are properly restored. The DEP's proposed revised bonding regulations (set forth in Subchapter G of Chapter 78) fail to do this. They condition release from liability only on the filing of a certificate of plugging. Release from liability should also be conditioned on the adequate final restoration of the well site after the last well on the site has been plugged.

Andrew Sharp is PennFuture's Director of Outreach and works out of our Philadelphia office.

Posted by Andrew Sharp at 12:17 PM

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Labels: DEP, EQB, fracking, oil and gas, public hearings, talking points

1 comment:



Jack Wolf January 8, 2014 at 4:07 PM

I would also like to point out that those "natural depressions" would include vernal ponds, a seasonal wetland used for spring spawning.

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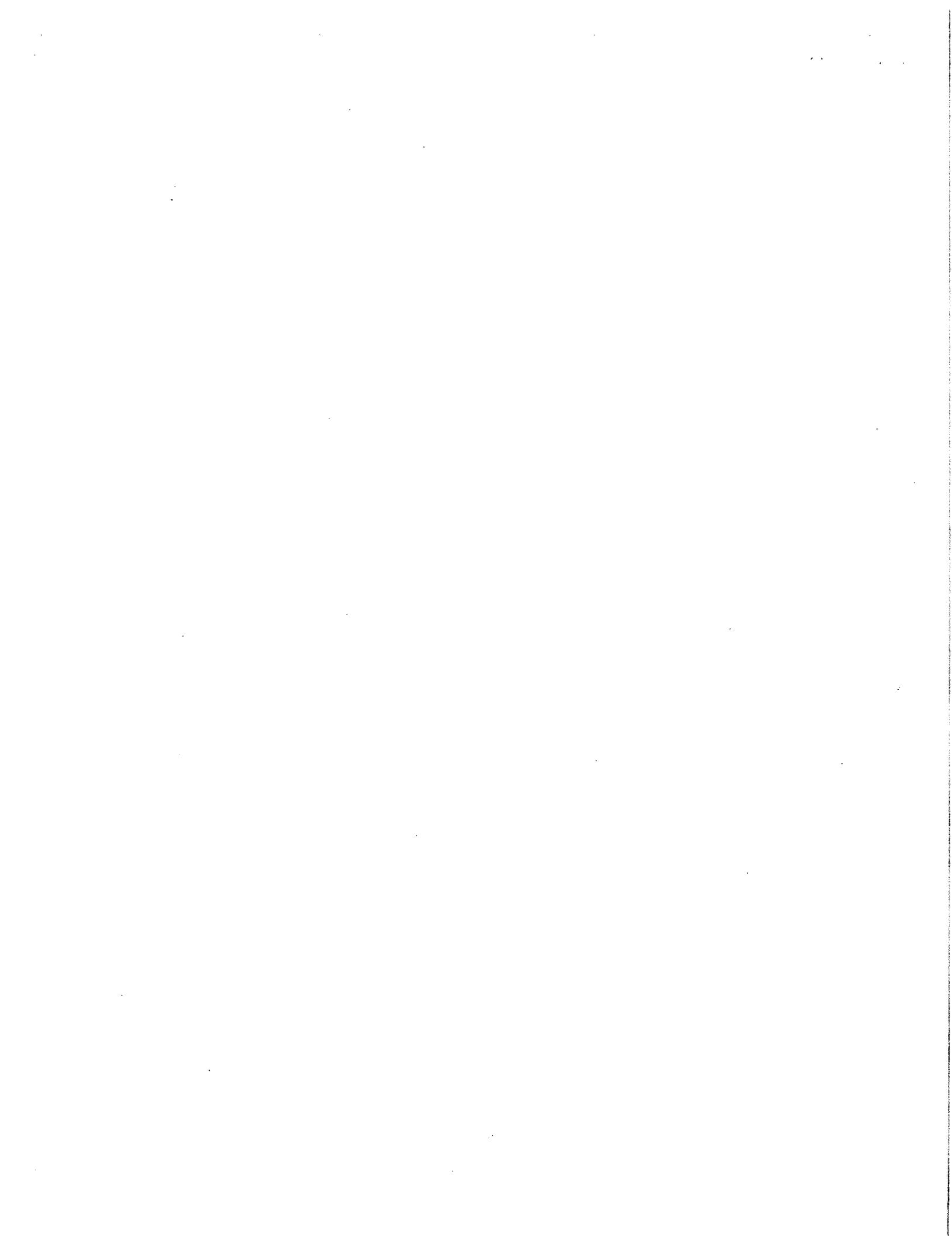
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I'm here to talk about a family who lives in Duke Center, (McKean County), Pennsylvania.
(*Duke Center, Otto Twp. borders New York State*)

The Thomases. When they look out their window they see abandoned wells and oil tanks.

A large number of these wells are leaking oil and natural gas. There are puddles of oil, acres of contaminated soil, pump-jacks, an abandoned brine pit, plastic and metal pipelines, electric wires, deteriorating storage tanks, all abandoned.

The Thomases recently discovered another abandoned well on their property, bringing the number of found wells up to 32. Some wells have had their wellheads and the entire related infrastructure removed, in areas where the vegetation is heavy, locating wells has been difficult. 65 are identified on a historic map.

Sometimes there is a light sheen of oil flowing down Knapp Creek, a tributary of the Allegheny River. During rain and flood events, the flow of oil increases.

The situation recently took a turn for the worse when a large oil storage tank failed, sending its contents of oil downstream. Another well, (one of the 32 wells) that has not leaked in the past; started to leak (oil) the other day.

Thirteen of the wells don't have API numbers. None of the 32 wells are identified on DEP's online map; even after many reports to DEP officials.

In addition to the DEP, Rep. Martin Causer, many individuals, and officials, from local on up to the governor's office, organizations including the McKean County Conservation District, the Fish and Boat Commission, The National Response Center, the EPA, and many others have been contacted about this.

An administrative order was issued (several months ago) by the DEP to the administrator of the deceased operator's estate; it doesn't seem to be worth the paper it's printed on.

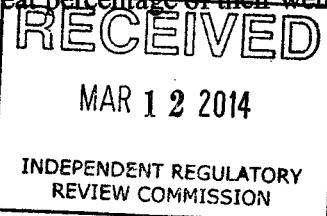
None of the 19 wells that are identified in the order has made it to the DEP's online map either.

Despite emails, phone calls & many pleas for help, oil from these wells continues to enter the watershed many New York State and Pennsylvania citizens rely.

Currently operators are required to post bonds equal to *only a fraction** of the actual cost of plugging. This *increases* the likelihood of improper well abandonment.

Regulations which would require operators to post bonds *equal to the approximate cost* of plugging their wells would immediately *reduce* the risks associated with improper well abandonment.

Some operators have accrued large numbers of inactive wells. In some cases these represent a great percentage of their well inventories.



Limiting the number of inactive wells, and also the percentage of inactive wells operators are permitted to accrue in their inventories by setting regulatory limits will minimize the risk of inheritance these wells present to surface owners, stakeholders and more importantly, The Commonwealth.

Requiring operators through regulations to plug orphan, abandoned and inactive wells in their inventories, before authorizing permits to drill and operate new wells will encourage operators to plug their depleted wells and would also provide much needed protection for the environment, surface owners and other stakeholders.

Allowing operators who have accrued large numbers of depleted** inactive wells that may never be commercially viable to apply for Act 13 impact funds to be used to plug inactive (depleted) wells would go a long way to addressing these risks, while providing employment opportunities.

Allowing surface owners to apply for Act 13 impact funds to be used to plug legacy wells on their property would enable citizens to take a pro-active role in reducing contamination and The Commonwealth's green house gas emissions.

Conservation districts, and other organizations that have refused to assist or chosen not to respond to oil and gas related contamination incidents, should not be eligible to receive Act 13 funds.

This will encourage conservation districts, and other organization to take a pro- active role in remediating oil and gas related impacts on The Commonwealth's natural resources.

This was one of the intended uses for Act 13 funds. The organizations that would use Act 13 funds for pet projects while turning their backs on needed remediation is an insult to the spirit of Act 13.

* See attached: Economic Incentives and Regulatory Framework for Shale Gas Well Site Reclamation in Pennsylvania, by Austin L. Mitchell and Elizabeth A. Casman
Department of Engineering and Public Policy, Carnegie Mellon University
http://www.hydrorelief.org/frackdata/new_nov/Mitchell2011_pluggingwells.pdf

** Not depleted, wells that are granted "inactive" status while waiting for associated infrastructure such as gathering lines etc.

Laurie Barr
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Cooper, Kathy

From: RegComments@pa.gov
Sent: Wednesday, March 12, 2014 9:56 AM
To: Environment-Committee@pasenate.com; apankake@pasen.gov; IRRC;
RegComments@pa.gov; erekop@pahousegop.com;
environmentalcommittee@pahouse.net
Cc: ra-epmsdevelopment@pa.gov
Subject: Proposed Rulemaking - Environmental Protection Performance Standards at Oil and Gas Well Sites



Re: Proposed Rulemaking - Environmental Protection Performance Standards at Oil and Gas Well Sites

The Environmental Quality Board (EQB) has received the following comments regarding the above-referenced proposed rulemaking.

Commentor Information:

John Trallo
Shale Justice Coalition (jtrallo@epix.net)
47 Main Street
Sonestown, PA 17758 US



Comments entered:

Tunkhannock Hearing, January 27, 2014

No attachments were included as part of this comment.

Please contact me if you have any questions.

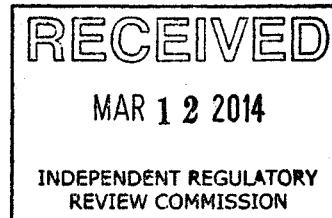
Sincerely,
Hayley Book

Hayley Book
Director, Office of Policy
PA Department of Environmental Protection
Rachel Carson State Office Building
P.O. Box 2063
Harrisburg, PA 17105-2063
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Official full testimony

January 13, 2014

Testimony of Ralph Kisberg
1736 Almond St.
Williamsport, PA 17701
rakisberg@gmail.com



To: Pennsylvania Environmental Quality Board
Re: Public Comment on Rulemaking Amendments to 25 Pa. Code Chapter
78

Thank you for the opportunity to address the Board. In preparation, I attended both days of the Technical Assistance Board meetings in State College back in August. There I listened to and talked with a number of small conventional drillers. They were upset about the costs of some of the proposed amendments. I was empathetic at first, but in studying the Regulatory Analysis Form completed by the DEP, it is clear the estimated figures are not unfair or uncompetitive expenses given the volume and value of the hydrocarbons produced in the Commonwealth currently and for the foreseeable future. I respectfully suggest you study that well crafted form thoroughly.

Yes, some small conventional well operators will go out of business. But if they cannot afford to comply with the very limited number of proposed regulations DEP has deemed applicable to them, the harsh reality is that their resource production in the current era is insignificant. Whereas their industry's history and legacy of environmental degradation unfortunately, is not. As the DEP phrased it, "the costs of reasonable environmental protective measures are relatively small compared to the costs associated with cleaning up a release of pollutant substance into the environment and restoring the impacted area."

Given the emphasis on jobs the advent of the unconventional gas industry has contributed to our state's economic projections, the potential job loss from the effects of the 5 sections of proposed regulations on the operators of conventional oil and gas well sites now in the Commonwealth will undoubtedly be stressed as reason to somehow exempt small business operators, or to water down the regulations for all. It is important to point out what the reality of living with unconventional gas development has taught communities like ours; its cyclical nature, it's extremely high job turnover and need for personal to fill those vacated jobs. Eventually, somewhere there will another job for the competent, trustworthy and hardworking who want to stay in the industry. It may be many miles, or

even states away for any given time, but that is the nature of work in the modern oil and gas industry.

Searching out the mission of your board, I see that at the top of the list is the charge to, "Develop a Master Environmental Plan for the Commonwealth". I apologize, but I do not know the state of that objective given the relatively new and environmentally overwhelming addition of the unconventional gas business. If the Master Plan has not yet been updated, I trust it is on your agenda soon and that it will be done welcoming public participation, as is being done tonight. It will certainly be a daunting task.

One important aspect of gas development we who live with it realize that others out of the target counties may not is the relative inefficiency of the current preferred extraction method for shale gas. In a public hearing last year in Fairfield Township here in Lycoming County, Tom Irwin, Operations Manager for Inflection Energy, a 30 year industry veteran and a fine addition to our community, testified under oath, in response to a question about how much gas is extracted from a targeted area through hydraulic fracturing of one of his company's horizontal wells here in the Marcellus shale, that about 15% of the gas will be extracted (my recollection of Tom's exact phrasing is not precise, but his answer and the 15% percentage is a matter of public record).

Other operators have claimed up to 25% in print, but the point is, now, only 13 years or so into significant commercial production of shale gas anywhere in the world, there is a lot of gas left in the ground. No one is naïve enough to believe the large multinational corporations that have flocked to our Commonwealth will be satisfied with 15% or even 25% of their rights. Extraction methods will evolve, new technologies will come along, market conditions will change and all we can project is that when it is possible to make money by re-entering the formation it will occur in the same places it has already, and new areas previously deemed uneconomic, will also be targeted.

In the spring of 2012, an Environmental education and advocacy coalition I belong to, the Responsible Drilling Alliance, based here in Williamsport, was invited to give presentations on shale gas development to the 4th, 5th and 6th graders of the Wyalusing Elementary School in the Commonwealth's heaviest drilled county, Bradford. One of the children, a 5th grade young lady, reflected the attitude of many of her schoolmates when she asked, in a somewhat hopeful but slightly frustrated manner, "When are they going to leave?"

It was a question none of the 3 of us, a former educator, a retired chemical safety engineer, and a former manager of thousands of acres of forested property for a Native American tribe, could answer.

One of the results of still being haunted by the tone in that young voice, is a commitment by all 3 of us and others in our organization, known as RDA, to a future Pennsylvania that still honors the origin of our Commonwealth's name. We work hard in the hope of our generations leave a legacy for those who follow that fulfills that little girl and her children's children right to clean air, pure water, and the natural, scenic, historic and esthetic values of the environment we enjoyed here for so long.

One way to help accomplish that, though it is not part of the current revisions, is for you to consider, for another time, an element of shale gas development not covered by any statute or regulation yet; that of well pad spacing. As an example of that sweet 5th graders frustration, take a drive north of Williamsport into Gamble Township to the north end of Sugar Camp Road and follow it along as it turns slightly right into Calvert Road. You will find on your right, starting near the beginning of Calvert Rd., a series of 3 well pads as you proceed north, two on the east side operated by Atlas Energy, within .2 mi of each other, followed by an Anadarko Pad another .2mi on the west side of the narrow lane.

Certainly the question of well pad spacing needs to be taken up eventually. In the mean time, many of the current proposed amendments are positive steps towards the promise of Article 1, Section 27 of the Pennsylvania Constitution. Provisions that need to be supported. There are also many others that need to improved before they are codified.

Section 78.51 (2) regarding the restoration and replacement of contaminated water supplies is a proposed standard all Pennsylvanians can be proud of: "The quality of a restored or replaced water supply will be deemed adequate if it meets the standards established under the Pennsylvania Safe Drinking Water Act or is comparable to the quality of the water supply before it was affected by the operator if that water supply exceeded those standards."

Section 78.52a, Abandoned and orphaned well identification, is an example of a good start on a rule to address a problem we have seen twice in this area. In Forks Township in Sullivan County a 7,000' abandoned well from the 1950's had to be plugged in 2012 after DEP detected combustible gas at the surface of the ground above the BJ Broschart well and in a number of homes and a stream in the vicinity. As

the well had no viable operator, the DEP assumed the responsibility of plugging the well through the Orphaned Well Plugging Fund. I believe the situation is still under investigation by the department but DEP NC Regional Office Spokesperson Dan Spadoni summed up the situation clearly with a statement in October of 2012, "Had we not taken this action, this well would have simply been added to the list of thousands of orphaned wells waiting to be plugged, and it could have taken many years". What Dan Spadoni didn't say was the obvious, that the moving of this plugging to the top of the list took away funds from plugging another well, or possibly many, as the cost of this well plugging was reported to be \$100,000.

In order for abandoned wells to be more easily avoided, I believe DEP should have operators identify existing wells before wells are spudded, instead of, "prior to hydraulic fracturing" as the language in the section currently reads. That will insure a choice could be made to alter horizontal well bore paths prior to drilling if fracing them could potentially cause a problem with communication with an abandoned deep well. While it is true that about half of all wells permitted in a given year do not get drilled in that year, DEP estimate's the cost to unconventional operators for identifying these wells at \$2,000 per well, it a drop in the bucket compared to the total cost of developing a well to production, and the money will have to be spent eventually.

Another change that will help insure a more effective survey will be undertaken is to increase the distances measured from the surface above the horizontal well bores to 1,400' from the current language's 1,000'. This recommendation is derived from an explanation given by a representative of the Shell Corporation at the TAB meeting in State College of the maximum distance the energy in a frac operation can penetrate the rock around it, which was stated to be 1,400'. This statement involved the limitations of the laws of physics and I suggest you look up the testimony to derive a distance based on science rather than approve an arbitrary rounded figure of 1,000'.

In Section 78.59c(g)(2) the draft regulations appear to require one monitoring well hydraulically upgradient from a centralized impoundment and a minimum of 3 three monitoring wells downgradient. The catastrophic failure of the impoundment liner on the Phoenix Resources property on the Landfill in Duncan Township in Tioga County provides a fine example of why monitoring wells are necessary and can provide alerts to toxic infiltration of groundwater from underneath liners. These liners do leak and the 75 -100 holes discovered upon draining of the liner on the Phoenix Pad

S impoundment also shows that, due to the allowable definition of "freshwater" to contain pollutant substances, those ponds built to lesser construction standards should too require the minimum monitoring wells described for the higher standard of construction centralized impoundments.

Section 78.59c(e)(3)(i) states a leak detection system is required that rapidly detects and collects liquid entering the leak detection zone, and rapidly transmits the liquid to a sump. Though it is not specified how the system to run the monitoring and pump is powered, it is recommended to have a backup power system requirement.

In general, the industry track record on open impoundments containing toxic fluids is not great for a variety of reasons. Not all operators use them, in this area, Chief, who came in early, never use them from the get go. Large operators in the Commonwealth like Chesapeake and Cabot do not use them. Numerous operators have moved away from them, which in itself is proof they are not best practices. In June of 2013, Representative Boback introduced HB 1546 to prohibit the use of open impoundments for storage of produced liquids, treated water, hydraulic fracturing fluid or industrial waste. This would seem a good indication of where things are moving. Why not rule them out now if possible?

In Sec 78.15F, the 15 day requirement to assess and submit comments to DEP doesn't seem to give agencies enough time to adequately do their job and properly satisfy their agency mission. The addition of oil and gas operations on public land has strained DCNR staff as exemplified by the number of leased tracts in the Tiadaghton State Forest here in our county. Huge game land tracts like SGL75 in Lycoming County now slated for gas development too certainly will stretch the resources of that agency's staff that in addition to regular duties, now have an added burden. The supervisors and field workers of the agencies should be given more consideration in determining a realistic time frame.

Under Act 13, an operator can obtain a single blanket bond in the amount of \$600,000 that covers all of their well sites in the Commonwealth. Though DEP cannot require higher bonding, something the Commonwealth needs to revisit, bonding is designed to secure all of the operator's legal duties for potential water supply replacement, for site restoration and for well-plugging. DEP should establish a process that ensures operators are not released from liability for well sites until those sites are properly restored.

The proposed revised bonding regulations in Subchapter G of Chapter 78 do not do this. Release from liability is conditioned only by filing of a certificate of plugging. Release from liability should also be conditioned on the adequate final restoration of the well site after the last well on the site has been plugged. Based on a presentation arranged by the Sullivan County Energy Task Force in the winter of 2012 on well casing cementing and well plugging, it appears to me the Commonwealth also needs to revisit well bonding requirements to insure adequate funds are placed in trust for investment so as to insure money is available for future generations to re-plug wells in distant eras when cementing has deteriorated to the point where re-plugging becomes necessary.

As described to the us that day in Laporte by a cementing company professional, much like a gravesite in a cemetery, perpetual care will be required over many centuries for plugged wells. An thoughtfully designed perpetual care fund would probably not be a great expense to operators and its available investment capital could be lent to operators specifically for environmental upgrades that rational economic choice may put on the back burner but that would benefit the environmental quality of the Commonwealth while helping the operators bottom line. For instance gas fired mobile compressors at the well site for fracking, conversion of company vehicles to run on NG or "green completion" systems. Or loaned to citizens for energy efficiency or conservation projects that would provide a rate of return adequate to grow the fund.

The current draft regulations in Section 78.59c prohibit well operators from building "centralized impoundments" for wastewater within 100 feet of any "solid blue line stream" that flows year round. The appropriate distance may be debatable, but any buffer should be extended to streams that do not flow continuously. Intermittent streams need to be protected as even though water may not be flowing on the surface at all times, in all likelihood it is still travelling downhill underground below the watercourse, often very close to the surface. The DEP has an obligation to protect intermittent streams under the Clean Streams Law.

Section 78.62 draft regulations allow well operators to dispose of residual waste including drill cuttings in pits at the well site as long as they comply with certain requirements. As waste generated at oil and gas drill sites is exempt from hazardous waste regulations, the result is hazardous waste can be managed as residual waste and disposed at well sites with a single synthetic liner and no long-term groundwater monitoring. These minimal protections are inadequate.

There was a problem with contamination leaking from a buried waste pit on a leased tract in the Tiadaghton State Forest a couple if years ago. I was not able to access the file in time to prepare this testimony but I believe the problem came from the legal burial of drill cuttings from a well pad that is situated on the mountain above the village of Ramsey on the east side of Pine Creek.

Finally, I am deeply concerned about the wording of Section 78.15 (g). The Pennsylvania Constitution requires DEP to protect the public's right environmental rights. 78.15 (g) states, "...the Department may condition a well permit if it determines that the proposed well site or access road poses a probable harmful impact to a public resource." The wording problem lies in the first clause of the following sentence, "Section 3215(e) of requires the Department to consider the impact of the condition on the applicant's ability to exercise its property rights to ensure optimal development of the resources..." .

That clause can be interpreted to read that even if DEP determines that a proposed well or access road will have a probable adverse impact on a public resource, it still cannot impose conditions that will prevent or mitigate that harm without first considering the impact of the condition on the individual mineral right owner's ability to "optimally" develop his or her oil and gas rights.

The regulation places the DEP directly in opposition to its mission, " to protect Pennsylvania's air, land, and water from pollution and to provide for the health and safety of its citizens through a cleaner environment." It elevates the "optimal" development of oil and gas over the protection of public resources against likely adverse impacts. As long as DEP's conditions do not constitute a taking of private property, the agency is obligated to condition permits in a manner that protects public resources.

Adrienne Panuski
214 Shutes Street
West Wyoming, PA
18644

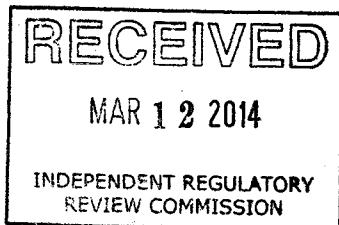
Adrienne Panuski Testimony on Proposed Revisions to Chapter 78 Oil and Gas Regulations

My name is Adrienne Panuski and I am from Luzerne County, Pennsylvania. I am a citizen concerned about the current impacts of oil and gas operations throughout Pennsylvania. I believe the best way to protect Pennsylvania's citizens and our natural resources are through transparency and accountability. Every Pennsylvania citizen has a right to their health, clean water, and clean air. I believe and urge the Pennsylvania Department of Environmental Protection (DEP) to make as much information as possible from gas drilling operations available to the public online so the public can have all the information necessary to choose where they would like to live.

For each recommendation that I mention, I would highly urge that the DEP create an online database available for free to the public so that the public may have access to that information at any given time.

First, I highly urge the DEP to make all drillers conduct pre-drill water testing and air testing at sites and not at the cost of the property owners or those living within the area. I highly recommend this testing be completed by a neutral 3rd party that has no ties to the gas industry or even the DEP. If water should become contaminated after drilling has occurred it should be up to the driller to pay the costs to return the water quality to the highest standards available for drinking water.

Second, I urge the DEP to make it mandatory for all drillers to provide a list of chemicals they use in their drilling process and the dangers to humans and the environment. It should be prohibited to not list a chemical because it is considered "propriety". With public health and safety in mind, if a disaster were ever to occur, how would the public know how to prevent exposure or treat exposure to these chemicals if they are not known? How would our emergency room personal know how to treat citizens as they come in with varying symptoms? This is why it is critical that a regulation be passed to make these chemicals available to the general public, first responders, and medical personal.



Third, since the technology already exists to contain containments in closed looped systems and tanks, then I urge DEP to propose in their regulations the requirement for closed loop systems. All open pits should be banned including temporary pits. The suggested 9 month allowance is also too long for temporary storage pits and these should also be prohibited.

I agree with the DEP to have freshwater impoundments be registered with the department and I suggest this information also be made available online along with open pits, temporary open pits, and underground/partially buried storage tanks etc.

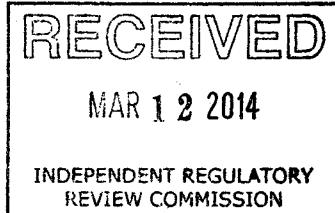
I highly recommend DEP prohibit the use of brine for dust suppression, de-icing, and road stabilization. We need to pass all regulations possible to stop these chemicals from entering our air and waterways and adding to the already heavy air pollution we experience in the winter months.

The DEP acknowledges that public resources are a major economic contributor to Pennsylvania. Therefore, it is absolutely necessary that the strictest regulations are put into place to protect these resources. These regulations should also extend into the other areas of the gas drilling industry such as pipelines, compressor stations, gate and metering stations, dehydration stations etc. DEP'S current proposal in the Chapter 78 revisions requires applicants to notify appropriate agencies when applying for permits within 200 feet of a public resource. I highly urge DEP to increase this distance to at least a half mile around public resources including publicly owned parks, forests, game land or wild life area, national natural landmarks, or historical or archaeological sites. These areas must be protected and preserved so present and future generations may be able to enjoy them. I live near Frances Slocum State Park in Luzerne County. There are already vast stretches of land that have been clear cut for pipelines very near the park. I can't bear the thought to think that well pads or open pits, etc. can next be placed so close to this State Park if stricter regulations are not put in place.

In closing I would like to urge the DEP to extend the public comment period to the full 120 days. I would like to urge the DEP to hold more public hearing comment sessions in other counties. I live in Luzerne County and had to drive an hour today to this hearing since this was the closest for me. I believe a public hearing comment session should have been held in each county across Pennsylvania. I also find it extremely inconvenient for the public comment period to begin during the holiday season and these public hearing sessions be held during the dead of winter when weather and travel is so difficult. This meeting had to be rescheduled due to weather and it is not fair to those citizens who now cannot make the meeting. I also feel 5 minutes is not a sufficient amount of time for each citizen to speak on a matter that greatly affects their health and everyday life.

I would like to thank you for the opportunity to comment on the proposed revisions to Chapter 78. Please take the comments you hear tonight into serious consideration.

EQB Public Hearing
Washington, PA



1/22/14

Good evening. My name is John Peters. I am a resident of Ross Township in the North Hills area of Allegheny County. I have been a Pennsylvania resident since 1966. My wife Patty and I have three adult children. All were born, raised and reside in Allegheny County. We have a 6 year old grandson and 3 year old granddaughter, both born in and residing in the North Hills of Pittsburgh.

I am a sales representative for BioBlend Renewable Resources, a leading manufacturer of biodegradable lubricants for commercial and industrial use. BioBlend products are made with environmentally-safe vegetable oils and additives, contain no regulated substances and are no more toxic than cooking oils. The oil and natural gas industry is an important market for BioBlend, and we are supporters of exploration and production in Pennsylvania and throughout the USA. I am also a member of PIOGA, but I have not been asked by nor am I speaking on behalf of PIOGA or any of its other members.

I also support protecting our environment. I live here; my children and grandchildren live here. I believe protecting the environment is the right thing for all of us to do. I believe the oil and gas industry and a healthy environment can coexist.

My observation is that the oil and gas producers are working hard to comply with regulations, and most take steps above and beyond state requirements in order to minimize environmental impact. Why? They and their wives and children and friends live here, too! Many have moved here from other states and brought their families. And they want to be good corporate citizens.

One example is rock drill lubricant which is used in drilling portions of the well bore. Traditional rock drill lubes are made from petroleum oil and chemical additives, some of which are potentially harmful. However, most producers drilling in Pennsylvania choose vegetable oil-type rock drill lubricant such as made by the company I work for. The state does not mandate this; rather the producers choose it to protect the groundwater ...

an example of good corporate citizenship, wouldn't we all agree? There are other such examples.

There are more opportunities to replace potentially harmful products with biodegradable, non-toxic alternatives, but there is a significant obstacle: PA D.E.P. does not formally recognize such products as different or less of an environmental hazard and no reduction of civil penalties is granted, at least not officially. I'll cite an example: A drilling contractor decided to switch a drill rig from petroleum oil-type hydraulic fluid to vegetable oil-type, biodegradable non-toxic hydraulic fluid. When they informed the D.E.P. field representative of the change, they were told it doesn't make any difference. If you spill it, your fine will be the same.

These are two quite different substances: Petroleum hydraulic fluid meets the definition of "hazardous substance" as found in The Storage Tank and Spill Prevention Act (Act 32). Most of these contain zinc dialkyl dithiophosphate (ZDDP), which is a hazardous substance deemed toxic to fish. On the other hand, vegetable oil is not a hazardous substance, and vegetable oil based hydraulic fluid (at least those produced by BioBlend) contains no ZDDP or any other toxic substance. So I ask the following questions:

1. Which of these poses an environmental risk, the petroleum oil or vegetable oil product?
2. Then wouldn't it support the mission of PA D.E.P. to encourage the use of biodegradable products, rather than discourage their use?

Why don't people simply switch to biodegradable products anyway? Because it requires making a change (we all resist change) and they are often priced higher. There are really two potential incentives: one, "doing the right thing" and two, "reducing my liability". The state has I believe unintentionally eliminated the second of these incentives.

For the benefit of the audience, I'll read the D.E.P. Mission Statement as it appears on the website:

"The Department of Environmental Protection's mission is to protect Pennsylvania's air, land and water from pollution and to provide for the health and safety of its citizens through a cleaner environment. We will work as partners with individuals, organizations, governments and businesses to prevent pollution and restore our natural resources."

I am not advocating the state REQUIRE the use of biodegradable products, whether lubricants or any other product type. And to be sure, I am not seeking any special recognition of our brand or products. My request is for D.E.P. to draft a rule classifying environmentally-safe substances along with reduction or relief from civil penalty in the event of their reported spills, leaks or discharges. To manage this I suggest the following conditions be met:

1. Reporting of the spill remains a requirement.
2. Proof that the spilled substance has been correctly identified.
3. The substance must meet standards of biodegradability and toxicity limits as defined by the state.
4. The biodegradability and toxicity of the substance must be certified through independent testing.
5. The amount of the spill must not exceed the state established limit.

This is a pragmatic opportunity for D.E.P. to indeed partner with the oil and gas industry by enlivening the incentives to choose environmentally responsible products, and what better time to do so than right now while regulations are being revised?

Thank you for your attention and the opportunity to give testimony at this public hearing.

Victoria Switzer-Resident of the Dimock Gasfield-Susquehanna County Testimony
on Proposed Revisions

To Chapter 78 Oil and Gas Regulations

*Victoria Switzer
SR 3023 11361
Dimock PA*

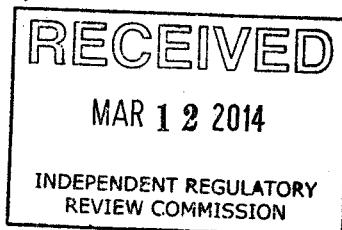
On November 18, 2008, I attended the Senate Majority Policy Committee hearing held at College Misericordia in Dallas, PA. It was advertised as a public hearing to better understand and manage the opportunities and challenges posed by the development of the Marcellus Shale Play. Industry, elected officials, representatives of DEP and DCNR as well as others were slated to speak. It seemed like an opportunity for citizens to learn more. I was particularly interested since we already had over a dozen unconventional gas wells drilled near my home.

To summarize that first hearing, the gas industry representatives complained about the burdensome paperwork PA required(demonstrating- with a huge pile of papers)and the delays it cost in obtaining permits. One by one, industry reps warned of "ominous" consequences if DEP did not become more welcoming! They would move drilling rigs to West Virginia and delay transfer of a "significant number" of employees into PA because permitting delays were worse than any other state. Texas was quoted as having a 7 day permit at the time PA had a 45 day process in place.

With new wells going in monthly, in my neighborhood in 2008, I wondered what delays had occurred there.

The GOP senators were very sympathetic, nodding their heads, and went further to expound on the importance of thousands and thousands of jobs and even denounced the danger of killing the "Golden Goose".

When the newly appointed Secretary of DEP, John Hanger concluded his remarks with the emphasis on the need to protect Pennsylvania's environment, he was directed to streamline the process.



Fast forward to January 27, 2014, 6 years later and here we are! That "Goose" has been very busy (laid a lot of eggs!) in the past 6 years: \$800 million plus ATW (at the wellhead) and over \$4 billion and some change for residential price. And that is from just one Goose in a 4 mile radius of Dimock!

I'd say we are well past the point of worry that the industry will not set up drills or bring their workers to PA. In fact I would say we know a lot more of what they will bring...a lot more. Our train has left the station and it is loaded. WHERE that train is heading remains the challenge.

Reading the regulations and the proposed revisions to Chapter 78 is almost as difficult to get through as the Affordable Health Care Act. Try as I may to be a participant and not a victim, in the process of submitting suggestions, I focused on the section on pits. I know a little about pits. There are pages of requirements and directions on how to do the pit. The idea of disallowing any pits to be buried on a landowner's property, without having to obtain his or her consent was dropped because the industry protested and DEP "determined such restrictions were not practical".

Each morning, faithful to my commitment to never again be ignorant or uninformed regarding natural gas, I read the "gas news". Invariably, the morning headlines proclaim yet another ban on natural gas extraction aka "fracking". Some city, community, even country has decreed "NO FRACKING". Other headlines announce the liquification and exportation of our resource: "Exclusive: World buyers line up to buy U.S. natural gas. (China, Japan, India) Even Forbes magazine published an article with the lead in "Billionaire Father of Fracking (George Mitchell) Says Government Must step Up Regulation" and another "The Fracking Solution Is A Good Cement Job".

We know, all too well, that the necessary sacrifice will be allocated to areas of poor, rural, non-zoned communities. Certain areas, areas with AFFLUENCE AND INFLUENCE will be exempt from the massive industrialization of their backyards, front yards and even their school yards.

DEP, DEPARTMENT OF ENVIRONMENTAL PROTECTION, I suggest you no longer regulate the harm that is allowed but do everything in your power to prevent it and if you do not have the ways and means to do so, then stop issuing new permits. You are the foot soldiers, boots in the field. You were hired to protect Penn's Woods, to uphold Article I Section 27 of the Pennsylvania constitution that states:

"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"

Those elected officials that presided over that hearing in 2008 and those subsequently elected have that same duty.

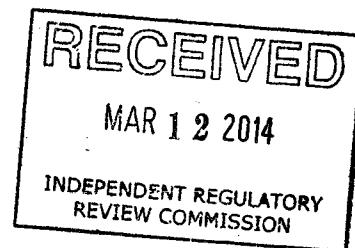
DEP, hit the pause, there is no rewind for this, only a fast forward into a disastrous future for the children, your children, our children.

Sincerely, Victoria Switzer-Resident of the Dimock Gasfield

Subject: Comments on proposed changes to Chapter 78 Oil and Gas wells.

To: Department of Environmental Protection- Oil and Gas Program

From: Luigi DeFrancesco resident of Richmond Twp. Crawford County
27502 Hwy 77
Guys Mills, Pa 16327
ldefrank@windstream.net.



Once again it appears that Pennsylvania will come to the rescue of its residents and the whole Nation by working toward the energy independence that we have hoping to achieve all these past years. We as Pennsylvanians should consider ourselves lucky to have a governor in Tom Corbett with a vision and the desire to achieve the goal of energy independence and at the same time bring economic prosperity to our Commonwealth. I would also like to acknowledge the intensive work that the Department of Environmental Protection has applied to the permitting process and field oversight. The Department mission statement say it all:

The Department of Environmental Protection's mission is to protect Pennsylvania's air, land and water from pollution and to provide for the health and safety of its citizens through a cleaner environment.

We reside in a State that values individual and property rights and stopping the exploration of minerals and other natural resources is not an easy task if impossible however due to the fact that the Pennsylvania Constitution guarantees the people the right to clean air, pure water then it is imperative that regulations are enacted to assure that the mission of DEP becomes a reality.

To this extent I like to propose that the following is incorporated into Chapter 78:

1. Set back from a road right-of-way.

- a. Neither equipment nor storage facilities related to a gas well shall be built within three hundred feet of state or municipal right-of-way. This would include but not limited to storage tanks, compressors, water separators above ground section of high pressure lines.

2. High pressure compressors.

- a. High pressure compressors shall be located in underground vaults in order to attenuate noise and vibrations.

3. Casing standards

The standard for casing should include also a standard that the casing material is capable to withstand temperature that are consistently found in ten thousand feet (10,000) below the surface.

4. In line valves.

There should be a standard establishing an amount of valves that should be installed along a transmission line and how far apart. Purpose is allow a quick response in case of leaks and accidental line damage.

Reasons for the above:

1. There are too many gas line and equipment too close to the roadways in Crawford County. One that I am familiar with is a site in Richmond Twp. where all the equipment lies next to the Township road and 30 feet from an occupied dwelling. There have been minor gas leaks before and if there would be a major one the people that live nearby will be extremely affected. The equipment has no protection from any out of control motorized vehicles. There was an accident in Richmond Twp. that occurred on Route 408 in close vicinity of Maplewood road whereas a vehicle damaged high pressure lines.
2. The noise from the high pressure compressors especially those used for the gas from the Marcellus formation are not healthy for human ears.
3. This a common sense that I hope the gas industry has already looked into.
4. In line valves should be installed as close as possible in case of a brake or leaks.

Department of Environmental Protection

Air Quality program

Mark Wejkszner

2 Public Square

Wilkes Barre, PA 18701-1915



Hearing and Public Comments on: Chapter 78 of Oil and Gas Regulations update

Tunkhannock High School 1-27-2014

My name is: Howard Hannum and I live at 1221 Higley Rd Sidney Center New York 13839 just approximately 50 miles north just across the State line. On behalf of the League of Women Voters and as a good neighbor policy on behalf of the Concerned Citizens Of The Southern Tier of New York, I would like to comment on the new proposed regulations.

78.51 and 78.52 - We would like all current and future water quality tests to be done by an independent lab to include the required certification as well. We do not think it is appropriate to have the lab of choice be selected by the operator, therefore we'd like to see the DEP put a halt to this policy.

78.52(a)- We'd like to see the department (DEP) identify spent wells and enter each one into a data base to make for easier identification. We would like any and all spent wells to be capped before any future work begins.

78.70- We would like to see brine spreading on roadways to be discontinued. We would like to see harsh penalties for any operator that spreads brine on any roadway and especially those near schools, bus stops and churches as well as hospitals and any roadway that is used for walking pets, hiking and biking.

In general, we'd like to see any and all gas Drilling Operations; including gathering lines, pipelines and transportation operations, prohibited within a ~~1/2~~ mile from all schools, churches, bus stops, parks and hospitals as well as any public place used for congregational purposes. We'd also like to see these same listed operations banned from all State Forests and State Game Lands.

We would like to see the department (DEP) put a halt to mountain-top removal.

We would like the Department (DEP) to put a halt to open-air pits for produced water and waste water, as well as drill cuttings. We would like to see on-site burial of these same items prohibited. We would like to see the prohibition of open-air pits with liners as well.

Here at the League of Women Voters and the Concerned Citizens of the Southern Tier of New York, we would stand with the Clean Air Council in favor of Green Completion Technology used for any existing and future Gas Drilling Exploration to include well pads, compressor stations, pipelines and gathering lines and any fibulators, ventilators and dehydrators. LNG processing facilities and fertilizer manufacturing facilities.

And finally, while we stand with the Clean Air Council on the issue of Green Completion, we think the best course of action is to enact a state-wide 2-year moratorium on any current and future gas drilling exploration in order to sit down at a table for intelligent discussion with members of the DEP, the Gas Drilling Industry and Concerned Citizen Groups from across the State of Pennsylvania.

 1-27-14
Howard L. Hamm

DEP
Rachel Carson State Office Building
PO Box 2063

Harrisburg PA 17105-2063

1 longfellow ave, Bradford, McKeon County

Good evening, my name is Mark Cline and I am a fourth generation oil man. These new chapter 78 regulations the way they are now written will destroy the conventional oil and gas business.

I would like to read to you 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. But here we are, fighting to save our industry because we were included in regulations that were not written for our industry!

The conventional industry should never have been included as we are not a new industry. We have been here for over 150 years. Our two industries both drill wells but we are completely different. The conventional industry drills shallow vertical wells, the unconventional industry drills deep horizontal wells. Their drill cuttings have contaminates in them, ours don't. They have very high pressures in their wells, ours don't. The unconventional frac job sometimes uses 100,000 bbls of water. The conventional frac job uses about 1,000 bbls. The amount of traffic going to and from a Marcellus drill site and frac job is about 50 to 1 compared to a conventional well that is being drilled and fraced..

The well site for an Unconventional well is around 5 acres. A conventional wells site averages 100 feet long by 50 feet wide. We leave a very small environmental foot print.

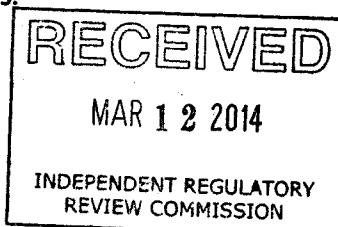
I would like to tell you that we support the Marcellus industry but we should not be regulated the same way.

In 2010 the conventional industry had 7,280 operators of oil and gas wells in Pa. There are over 100,000 oil and gas wells in Pa. Most of these wells produces less than a bbl of oil a day. But when you take the sum of them all, they produce quite a bit of oil.

The year 2011 is the most current year that I could find for production records for conventional wells in Pa. We produced 2,270,500 bbls of oil and 249,323,980 (mcf) of natural gas.

A study done in 2008 said the Pa. conventional Oil and Gas industry supported more than 26,000 jobs and generated over \$7 billion each year, with an additional \$200 million in annual royalty payments to land owners.

These conventional wells produce Penn Grade Crude oil, which is the best lubricating oil in the world. There are two refineries that refine Penn Grade Crude oil. One is in Bradford Pa. and the other is in West Virginia. American Refining Group in Bradford is the oldest continually running refinery in the world. They now are operating at 2,000 bbls a day less than they would like because of a shortage of oil. Fewer wells are being drilled because of Act 13 and now these chapter 78 regulations are going to make things impossible for conventional operators to drill new wells and operate the older wells.



Most of the 7,280 conventional operators will also be put out of work. The jobs lost from companies that deal indirectly with the conventional industry will be many times that in people out of work.

What the conventional industry is asking for is to revert back to the regulations of the 1984 Oil and Gas Act and have our own inspectors. The Marcellus industry should have their own regulations and inspectors. The reason we are asking for separate inspectors is there are too many regulations to learn and enforcing the right regulations to the right industry would be complicated.

On behalf of the conventional operator I am asking the Environmental Quality Board to not pass these regulations as they are now written.

Thank you

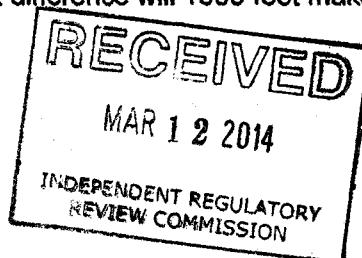
Mark L Cline

PA DEP hearing January 13, 2014
Susan D. Laidacker

My name is Sue Laidacker and I am on the Executive Board of Shale Justice Coalition which is a coalition of environmental groups with major concerns about industrialized extraction of fossil fuels. Our goal is to make sure there is a total and complete ban of this type of activity in Pennsylvania. I want to take this opportunity to point out some glaring flaws in these proposed provisions in the gas regulations. After combing through these provisions and chapter 78 several times there are these areas that I need to address.

On the area of public resources: I agree the areas of tourism, fishing, hunting, and recreations are major economic contributors to Pennsylvania coffers but the DEP must surely know that ANY gas development in the beautiful areas of Pennsylvania's back woods will drastically jeopardize these very resources that are so important to Pennsylvania's future and well-being. The setbacks proposed by the provisions of 200 feet of publicly owned lands and wildlife areas and historical and natural landmarks are simply token distances for the department to tell the citizens of PA that they are indeed regulating the drilling of new wells. These distances are not even as long as my driveway and that is a ridiculous distance to even think that it may make a difference. 1000 feet from a private water well has been proven so many different times to be totally inadequate that this distance is a moot point at this point and the DEP isn't prepared to have water provided to the whole of Pennsylvania once their water has been contaminated which it surely will be if this industry is allowed to continue with such woefully poor regulations. The problem of water contamination MUST be solved as this is the biggest issue of the many, many, many problems with this industry and it is in the forefront of many of the catastrophes associated with gas extraction. The only reasonable solution to this destructive, catastrophic industry is a total ban of any of its activities in Pennsylvania. This is the only true and accurate way that we can be sure our water, air and land will not be polluted for us and for future generations.

Now on the subject of unplugged abandoned wells: again 1000 feet is the allowable distance for drillers to drill new wells when the provisions admit that abandoned wells have been known to be altered and contribute to methane migration when new wells are drilled and with horizontal hydraulically fractured wells what difference will 1000 feet make from the initial



vertical well bore? And the provisions propose that visual monitoring and plugging is required by the operator of the well drilling and we all know from past experience that that is simply a ridiculous notion on all fronts because the dream of huge amounts of money (which almost never materializes) are far too strong a draw for them to follow regulations and fines are simply tokens and not even a slap on the fingers if they are not followed. Again the solution for this problem is a total ban of this industry in Pennsylvania and actually in this country as a whole.

Containment Practice: These should all be monitored by a third party that has absolutely nothing to do with gas extraction and is not beholden to them in anyway. This is the only way that any data can be trusted at all and even then that is on the periphery as how can we be sure the gas companies aren't lining pockets of these third parties as they are doing with our elected officials. This industry simply cannot police themselves because that just doesn't happen. They simply cannot be trusted in any way, shape or form. Now to stop this type of criminal activity there must be a complete and total ban of this type of industrialized extraction.

Protecting water resources and land reclamation: currently restoration practices are really inadequate. Most of what we are seeing at the well pads and pipelines are simply greenwash. Planting grass doesn't restore a 100 year old forest that has been decimated. The ecosystem has been totally destroyed by the creation of well pads, pipelines, and compressor stations. The forests have been fragmented and planting grass won't restore that. We are left with predator species of insects and wildlife that wasn't here before this industry infiltrated our once beautiful areas. So to that end the only solution to this problem is a complete and total ban of this industry in Pennsylvania.

This is just promoting an environmental disaster much worse than anything we have seen in the last couple hundred years. I keep hearing how environmentally friendly this industry is and they are using best practice techniques and they want to be good neighbors but the only way any of that will work in Pennsylvania is if this industry is totally and completely ban from doing business within our borders.

DEP Public Hearing on Gas Drilling Rules

January 22, 2014 6-9pm

Washington & Jefferson College, Rossin Campus Center, Allen Ballroom, 60 South Lincoln St., Washington, PA

My name is Barbara Grover. I live at 5526 Wilkins Ave, Pittsburgh, PA 15217. Strengthening regulations for the Gas and Oil Industry is sorely needed. I will address three areas of your proposed regulations.

I. Water is the most critical issue (Sections 78.51, 78.52, 78.56, 78.57, 78.58, 78.59) The planet has only a finite amount of water suitable for human consumption. YOUR regulations must ensure that the current, fragile, water supply is available as **SAFE DRINKING WATER** for current and future generations.

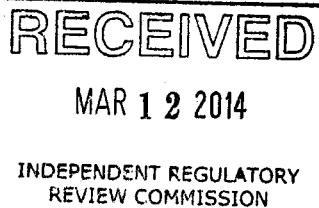
With respect to the source of the fresh water needed for drilling, I suggest your regulations:

- Define "fresh water" used in oil and gas operations so that companies that mix contaminated fluids with clean water cannot avoid regulations on the use and disposal of polluted substances.
- Require the water surrounding the proposed sites be tested PRIOR to drilling according to criteria YOU, the DEP, establish. Those criteria, at minimum, should be what the DEP uses when it conducts contamination investigations.
- Require the toxic waste water be restored by the driller to Safe Drinking Water Act standards.
- Require ALL the pre-drilling data be available to the public.
- DO NOT leave the water testing time and place in the hands of the drillers.
- DO NOT allow them to restore the water ONLY to the quality of the water prior to drilling.

Another concern related to water is the storage of the toxic wastewater. As you know, the wastewater contains toxic chemicals, metals, many unknown chemicals, and sometimes radioactive particles. Open pits as storage are an extreme hazard to the health of humans and wildlife. You know from your own records of violations that the liners in those pits LEAK because of inadequate anchorage or the pit overflows because of heavy rains or several other reasons. The toxins in the wastewater will contaminate soil, streams near by or seep into aquifers. In addition, the toxins evaporate into the atmosphere before the wastewater is hauled away, which results in air pollution. I suggest your regulations:

- Prohibit drillers from using open pits for storage of waste water, drill cuttings and all other substances that return to the surface with the fracking fluid.
- Require drillers to use ONLY closed system storage.

II. In addition to my water concerns is the Disposal of brine, drill cuttings, and residual waste. (Sections 78.60, 78.61, 78.63, and 78.70) As you know the brine, drill cuttings, and waste contain substances hazardous to humans and wildlife. These



hazardous substances can occur in drill cuttings above as well as below the well casing. Placing these substances anywhere on land creates a health hazard. Your regulations should:

- Prohibit onsite processing of shale drill cuttings;
- Require thorough analysis and special handling of the drill cuttings
- Apply regulations related to the disposal of ALL drill cuttings, no matter where they were obtained.
- Prohibit onsite burial of waste pits
- Prohibit the use of brine for dust suppression, de-icing or road stabilization

III. Another issue is the identification of orphaned and abandoned gas and oil wells (Section 78.52(a)). I strongly support this measure. It is a significant step in reducing the chance of problems occurring from the intersection of new and old wells. The regulations should include:

- Identification of ALL existing wells before a site is determined and new well construction and drilling occur
- Do what is necessary to make all these orphaned and abandoned wells meet the State Safety standards PRIOR to well construction.

IV. My final recommendation relates to the comment deadline and the current schedule of hearings. Fortunately, I own a car and live within an hour's drive of this hearing location. Thus, it was convenient for me to speak this evening. However, many people in many communities that will be affected by your significant, wide-reaching decisions will not have this same opportunity. Your current deadline of Feb. 12 and just a few locations for hearings are inadequate. All those who wish to have their voices heard may not own a car or a computer or live in sufficiently close proximity to a hearing site. I strongly urge you to extend the public comment period for at least another 3 months and hold many more hearings in other regions, especially those immediately impacted by your decisions. In order for you to be fully informed by the Public, those residents must be given the opportunity to have their voices heard. These additional hearings need to be widely advertised via media, US mail, and many other venues to assure the widest possible range of public input. As you well know, the decisions you make regarding changes to Pennsylvania's oil and gas regulations are an extremely serious responsibility. You must be as fully informed as possible.

Strengthening current regulations and enforcing them is essential to meeting your responsibility as the Department of Environmental Protection. We are still living with and paying for the hazardous practices of the coal industry that were allowed in the past century. PLEASE learn from that mistake and require the Gas and Oil Industry to meet high standards that protect the water we need to survive, the air we breathe, and the land we live on.

Thank you for your time.

Public Hearing, EQB Board, Wed. January 15, 2014

Meadville Senior High School

Topic: New Regulations on Oil and Gas Development in Pennsylvania.

My name is Sister Claire Marie Surmik . I am a Benedictine Sister from Erie, PA

Former Prime Minister Margaret Thatcher surprised many people in 1988 when in a lecture to the Royal Society she said, "For generations we have assumed that the efforts of mankind would leave the fundamental equilibrium of the world's systems and atmosphere stable. Unwittingly, we have begun a massive experiment with the system of the planet itself." (End of quote) I believe if Margaret Thatcher were alive today in 2014 she would change the word unwittingly to knowingly.

I'd like to read a few excerpts from the guest-voice opinion of Matt Walker in the July 18 edition of the Erie Times News.

Fracking and all of shale gas equipment and facilities that come along with it release a significant amount of harmful pollution into the air, water and land and can have serious health impacts on residents who live nearby.

Shale gas is also touted by the gas industry and elected officials as a solution to climate change. Methane or natural gas is 105 times more potent at warming our planet than carbon dioxide from coal. The Gas Industry leaks anywhere from 3 ½ % to 9 percent of the gas it produces . End of excerpt from Matt Walker.

(Source- <http://www.goerie.com/article/Opinion08/308129992/Guest-Voice%3A-Erie-should-focus-on-clean-energy>)

In this weeks Erie Times News, we read that since 2008, Pennsylvania has signed several major new sale gas leases of almost 139,000 acres of public land. So far these leases have generated \$413,000 thousand dollars for the state. How many times in recent conversations have you said or heard someone say, "It's all about money." I would like to say a lot more about jobs and the economy. But, just let me say that I believe that if we stopped putting our money on fossil fuels and started seriously spending it on renewable energy we would have jobs a plenty and we would be healthier, happier and yes, holier people, because we would be seriously taking care of our planet earth and all of God's creation for future generations.

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MAR 12 2014

**INDEPENDENT REGULATORY
REVIEW COMMISSION**

As we all know, The DEP is required by the PA Constitution to protect the public's right to a clean environment. With that said, I am concerned about several of the EQB's proposed oil and gas regulations.

- 1. All fluids related to oil and gas development should be contained in engineered facilities, not in natural Depressions." The DEP should not allow the storage of waste water in open pits or impoundments. At issue here is the protection from drilling operations related to fracking. Our streams and ground water should be secure. Proper disposal of waste materials at well sites is of great concern to me. We should not even suggest that Pennsylvania will allow fluids related to fracking in the oil and gas business to be managed in "natural depressions"**
- 2. The definition of "seasonal high ground table" should be retained in the proposed regulations because the term continues to play a key role in the regulation of oil and gas activities.**
- 3. The collection and analysis of chemical samples of waste that the operator intends to dispose of on site should not be discretionary. The regulations should be clear that it is a mandatory obligation.**
- 4. The DEP's proposed revisions to Chapter 78 should require meaningful standards for the final restoration of well-sites, and impoundment sites as well as for the interim post-drilling restoration period.**
- 5. The DEP's proposed regulations for the road- spreading of brine pose unacceptable threats to PA water resources and would be unlawful.**
- 6. Currently, the DEP's restoration standards are practically unenforceable because they fail to require site specific standards for restoration and they establish no process to allow the DEP to approve or disapprove restoration.**

Thank you.

**Sister Claire Marie Surmik, OSB
218 E. 11th Street
Erie, PA 16503**

25 PA CODE CHAPTER 78, SUBCHAPTER C

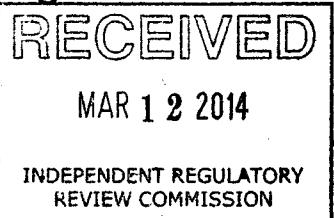
OIL AND GAS WELLS RULEMAKING COMMENTS

KRISTIN LANDON

Good Evening, my name is Kristin Landon, I am a life-long resident of Wyoming County. Currently I live in Lemon Township. I hold a degree in Electrical Engineering from Wilkes University, and I have spent 20+ years of my career working for the Wireless Telecommunication industry on siting towers and other infrastructure for the industry. I am a natural gas leaseholder, a stay at home mother of two young children, and I work full time as an engineering consultant.

I have been observing and experiencing first-hand the Marcellus shale development over the past four years. Within a two mile radius of my home I have six active well pads, with approximately sixteen spudded wells, the Hirkey Compressor Station, and one freshwater impoundment. The closest well is within 3500' of my house. I want you to know that I actually feel, hear, see, and breathe Marcellus development twenty-four hours of every day.

I am here to state my support for the quick passage of the revisions to the Chapter 78 Oil and Gas Wells Code. I have read reports on both industry and environmental comments from hearings in other parts of the state. Industry states the



proposed regulations kill jobs. Environmentalists state the regulations are not strong enough. As I see it, these regulations will help create jobs in the local environmental and engineering firms that currently exist in Pennsylvania. The Industry will not stop drilling because of the Regulations- they are not prohibitive, so their argument about job loss is unfounded, in my opinion. On the other side, the Environmentalists want strict regulations that may impede Industry. The proposed Regulations are much better than what we have currently- so it is a benefit to the environment to enact these Regulations. We need compromise in the middle- which is what I think these proposed regulations represent. It is my understanding that both Industry and Environmental groups worked on roundtable subcommittee discussions about these regulations over this past year. That was the time to debate and fight it out.

I wanted to use my five minutes this evening to express how critical it is to me as a resident leased landowner in the development area to have these regulations in place to better protect the health, safety, and welfare of my community. I live in a county and township that has no zoning or protections for landowners on any of these issues. I feel regulations are extremely important when you have an industry that has a large amount of operators- **seventy-three**- according to the DEP Executive Summary Document.

Speaking for residents of the Shale region, we need action now and I urge no further delay.

I would like to speak specifically on three of the revisions being proposed.

First- Section 78.15 Application Requirements: I am very heartened to see that the natural gas industry will be required to consult with the Pennsylvania Natural Heritage Program as well as be required to notify about the impacts to public lands, natural landmarks, and historic properties. While it is not as encompassing or as protective as it should be, it is a start and these regulations need to be approved quickly to afford some type of Endangered Species and public land protection.

In addition I recommend that DEP look at adding a provision to this section that a company planning for a well, pipeline right-of-way, compressor station, or other gas processing facility, should only be allowed to apply for a permit if they have a current lease in place or a Letter of Authorization from the landowner. Currently the above described applications can be submitted to the DEP for review without a lease in place with the landowner. It would save DEP's time and resources and allow the public to have accurate information on a facility prior to the installation instead of receiving amendments to the permit after the fact.

Second- Section 78.51 d2 Protection of Water Supplies

This section has brought quibbling from Industry and environmentalist groups. I understand this section to mean if my private water supply was a superior supply to the safe drinking water standards predrill then it needs to be returned to that superior level, not just safe. By means of example, if my pre-drill chloride level is at 100 mg/l, and safe drinking water standard level of chloride is 250 mg/l, and my post drilling water supply chloride levels rise to 600 mg/l, I expect that this section will require the Industry to return my water supply back to a chloride level of 100 mg/l, not 250 mg/l. If something happens to the quality of my water as a result of drilling, it is only fair and just that the quality of my water be put back to the same high quality that existed before drilling. If the industry or environmental groups feel this language is ambiguous as written, then the DEP needs to make it clearer in its language perhaps by listing examples as given above.

Third

Section 78.59c -Centralized Impoundments- I recommend these centralized impoundments be eliminated entirely and not permitted. This section was the lengthiest in the Proposed Chapter 78 changes document- ten pages of regulations on this section alone. The storing of flowback fluids in an impoundment area provides inadequate protection of groundwater resources. Industry can do better and has done

better. Many operators do not use centralized impoundments. The industry should be required to use the above ground containment systems outlined in Section 78.57 of the Code. Protection of groundwater and other water resources should be one of the Commonwealth's greatest concerns. Leaks can go undetected in these centralized impoundments, why take the chance? Since there are other methods available to the industry- why not require them to do the safer alternative?

I thank you for the opportunity to speak before you this evening and provide my input.

Kristin Landon

Leased Landowner

11 Baker Hirkey Road

Tunkhannock, PA

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MAR 12 2014

INDEPENDENT REGULATORY
REVIEW COMMISSION

My Name is Dee Boyd
I live outside of Burgettstown, PA I'm a Retired
Nurse

I know and have met many people here in PA that have been affected by Hydraulic Fracturing or Fracking. Some of which are family members and close friends with children. I have personally seen adverse health effects from these people just innocently living in their homes drinking water and breathing air.

I have also witnessed homes loose well water after the fracking industry came to their land or farm. I know this to be true, I once lived on one such farm over 80 yrs. ago.

That being said, my concerns are many, so very many.

The bottom line here is that safety is NOT being practiced by the industry. Not only that, but the citizens of this state do not know the truth of this industry, and therefore, know not the danger they and their loved ones are in.

If it's the "cleanest" fossil fuel, then why not expose the extraction process? Or better yet, the 7,500 gallons of chemicals that are used per well! AND the effects of said chemicals on the human body.

First and most important is our precious resource: WATER!

It's being contaminated, at alarming rates. From the chemicals used, to the methane, radiation and other natural compounds that come up during the drilling process itself.

How many citizens know to get their water tested prior to drilling? Then once a land owner becomes ill, or their animals become sick, it's too late! The burden of proof is on the land owner. This needs to be changed.

New regulations need to be imposed on these companies to ensure our rights for ~~CLEAN~~ ~~SAVE~~ water! And shut down all well pads if contamination does happen to a water source! Also, what and where are these companies going to do with this chemical, radiation laden water?

Now you're proposing to dump it on our roads?

In our cities, towns, and rural areas!? Are you kidding me?!

We are going to have this poison on, and in our cars, breathing it in on the highways, breathing it in our yards. Our children getting doses of poison every day of chemicals and radiation!

This is what I propose you do.
Tell the public what exactly is in this Brine
water. That the chemicals can cause; confusion,
ANEMIA, Rapid pulse, Nervous System damage,
Leukemia, cancer, damage to the reproductive
system, birth defects, and more.
Eventually this dumping process will end up in all
our water ways.

Why not let the public vote on whether or not
they want this poison cocktail dumped on their
road? They Must and Should be informed!!!
This is OUR state, and OUR country. We all live here,
the gas and oil industry will not be here forever.
What will we be left with in its wake?

It's up to us!

TESTIMONY TO THE ENVIRONMENTAL QUALITY BOARD

Chuck Shrader

February 12, 2014

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MAR 12 2014

INDEPENDENT REGULATORY
REVIEW COMMISSION

Good evening. My name is Chuck Shrader. Two years ago, I retired after 34 years in the local Banking Industry, where I worked primarily as a small business lender. Currently, I work as an independent contractor for SLT Production, LLC in Sheffield.

As you are aware, the climate for small business has become increasingly more difficult over the past several decades. One of the heighten challenges to both large and small business has been the substantial increase of new regulations. These regulations have caused many smaller businesses to reduce their work force or just close all together.

I was pleased when in 2012 the Legislature revised the Regulatory Review Act to require agencies like the DEP to specifically consider the impact of new regulations on small business. Among other things, the DEP is now supposed to consider the benefit of any new regulation in conjunction with the associated costs.

Today we are reviewing numerous proposed regulations and requirements that will result in substantial increases in costs on Pennsylvania's conventional oil and gas industry. As you have heard from a number of speakers this evening, the DEP has failed to show a compelling need for many of these.

I would like to take a few minutes to speak about the new requirements regarding well site and tank battery site specific PPC (Preparedness, Prevention & Contingency) plans to be imposed on conventional oil and gas operators.

Today most conventional operators employ a generic PPC plan that meets the requirements of existing section 78.55. Among other items the generic plan lists the company contacts and internal spill cleanup resources. It also lists the outside contractors who might be called upon to assist in the response.

This information has been and is a sufficient guide on how to handle materials and respond to releases or threaten releases. In conventional versus unconventional operations, well and tank sites are smaller, the volume of materials that could be released from an accidental spill are smaller and there fewer types of materials to manage on site at conventional versus unconventional operations.

The proposed regulation elevates the burden by requiring a "site specific" plan that meets the requirements in 25 Pa. Code, section 91.34. Section 91.34 applies to locations where pollutants are both "produced" and "stored". Therefore, the site specific requirements would apply to both individual wells and to separate tank locations.

When the DEP provided there analysis of the new regulations to you, the DEP failed to attribute any cost to this new requirement. They also failed to discuss the need for such an additional burden. I am confident that the need does not exist. In addition to containing small amounts of materials, conventional well and tank locations are highly similar. Unique chemicals or other pollutants do not exist from site to site. The critical information of who to contact and where to locate cleanup resources are already contained in the existing generic plan.

It is shocking that the DEP did not provide to you any cost estimates for compliance with this new proposed requirement. There is a reasonable assumption of 200,000 discrete conventional well and tank locations. Assuming a cost of \$40 for the PPC storage unit, a labor cost of \$25 to install and a cost of \$100 to prepare each plan, the initial installation cost would be \$33,000,000. The \$100 preparation cost assumes that the plan can be prepared internally. The plan prepared by contracted professionals could cost as much as \$500. Annual plan updates and repair costs will continually increase the cost of doing business.

Based on my 34 years of lending experience, I can assure you the small business man and women who make up our conventional oil and gas industry cannot absorb these tens of millions of dollars in increased costs. This is especially true when the DEP has failed to show any reason why the existing generic plans are inadequate. The costs of these new burdens are dramatically out of balance with any benefits that might be achieved.

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INDEPENDENT REGULATORY
REVIEW COMMISSION

Page 1

My name is John Trallo. I am a resident, home owner, small business owner in Davidson Twp., Sullivan County, PA., and I want to thank you for this opportunity to speak. I am also a teacher, father, and grandfather.

After carefully reading the DEP proposed amendments to the PA oil and gas regulations, it is clear that the primary intention of these regulations is to encourage the expansion of the oil and gas industry in Pennsylvania, and not to protect the environment, the unique ecology of PA, our valuable forests and state lands, or people who live in the communities in the shale regions.

I hear the usual code words such as "minimizing, acceptable practices, lessening the impact", etc., but nowhere in the rules and regulations do I see any measure for shutting down what are commonly referred to as "bad actors". The only consequence for any violations, caused either by negligence, intent, or by accident, are scandalously low and inadequate fines. There are also no mention of any measures that the state would impose upon any operator to justly compensate, or restore the quality of life of those who will be negatively impacted. On the contrary, the rules are clearly slanted in the industry's favor.

To date, more than 1600 residents of Pennsylvania have entered their names onto the *List of the Harmed*, avowing that after drilling operations began in their area, they became ill.

Research from the Colorado School of Public Health indicates that persons who live within $\frac{1}{2}$ mile of fracking operations have an increased risk of disease-- both cancers and non-cancers due to exposure to toxic chemicals. Dr. John Adgate, Colorado School of Public Health, found that the chronic health risks near drilled areas were highest for neurological disease, hematological disease, respiratory effects, and developmental effects.

A study recently released by Cornell University, found decreased birth weight for babies of mothers who experienced their pregnancy near unconventional gas drilling operations. The research on the effect to developing babies is horrifying. There has been shown to be a 25% increased prevalence of low birth weight if the mother lived within 1.5 miles of an unconventional gas well.

Dr. Currie of Princeton looked at the Pennsylvania birth records from 2004 to 2011 of infants born within 1 mile of unconventional gas drilling sites, and found the likelihood of low birth weight increased by more than half.

Research out of Duke University found that water wells within 1 mile of unconventional gas wells had 17 times the thermogenic methane as reference sites. Another Duke study found methane 6 times higher and ethane 23 times higher if a home was within

one quarter mile 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 the 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 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 in gas drilling operations are known carcinogens, neurotoxins, and endocrine disruptors. Many, such as the BTEX group, have long been known to be linked to disease.

Over 40% of the chemicals used in unconventional gas drilling 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. The risk of disrupting the endocrine systems of our born and unborn children is unconscionable with the potential to lead to a multitude of chronic 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.

"Regulation" by it very definition means: *the adjusting, organizing, or controlling of something, or the state of being adjusted, organized, or controlled, or to regulate the flow.*

In closing I must conclude that there is no such thing as regulations that will adequately and sufficiently protect the people, or ensure the safety and protect the health of our children. If there are, I would like to know what regulatory model the DEP and the EQB have been studying.

Therefore, all the regulations, and the amendments to current regualtions you propose do nothing more than attempt to adjust the rate of damage to the environment, public health, and the safety and security of our communities, and our children.

Finally, I would like to echo the wise words of Supreme Court Chief Justice Ron Castille who wrote the Supreme Court's decision on the unconstitutionality of some of Act 13's provisions when he said:

"By any responsible account, the exploitation of the Marcellus Shale Formation will produce a detrimental effect on the environment, on the people, their children, and the future generations, and potentially on the public purse, perhaps rivaling the environmental effects of coal extraction." - PA Supreme Court Chief Justice Ronald Castille, December 19, 2013

Sincerely,
John A. Trallo, Sr.
47 Main Street
Sonestown, PA 17758
570-482-3503
jtrallo@epix.net

Executive Committee,
Shale Justice Coalition
<http://shalejustice.org/>

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INDEPENDENT REGULATORY
REVIEW COMMISSION

Diane Ward
902 Grove School Rd
Wysox PA 18854

Bradford County PA resident and landowner
Wyoming County PA landowner and former resident

Thanks for the opportunity to provide testimony tonight. I will focus my comments on the proposed standards regarding abandoned, orphaned and inactive wells in 78.52a, 78.73, 78.103 and 78.105.

My understanding of the issues regarding drilling near legacy wells dates back to 2009 when I realized that the planned Lundy horizontal 2H well in Standing Stone Township was in close proximity to the legacy Harold W. Lundy Well, plugged in 1991. At that time, I provided input relative to the permitting of the Lundy wells, wrote letters to Oil & Gas, TAB and CHK. I provided input on the advanced rulemaking and again during the public comment period of final rulemaking. I am providing copies of comments I made and the response that I got. Although no regulations regarding abandoned wells were enacted by DEP at that time, my efforts were not in vain. The Harold W. Lundy legacy well did get evaluated and ultimately was plugged in March 2011, prior to the fracing of the new Lundy 2H.

Although I am pleased to see the DEP addressing this issue at this time, I am more than disappointed at the lack of strength of the regulations. The regs deal only with a very limited set of wells, the officially "abandoned and orphaned" and do not include identification of inactive wells in the area of proposed new wells. Given the Harold W. Lundy well experience, there is clearly a need to identify inactive wells also.

Identification of wells is not enough. All wells in the area of a planned horizontal well must be evaluated, even if previously plugged. In Bradford County, there are currently 5 orphaned and abandoned wells. By my last count from DEP efacts records when the site search for inactive wells was still operational online, Bradford County has 23 inactive wells. The potential hazard to our environment from fracing near these wells is potentially much greater than from the orphaned and abandoned wells. I assume there is a similar situation statewide. The wells must be plugged or replugged, if necessary, prior to fracing.

The "visual monitoring" at unspecified frequency in your proposed 78.73 is insufficient. The concept of allowing fracing until changes in the monitored legacy well are noted is unacceptable. Requiring plugging after the changes occur is requiring plugging too late to prevent impact to the environment. This approach is not proactive and does not protect our water.

My proposal relative to identification is to adopt the Alaskan proposed regulations which were reviewed by the DEP and commented upon in the regulatory analysis associated with these standard changes. We need to go all the way and identify all well penetrations, as well as geological faults and fractures. At a minimum, inactive wells should be included in the identification step along with abandoned and orphaned wells. In addition, well penetrations must be evaluated, and replugging conducted if necessary prior to fracing the horizontal well.

I have twice provided the wording for a standard that would provide meaningful change. The DEP has had almost 3 years to seriously consider my input, if the DEP were so inclined, I will now read the proposed standard that I provided to the DEP in the advanced rulemaking and rulemaking public comment processes.

This proposal is included in my handout and highlighted and is numbered 78.77. With minor revision, it would meet the needs of providing proactive protection to the waters of the Commonwealth, including the private water supplies of our residents.

Read from document 2857 Received by the DEP Aug 2010 here.

Relative to 78.103 and 78.105, many wells currently classified as inactive need to be reclassified as abandoned. There is no stated impetus in the standards as to when the Department takes the initiative to do this. I will assist, if needed, in providing that impetus if needed for Bradford County's inactive wells. Only one well previously considered inactive has been reclassified as orphaned and abandoned in the past several years. Despite my dissemination of the inactive list to CHK and to Bradford County leadership, I do not see any evidence of the other wells on the inactive list having been evaluated, and potentially replugged, despite my pleas for this to occur. The inactive list is being ignored in Bradford County, and likely across the state. The true proportions of the problem with legacy wells in PA is best represented by the sum total of the orphaned, abandoned, and inactive legacy wells.

Regarding data, there have been changes in the DEP's efacts which limit the ability of the public to access data.

that we previously were able to obtain. There are several examples but the pertinent one here is the inability to access the inactive well list in totally. I have included in my testimony package the list I was able to access 2 years ago. I applaud the DEP's current mapping project, it needs to be completed with all wells shown. The Harold W. Lundy well is not shown, and is also semi-invisible in efacts.

I would welcome the opportunity to discuss these problems with a data administrator if I could be directed to the correct person.

Lastly, I would like to voice a specific concern for our area's, and specifically Wyoming County's, glacial lakes. Encroachment of drilling toward Lake Carey and Harvey's Lake threaten these special public resources. Current standards do not deal adequately with the special needs of our area's

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Testimony Tunkhannock 1814

glacial lakes. Water quality, habitat, and recreational opportunities afforded by these lakes need to be specially considered, as does the underlying geology. One proposal would be for an automatic evaluation of all glacial lakes for potential classification as EV (exceptional value).

I expect to submit additional comments via e-mail. These comments will address other aspects of the proposed regulations. If I should register to comment at a different county's public comment forum, it will be to provide comments pertaining to different regulations than covered today. I ask you not to exclude my participation at a second event. I also request an additional public hearing be scheduled for Bradford County which has not been scheduled for a convenient forum for public attendance, despite that county's significant gas drilling experience.

Thank you very much for your efforts to protect our environment, and for coming here today.

Diane V. Ward

1/27/14

DVN 1/8/14

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Site ID:	13413
Site Name:	HAROLD W LUNDY 1 OG WELL
Address:	PA
Status:	Inactive

Clients (1)**Programs (1)****PA Municipalities (1)**

North Central PA Region	Oil & Gas	Standing Stone Twp, Bradford County
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Site Permits (0)

No records matched the criteria.

Facility Permits (0)

No records matched the criteria.

Site-Level and Primary Facility-Level Inspections (4)

1961023	03/29/2011	Plugging(Includes Plugged/Mined Through)	No Violations Noted
1954846	03/04/2011	Drilling/Alteration	No Violations Noted
1952116	02/23/2011	Drilling/Alteration	No Violations Noted
213273	02/06/1991	Plugging(Includes Plugged/Mined Through)	No Violations Noted

And:

The formula for identifying over-pressurized annular conditions—(0.8 x 0.433 psi/foot) multiplied by casing length in feet—may not be sufficiently protective in areas with a relatively deep water table. We suggest reducing the multiplier from 0.8 to 0.7.

Diane Ward comments:

An operator proposing to drill a well within one mile of an abandoned or orphan well or a well plugged using procedures less protective than those detailed in this revision of 78.92-78.95, shall forward by certified mail a copy of the well location plat showing the location of the abandoned, orphan, or previously plugged well, the drilling, casing and cementing plan for the new well and the anticipated date drilling will commence to the Department and shall submit proof of notification to the Department with the well permit application. The operator will be subsequently required to provide to the Department the well record of the abandoned or orphan well or previously plugged well. Upon request of the Department, the operator will be required to assess the orphan, abandoned, or previously plugged well for mechanical integrity, defective casing or cementing, and excess pressures and provide this assessment to the Department. The Department will determine the appropriate prerequisites to drilling the new well, which may include the plugging of the orphan or abandoned well utilizing current standards as specified in 78.92-78.95, or may specify repair/re-plugging requirements for the previously plugged well which must occur prior to the drilling of the new well.

Earth Justice and Sierra comment:

The Department should develop best flaring practices as well as green completion techniques.

Response:

The Department believes it has appropriately addressed surface casing pressure requirements and remediation measures for when pressures are exceeded.

A survey and assessment of surrounding abandoned wells may be useful to the Department but should not be a prerequisite for well permitting. If well drilling or stimulation causes communication with an abandoned well such that there is the threat to pollution of waters of the Commonwealth, the Department has the authority to order the well operator to remedy the situation.

Finally, best flaring practices is a concept the Department will consider addressing through the development of a guidance document. As previously mentioned, green completion techniques are beyond the scope of these regulations.

§ 78.81. General provisions.

Numerous commentators stated that oil and gas wells should be constructed according to Pennsylvania public water well construction standards. In particular, requiring the diameter of the well bore be at least 3 inches greater than the outside of the casing collar or casing tube so that wells may be cemented using a tube that is placed on the outside of the surface casing (“top jobbing”).

PIPP comments:

403

AUG 17 2010

From: diane ward [pekin_2@yahoo.com]
Sent: Monday, August 09, 2010 6:57 AM
To: EP, RegComments
Subject: 25 PA. CODE CH. 78?Oil and Gas Wells Proposed Rulemaking EQB- Comments

INDEPENDENT REGULATORY
REVIEW COMMISSION

From: Diane V. Ward
RR #2 Box 68D
Wysox, PA 18854

e-mail:

pekin_2@yahoo.com<http://us.mc343.mail.yahoo.com/mc/compose?to=pekin_2@yahoo.com>
Thank you for your efforts to improve the PA regulations regarding Oil and Gas Wells. After careful review of the proposed rulemaking on Oil and Gas Wells, I hereby submit the following comments for your consideration:

78.83 (2) (c) The requirement for protecting fresh groundwater with surface casing should be that the operator shall drill to approximately 100 feet below the deepest fresh groundwater or at least 100 feet into consolidated rock, whichever is deeper, and immediately set and permanently cement a string of surface casing to that depth. The proposed regulation currently shows a requirement of 50 feet below the groundwater or 50 feet into consolidated rock. The 100 foot requirement was part of the proposal reviewed at the March 25th TAB meeting. I do not know why it is now shown as having reverted back to the original 50 feet requirement. This additional protection for water supplies is justified by the need of the people of PA to protect their pre-existing and lawful private drinking water supplies, and was supported as a needed change by the DEP.

The DEP is also seeking input on the installation of centralizers in this section. Relative to cementing, there is no substitute for a casing which is centered. After the first centralizer within 50 feet of the casing seat, centralizers should be installed in intervals no greater than every 50 feet above the first centralizer. This frequency will help to insure that the cementing operation is successful in protecting the fresh groundwater supplies of the Commonwealth of PA. The current proposal calls for every 150 feet after the first centralizer.

The following is a proposed new standard to proactively reduce the probability of gas migration caused by communication of a gas well with a legacy well.

78.77 Drilling in the area of an abandoned or orphan well or a well plugged using procedures and standards less protective than those detailed in this revision of 78.92, 78.93, 78.94, and 78.95.

An operator proposing to drill a well within one mile of an abandoned or orphan well or a well plugged using procedures less protective than those detailed in this revision of 78.92-78.95, shall forward by certified mail a copy of the well location plat showing the location of the abandoned, orphan, or previously plugged well, the drilling, casing and cementing plan for the new well and the anticipated date drilling will commence to the Department and shall submit proof of notification to the Department with the well permit application. The operator will be subsequently required to provide to the Department the well record of the abandoned or orphan well or previously plugged well. Upon request of the Department, the operator will be required to assess the orphan, abandoned, or previously plugged well for mechanical integrity, defective casing or cementing, and excess pressures and provide this assessment to the Department. The Department will determine the appropriate prerequisites to drilling the new well, which may include the plugging of the orphan or abandoned well utilizing current

standards as specified in 78.92-78.95, or may specify repair/re-plugging requirements for the previously plugged well which must occur prior to the drilling of the new well.

I previously submitted the above proposal for 78.77 in my comments to advance rulemaking. I am resubmitting it now because I feel that the Department's response to my concern about communication with a legacy gas well is insufficient to protect the fresh water supplies of the Commonwealth from gas migration. Basically, the Department's plan to deal with communication with an old gas well causing gas migration is to shut down the new well after the gas migration happens. This strategy is totally reactive, not proactive. It is the proverbial closing of the barn door after the cows get out. We, the people of PA need a proactive stance to the issue of gas migration caused by communication with older, legacy wells. We are not willing to accept the approach proposed by the Department which will cause our private water supplies to be contaminated by methane, and our houses to be uninhabitable. The Department has reviewed page after page of case studies indicating that these legacy wells are an issue. The Department should not permit the drilling of new Marcellus wells in the vicinity of legacy wells if it is not willing to issue regulations requiring the assessment, plugging, repair or other followup actions on legacy wells.

Based on my review of the data on the DEP's website, Bradford County PA has 23 inactive, previously plugged wells. In addition, there are three abandoned or orphan wells which need to be plugged in Bradford County. In some areas of the states, the number of inactive, previously plugged wells and abandoned or orphan wells is even higher. These wells create a serious gas migration risk to the rural private water supplies, and safety, of Bradford County and PA residents as new Marcellus wells are drilled in the vicinity of these legacy wells. An example of this is the Harold W. Lundy 1 OG Well (13413) last inspected/plugged in 1991. In my comments to advance rulemaking I discussed this legacy well and the very nearby Lundy 2H well which was at that time permitted. Five months have passed, and the Lundy 2H well has now been drilled, spud as of 5/13/10 API # 015-20556. It has not yet been hydrofractured. I am hoping for the best, but fear the worst. There are no regulations in place to minimize the chance of a communication event happening when the Lundy 2H is fraced. If gas migration happens in the vicinity of this well, I will consider both Chesapeake and the DEP responsible, since the DEP had advance knowledge of the concern provided to them on multiple occasions in writing, and has chosen to refrain from promulgating regulations restricting gas drilling near legacy wells, or proactively requiring conditional assessments of said legacy wells first. We urgently need a regulation concerning drilling and fracing near legacy wells. Thank you for considering this serious input.

Diane V. Ward

RR #2 Box 68D

WyoX PA 18854

pekin_2@yahoo.com<http://us.mc343.mail.yahoo.com/mc/compose?to=pekin_2@yahoo.com>

570-268-0978

Site Name (Site ID)	Site Address	Status
ARM HEADLEE LOG WELL (13414)	W. Burlington Twp	Inactive
BAIRD LOG WELL (459227)	Pittman Twp	Inactive
CHARLES W. EMMEL LOG WELL (13412)	Wilmet Twp	Inactive
CINNIGI LOG WELL (13417)	Columbia Twp	Inactive
EDWARD J. & MARY STRICKLAND LOG WELL (13415)	Wysox Twp	Inactive
ED SIMONS LOG WELL (13416)	West Burlington Twp	Inactive
FRANK J. BONIN JR. & MERRICE E. BONIN LOG WELL (13418)	Orwell Twp	Inactive
HAROLD W. LUMPKY LOG WELL (13413)	Standing Stone Twp	Inactive
HENRY CONDRICK UNIT LOG WELL (13410)	Herrick Twp	Inactive
HUEY O. OG WELL (13411)	Athens Twp	Inactive
JUHANNESSEN LOG WELL (13408)	Athens Twp	Inactive
Site Name (Site ID)	Site Address	Status
KENNETH RAY LOG WELL LOG WELL (612970)	Ridgebury Twp BENTLEY CREEK	Inactive
KIESER UNIT LOG WELL (654537)	Ridgebury Twp BENTLEY CREEK	Inactive
LEONARD L. WALSH (13409)	Springfield Twp.	Inactive
LLOYD JONES LOG WELL (13407)	Granville Twp	Inactive
MARGARET M. WALSH LOG WELL (612970)	Ridgebury Twp BENTLEY CREEK	Inactive
MICHAEL S. LOG WELL (650545)	Smithfield Twp	Inactive
RALPH JOSEPH UNIT LOG WELL (13400)	Asylum Twp	Inactive
SHIRLEY DELL LOG WELL (13402)	Troy Twp	Inactive
TWISS O. OG WELL (13422)	Litchfield Twp	Inactive
WILLIAM BRUCE O. OG WELL (13404)	Sheshequin Twp	Inactive
WOOD D. SKELL (650547)	Athens Boro	Inactive
Site Name (Site ID)	Site Address	Status
ZODER FARM LOG WELL (13411)	Rome Twp ROME, PA	Inactive

Shaw Oil
 (Alden + Blake)
 (Pure Oil Co.)
 (Pennzoil Prod Co.)
 (Fenix + Scisson Inc.)
 (Angerman Assoc. Inc.)
 (Weaver Oil Gas)
 (Fairman Drilling)
 (Shell Oil Co.)
 (Quaker State Corp.)
 (Quaker State Corp)

Consol Gas Co.
 (Range Resources)
 (Columbia Nat. Res.)
 (Goodwin Ind.)
 (Consol Gas & Co.)
 (Alden + Blake)
 (Shell Oil)
 (Angerman Assoc.)
 (Quaker State)
 (Quaker State Corp.)
 (Reedon + Blake)

(Unknown Opt.)

7/2014

Abandoned_Orphan_Web - Report Viewer

(2014)

COUNTY	08 - Bradford	WELL STATUS	DEP Abandoned List, DEP Orpha	<input type="button" value="View Report"/>
MUNICIPALITY	All	REGION	All	

14 4 1 of 1 > <

Find | Next



DEP OFFICE OF OIL AND GAS ORPHAN AND ABANDON

1/27/2014 12:55:04

County: 08 - Bradford; Municipality: All; Region: All
 Well Status: All
 Well Count: 5

REGION	COUNTY	MUNICIPALITY	API	WELL STATUS	FARM NAME	WELL TYPE	USGS QI
P DOGO ICDO Dstr Off	Bradford	Albany Twp	015-00005	DEP Abandoned List	Burbage 1	Oil	Dushore
P DOGO ICDO Dstr Off	Bradford	Rome Boro	015-00003	DEP Abandoned List	Speigel 1	Gas	Rome
P DOGO ICDO Dstr Off	Bradford	Rome Boro	015-00004	DEP Abandoned List	Kepplinger 1	Gas	Rome
P DOGO ICDO Dstr Off	Bradford	Rome Twp	015-00002	DEP Plugged	Yoder Farm 1	Gas	Rome
P DOGO ICDO Dstr Off	Bradford	West Burlington Twp	015-00001	DEP Orphan List	C Dickenson 1	Undetermined	Ulster

SSRS_OG_202 Ver 1.2

Page 1 of 1

(2011)

Orphan / Abandoned Wells

TY	MUNICIPALITY NAME	PERMREG/API	WELL TYPE	FARM NAME	WELL	TYPE WELL	USGS QUAD	QUAD SECTION	
	West Burlington Twp.	015-00001	Orphan	C. Dickenson	1	Unknown	East Troy	5	
	Rome Twp.	015-00003	Abandoned	Speigel Farm	B	Gas	Rome	1	
	Rome Boro.	015-00004	Abandoned	Kepplinger	C		Rome	1	
ID#	LAT OFFSET	LONGITUDE	LONG OFFSET	GPS LATITUDE	GPS LONGITUDE	Lat_Deg	Long_Deg	WELL DEPTH	TC
1000	13900	764000	2650	414742.68	764034.98	41.795189	-76.676383		
1230	6800	762000	10000	415122.60	762212.14	41.856278	-76.370039		
1230	6490	762000	10475	415125.67	762218.42	41.857131	-76.371783		

brian grove (brian.grove@chk.com)

diane

Compose

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Inbox (99+)

Replugging of old "legacy" wells in Bradford ... (2)

Drafts (74)

Sent

Spam (99+)

Trash (8)

Folders

Recent

Messenger

Calendar

Contacts

Notepad

Yahoo Mail for Mobile

Send Feedback

Brian Grove

To Me, Eric Haskins, Stacee Bellows

Diane:

Thank you for providing this information. We have shared it with our drilling, regulatory and operations teams to ensure that all are aware. Improperly abandoned wells are an issue that we take very seriously, as evidenced by our efforts on the Lundy property. We will continue to move forward with the same measure of care in other locations as is prudent. Thanks again.

Sincerely,

Brian

From: diane ward [mailto:pekin_2@yahoo.com]
Sent: Monday, February 28, 2011 2:00 PM
To: Eric Haskins; Stacee Bellows; Brian Grove
Subject: Replugging of old "legacy" wells in Bradford County

Eric, Brian, & Stacee:

Now that the replugging of the old Harold Lundy "legacy" well in Standing Stone Township is actually underway, I wanted to thank anyone who had a part in evaluating the well's condition and seeing to it that the well was replugged. This action on CHK's part provides a measure of relief to those of us who have been concerned about the well, considering its proximity to several of CHK's new wells drilled prior to the most recent standards updates, and the potential for it causing gas migration.

As a resident of Standing Stone Township, insuring that this gas well was properly dealt with was the focus of my initial effort, not only for myself, but for the other residents of our community, since there is no easy alternative to

private water wells for supplying this community with residential water. However, I am also concerned for the rest of Bradford County, since there are 25 inactive legacy wells in our county and 3 orphan/abandoned wells. Last year, I provided the entire county list to our CHK contact Greg Schöffner in the hopes that CHK would follow-up on all the wells in its drilling area, and communicate to other drillers about the hazards these pose in their drilling areas. Companies such as Talisman, Range and Southwestern should be made aware of these legacy wells which could potentially cause gas migration, or cause even worse impacts. In the supplemental material to the article in the New York Times this weekend, the issue of poorly plugged wells was again mentioned as one of the mechanisms for water impairment.

Since Greg Schöffner no longer works for CHK, and another individual, Brad Witrock, who was aware of our issues also is no longer with you, I wanted to be sure that the data that I provided was not lost in transition, so I am taking the opportunity to provide CHK with the list again.

Perhaps you could take a quick look the attached documents and tell me which wells are on CHK's follow-up list, and whether anyone has informed the other drilling companies about the potential problems associated with drilling near the remaining legacy wells. Are any of the legacy gas wells in CHK's "territory"

#9 Margaret Steury

RECEIVED

MAR 12 2014

TOPOGRAPHIC AND GEOLoGIC SURVEY
INDUSTRIAL REGULATORY
NEW CASTLE QUADRANGLE
PROJECT MILETONMISSION

U. S. GEOLOGICAL SURVEY
GEORGE OTIS SMITH, DIRECTOR

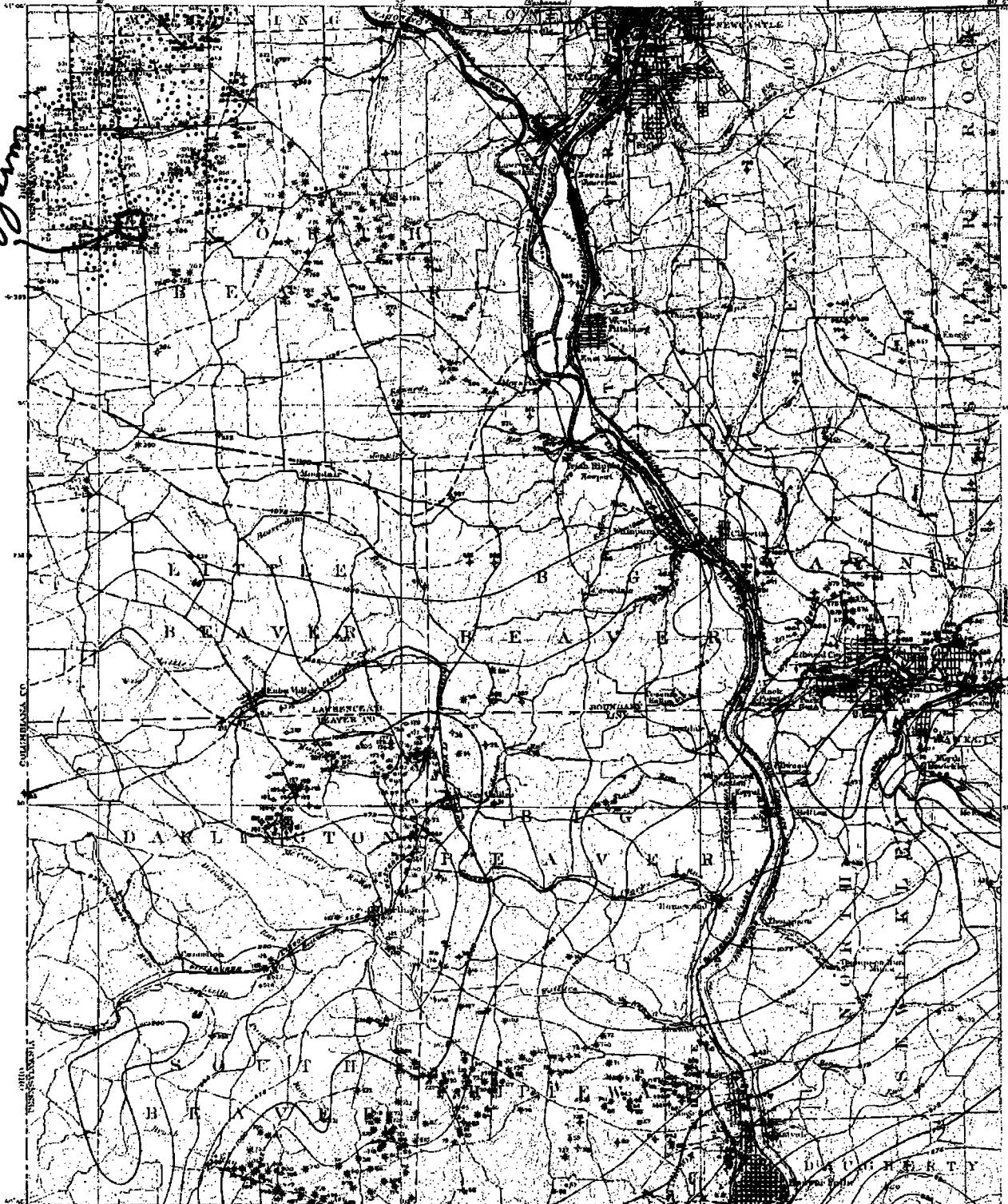
PENNSYLVANIA DEPARTMENT OF INTERNAL AFFAIRS
JAMES KIRKWOOD, DIRECTOR
TOPOGRAPHIC AND GEOLoGIC SURVEY
GEORGE H. ASHLEY, STATE GEOLOGIST

EXPLANATION

Drop wells

- * Gas
- ♦ Gas or gas
- Oil
- ▲ Show of oil
- ▼ Show of oil and gas
- + Dry
- ◆ Ranch unknowns

Vertical contours on Middle Elizabethtown coal
Contour interval 10 feet
Datum is mean sea level



MAP OF THE NEW CASTLE QUADRANGLE, PENNSYLVANIA
SHOWING OIL AND GAS

Base from U. S. Geological Survey topographic map
of New Castle quadrangle, Pennsylvania.
Surveyed in cooperation with the
State of Pennsylvania in 1901-1902.

Geological Survey
C. W. Denehy, Director
1905-1906 for the U. S.
Geological Survey, in cooperation with
the Topographic and Geological Survey
Commission of Pennsylvania

Scale 1:62,500
Contour interval 50 feet.
Distance 6 miles on a straight line.
1928

Wells of the New Castle Quadrangle



GAZETTE

WELLSBORO 1974



Old wells are forgotten, not gone

By Jason Przybycien
jprzybycien@logapublishing.com

Natural gas drilling isn't new in Tioga County. News papers from the 1930s and 1970s show lists of producible wells were drilled, though some have since been abandoned. Incomplete information on those wells is on file with the Department of Environmental Protection, and other agencies have databases of their own.

"But if you really want to find out where all the wells are hidden, you have to read old newspapers and ask around," says Carolyn Kilburn, a concerned Liberty resident. In her free time, she has been trying to compile a list of abandoned wells. The list is still woefully incomplete.

"A lot of it comes right from the newspapers in the Green Free Library archive," she said.

She herself wasn't concerned about the abandoned well along Goose Town Road in Union Township until recently. Shell Appalachia had drilled several gas wells about half a mile away. Kilburn thought about the old well again in early June,

just before hydraulic fracturing operations on those new wells coincided with a water/methane geyser on Goose Town Road.

"A couple weeks before the geyser thing happened, I asked my dad, 'What's that pipe?' he said. "We called it the artesian well and played in it when we were kids. He said 'That's a gas well.'"

Shell's data

Shell had known about that 1930s era well from at least one source, though until the geyser they thought it was well plugged. Deborah Sawyer, Shell communications business advisor said their primary source for abandoned well maps is The Pennsylvania Interim Record Logging System/Wells Information System, maintained by the Department of Conservation and Natural Resources.

Known locations of abandoned wells are considered when Shell decides where new drilling will take place.

"When selecting the surface location for a pad, Shell balances a number of technical, economic, environmental and social factors through a comprehensive screening process," Sawyer said.

Public data

While Shell is employing sophisticated technology to

map out the county's underbelly, Kilburn said anecdotal evidence is quite helpful. DEP offers a list of abandoned wells online at http://www.dep.state.pa.us/depweb/portal/server.pt?command=abandoned_oil_gas_well_program/02032. But the list only includes 14 wells in Tioga County. Kilburn knows of more, including one in her neighbor's back yard and the one in Union.

Tioga Planning Director Jim Wever said he would also like to see a more complete list than that one from DEP.

"I know of at least three other wells that are abandoned and are not on that list," he said.

Drawing from the newspaper archives, the list does not include an old well un-

derground that considers surface water, ground water, ecosystems and wildlife, unique or historic sites, and air quality impacts; and potential impacts on landowners and the community.

Shell

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Resign...

continued from page 1-A

Curren knowingly built a barn in November without a permit from the township.

Employee relations

The guests asked Curren why he had called the state Auditor General to examine township records. Curren said "things don't look right here to me" in terms of accounting, but that he did not accuse Christman, Spangler's daughter, of any wrongdoing.

"It's not Jackie," he said.

While reading the minutes from the July meeting, Spangler said they should have been an action item at that meeting. She offered a letter from Solichio Jeff Loonis, which said the supervisors cannot legally request Roadmaster Carnright to prove he has purchased insurance with a \$60 per week payment in lieu of insurance.

But, Curren shared a written opinion from the Pennsylvania State Association of

Township Supervisors which said that they could not provide a payment in lieu of insurance. Emily Rizzo, a guest at the meeting and former supervisor, said they never approved a payment to her for Carnright. They gave him the equivalent raise in base pay, instead. The supervisors agreed to discuss the matter further with their solicitor.

A few minutes later, Rizzo was on the agenda. As a current auditor and former supervisor, Rizzo was concerned that the supervisors had taken too long to award bids for a box culvert on Pond Road sponsored by the federal Emergency Management Agency (FEMA). She pointed out that, had the supervisors not opened the bids at the last meeting, they could have lost an expected \$223,594 reimbursement from FEMA.

Vernon argued that he was "catching up" because the FEMA process was initiated

before he was a supervisor. Curren said he was catching up, too.

"I was wondering, particularly, why we went from a shovelful pipe to a box culvert," Curren said.

"Because of FEMA," Rizzo replied, adding, "This is something we discussed at every township meeting ... you were at our meetings."

Later, Vernon pressed Roadmaster Carnright to explain how long the Pond Road construction would take given other necessary road work.

Carnright said he could not predict their progress, but said the planned repairs are "not even possible within the budget." Vernon offered to hire Rusty Sherman as a full-time road worker, the only remaining candidate. Carnright had recommended against Sherman and Curren voted to hire him, and Spangler abstained.

"He's going to require a lot of work to get him up to

snuff," Spangler said.

Just after that, Carnright accused Curren and Vernon of lying to him, for instance, by approving purchases at the meeting and criticizing him later for making them. Vernon said it was an inappropriate forum to say that, and encouraged him to resign. Carnright did, followed by Christman, and others Rizzo and Timmehello and Spangler.

According to Spangler, Christman was going to make her resignation effective Aug. 17, but Curren, Vernon and the solicitor met her at the office Aug. 8 and said she would be paid until Aug. 17 but was forbidden to enter the building. Spangler is resigning effective Aug. 20, the date of the next meeting.

"If Jack Curren spent half as much time helping this township as he is trying to destroy it, the township would be in good shape," Spangler said.

Wells...

continued from page 1-A

which comes in with a roar and a shower of shale. Friday afternoon, hurling the tools halfway up the hole and breaking the sand line," the old article says. "The puff occurred at about 5,315 feet, when the drillers are now fishing for tools hung in the hole."

Also that week, drillers dropped nitroglycerine charges into another hole to break up shale. Drilling took place in Tioga County before and after that "boof" of the 1950s, and until 1965 no one had to make an official record of where all the wells were.

"There really wasn't any kind environmental protection back then," said Tioga County Historian Scott Gitchell.

Sometime knew where those wells were, because some company drilled them. But many of those companies gone before 1965.

"The wells remain, though they aren't necessarily dangerous. Richard and Helen Barthel, Elkhorn, live with

one in their woods. It sends a bubble to the surface each hour.

"It's not hurting anyone," he said.

But they are hoping newer companies like Shell can tell them more, just to be sure.

Kilburn is also looking for information about old wells. She knows of quite a few now, but still only a fraction of the 300,000 which possibly have been drilled in the state since 1859. She welcomes information about old wells at reportwells@gmail.com.

"The more people that are interested, the more people we can get in contact with to tell about them," she said.

Current drillers are recording their wells with DEP. Despite that, people like Matt Roppes, who lives a mile and a half from Union Township, still feel that companies aren't sharing enough information.

"What is going happen with this 40, 50 years down the road, because I don't think we fully understand what's going on," he said.

STSD...

continued from page 1-A

cost to mail one to every resident \$1,079.22.

Roy Zeolla of Liberty Township pointed out that North Penn's Pennsylvania System of School Assessment (PSSA) test scores were the lowest by comparison with the Liberty and Mansfield schools. Zeolla asked the Board "to see where education is working the best and support that with your decisions."

Andy Ritter of Rutland Township said he wanted "put into perspective how the financial mess started. A lot of blame is put on the Governor." He noted that Southern Tier's 6.3 percent tax hike for the 2012-2013 school year puts the District at #12 on a list of the highest taxing districts out of Pennsylvania's 501 school districts. He noted that 469 school districts, faced with the same budget cuts, handled finances in a fiscally responsible manner.

"The increase you board members have put out citizens is in the top 2 percent. I don't blame the state. I blame the members of the board serving in September 2010. You have had numerous occasions to stop the train from going down the track and realize (the Bloomsburg school building project) is not a fiscally viable option. The time to act is now. The first choice is you nine members have some courage and present a motion to eliminate the building project so next year we are not in the top 2 percent. There are 491 school districts in this state that are doing a better job. We all want a good education at a good price but we have nothing more now than we did two years ago." The other option, if you don't have the courage to do that, is bring a letter of resignation because you failed.

That brought Board member Frank Koller to the mic. "That percentage may be accurate," he said. "We have had numerous losses that we have to traverse to bring students to class. Every one of us are dedicated, elected by you, to do the best job possible. I have spent all my time with the rest of these people trying to figure out a solution. To sit here and take that," he said in response to Ritter's point about resigning. "I certainly will not. I want education for our students. We absorb increases in everything as you do in your home." He added, "It is hard for me to sit and vote and negotiate contracts we know the financial impact to this district," noting all three teacher contracts are being negotiated.

Board member Barb Shell, who just resigned her position as Board president this year, then took over the mic. She discussed the Crabtree feasibility study numbers. She said in talking with Crabtree's Scott Venczel, she found out

the way elementary and high school student capacities were developed for Liberty and Mansfield school buildings was different from North Penn.

She readdressed the numbers "to compare apples to apples." Based on her numbers, she believes the most cost effective way to centralize would be to keep either Bloomsburg and Miller or Liberty and Miller elementary schools open. And Mansfield and Liberty high schools or Mansfield and the current North Penn High School.

Kyle Leboff, board member, said "The biggest thing is to take the emotion out of this and look at the numbers and see what we can afford - maybe a central building. We could send everyone to Mansfield and Liberty for two years and then build a new central school here in Bloomsburg for the entire district."

Board member Dan Bergeson said, "I think we are at the point where we are going to accept the formal bid for design to come. Quaid presented 12 options and 13th option for a central high school that I fell in love with. I am a product of North

Penn High School. I had no idea how to study, was not pushed or challenged."

He said in college he was in class with students who had a year's worth of calculus. "I had 6 weeks. I have heard the same thing from my children. I don't want that to continue. The most effective delivery of education is to 800 to 1200 students. If we consolidate our 9th through 12th grade students we are closer to that number. I want people to be able to take courses of their choice. We failed at that. We need to do a better job."

Sam Bartlett of Richmont Township, a regular meeting attendee, pointed out he had never opposed the North Penn High School building project because he felt it was a community school and that's what the Bloomsburg area wanted. But he noted that it is no longer a community school situation because one of Southern Tioga's communities is going to lose a school and because the Bloomsburg school project was not designed to be a consolidated facility. He said to the Board, "I am asking that whatever decision you make is appropriate for the communities and the most appropriate based on the resources we have."

Today night will be a game changer. On the table is the decision to be made by the Board whether to re-build the Bloomsburg building project or keep it in limbo, which could mean the end of it all together. The pressure is to meet the Tuesday, Aug. 14, deadline presented to the Board's Building and Grounds Committee at their July 23 meeting to have the contractors ready to go in case the Board decides to proceed with the North Penn new construction and renovation project at some point in the future. To do that, the project, according to consultant Sam Scaramino of Quad3, has to be re-bid by this coming Tuesday. That decision may have already been made.

The Wellsboro Gazette

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GAZETTE

WELLSBORO 1871



Cats!

See page 1
in The Marketplace

Methane, water spout

Cabin evacuated, gas well work halted in Union

by Jason Przybycien
przybyc@tiogapublishing.com

Shell Appalachia subsidiary SWEPI LP suspended operations in Union Township while they contain and investigate methane and water releases around the Guindon K 706 well pad. The Department of Environmental Protection (DEP) is also working in the area.

Overflowing well

The problems began at the Ralston Hunting Club on Goose Town Road on June 14 or 15. Leonard Coulson, a certified emergency management coordinator working in Union Township, and Kim Jennings, Canton fire chief, gave similar accounts.

"They had water in one of the cabins starting Thursday," Coulson said. "The well was backing up."

Deborah Sawyer, Shell communications business advisor, described the situation in different terms.

"On June 16, 2012, during routine operations on the Guindon 706 well pad, Union Township in Tioga County, well operators were informed that a private landowner in the area was experiencing a change in the functioning of their water well," she said. "Shell representatives immediately began investigating the situation. Water well conditions tested positive for methane. As a result, we suspended operations on the Guindon well pad."

Daniel Spadoni, DEP community relations coordinator for the North Central Region, said the cabin in

question is about 2,400 feet from the well pad. DEP was informed of the situation June 17.

"Shell is fully cooperating with the response and investigation," Spadoni said. "Shell has several well pads in the area in various stages of completion. They stopped all operations in the area when notified of a problem involving a hunting cabin that had an overflowing drinking water well inside a mud room."

Water erupts

On Monday morning, June 18, someone noticed a "geyser" of water coming out of the ground a quarter mile from the cabin on the hunting club's land. Jennings said the geyser reached up to 50 feet in the air and contained methane.

"There is a geyser there, about 35 feet off the ground," Coulson said.

Jennings added that the township does not maintain that portion of the road and it is traveled infrequently.

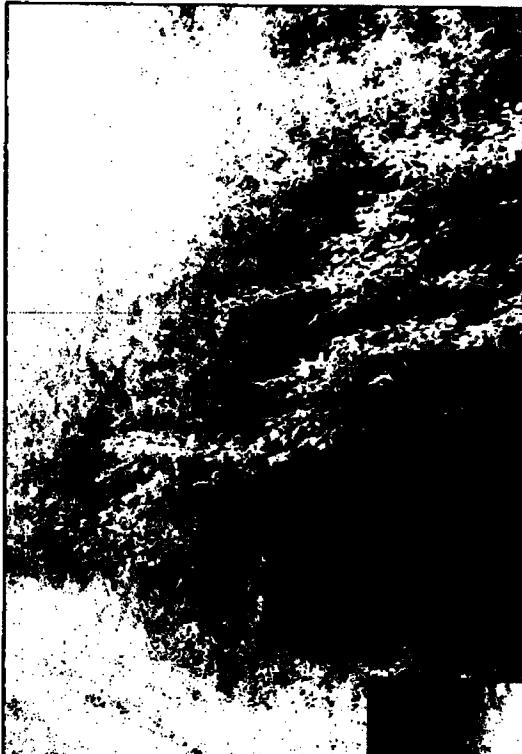
"I recommended that they close it completely," Jennings said.

By June 19, Shell had posted security guards on Goose Town Road.

DEP and Shell are also investigating bubbles in a nearby stream.

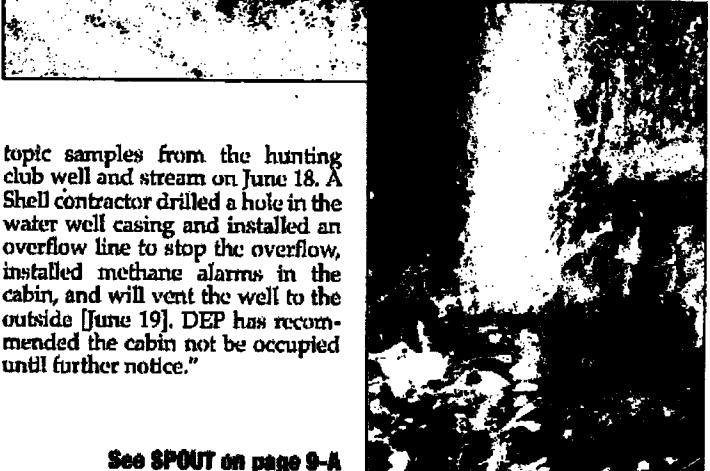
"On June 18, 2012, while continuing our investigation it was discovered that a nearby stream was impacted and it has tested positive for methane," Sawyer said. "We are currently conducting field studies to determine the type and extent of the impact."

Spadoni added, "DEP Oil and Gas staff collected water and iso-



photos provided/Kim Jennings

Fire Chief Kim Jennings snapped these photos of the geyser with his mobile phone.



See SPOUT on page 9-A

Spout...

continued from page 1-A

Investigation continues

Spadoni said the source of the methane has not been confirmed, but Shell and their consultants are screening homes and water wells within a one-mile radius for additional methane.

According to a publication by the Penn State School of Forest Resources, methane gas is explosive in concentrations of 5 to 15 percent within a home. Coulson said the concentration was only dangerous in the first cabin.

"The first cabin went as high as 14 percent gas above the well," Coulson said. "They made him move out. We tested everyone else and the [water] wells tested all right."

"Shell will also begin the process of mobilizing equipment to conduct further investigation and operations on their nearby well pads," Spadoni said.

"In the short term, it may be necessary to de-pressure some wells on the identified pads that are currently shut-in," Sawyer said. "This action could result in the need to flare some natural gas through the systems on site

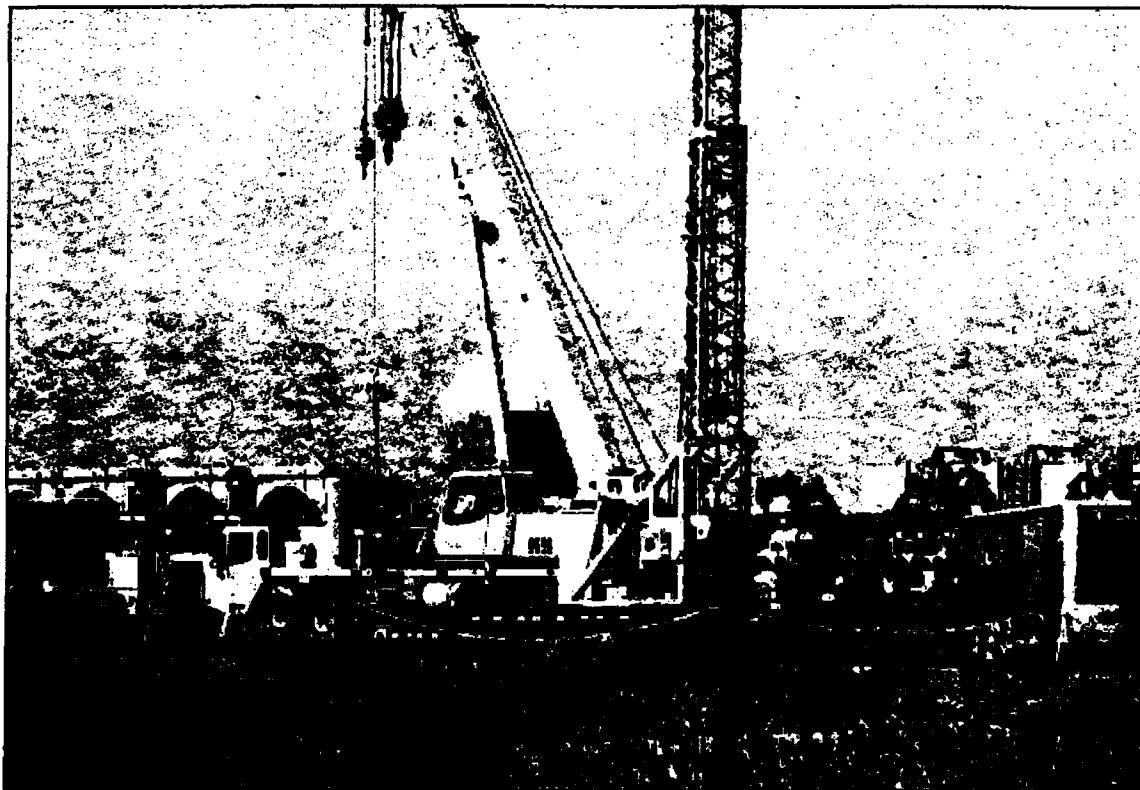


photo by JASON PRZYBYCIES

Though equipment from several gas industry contractors remains on scene, hydraulic fracturing and other work have stopped around this well head on the Guindon K 706 pad.

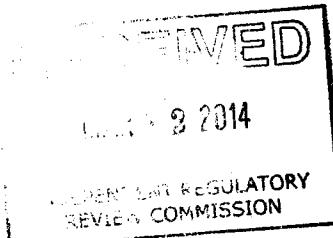
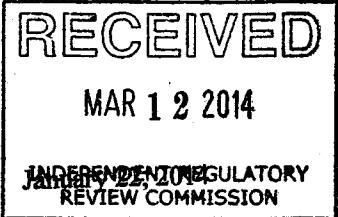
for a period of time still to be determined. *

"If you have any concerns or questions please contact the Shell Neighborhood Call Center at (570) 662-9415," said Sawyer.

According to public databases available online, DEP

permitted the first three horizontal wells at the Guindon K 706 pad in December 2011 and drilling began in January 2012. Shell started five other wells on other pads in Union County since then. DEP records show no violations at the Guindon K 706

pad, but DEP recorded three violations at the Cochran T 705 well pad, also on South Union Road. DEP alleged in May that Shell spilling fracturing fluid outside a containment area into a sedimentation basin at the Cochran T 705 pad.



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

RE: Comments to Proposed Regulation 25 PA Code Chapter 78
Public Hearing held in Washington, PA

Environmental Quality Board Members:

My name is Jeff Walentosky and I am here today to testify as an interested citizen of the Commonwealth, regarding the proposed rulemaking of Chapter 78, Subpart C – Environmental Protection Performance Standards. I am a lifelong resident of the Commonwealth and western Pennsylvania. I've been employed as a licensed professional geologist for over 23 years for a groundwater and environmental consulting firm located in western Pennsylvania, which acts as an unbiased third party consultant to industry representatives.

Our company maintains membership with the Marcellus Shale Coalition (MSC) and the Pennsylvania Independent Oil and Gas Association (PIOGA). As a member of PIOGA, I currently serve as the Well Construction Subcommittee Chair, which is part of the Environmental Committee. As part of my chairperson responsibilities, I had the privilege of attending and participating in the Oil and Gas Technical Advisory Board (TAB) workgroup public hearings on the proposed Chapter 78 revisions this past summer on behalf of PIOGA.

I would like to commend the Pennsylvania Department of Environmental Protection (PA DEP) and the industry representatives for all of the hard work and long hours expended to get these draft proposed regulations to this point. However, it is apparent that there are significant improvements and modifications that need to be made to various portions of the proposed rulemaking. I will be submitting a detailed comment letter prior to the end of the 60 day comment period. Here are a few of my comments:

General Comments

There is a significant difference between conventional and unconventional well drilling and stimulation operations. The land disturbance footprint, waste management activities and water usage on conventional well sites is significantly different and entails a small percentage of activity in comparison to unconventional operations. Industry representatives met with PA DEP officials on numerous occasions to discuss the fundamental differences in these operations and the impact the proposed regulations would have on the conventional oil/gas operator, yet the Department has not adequately addressed this issue.

The proposed Chapter 78 revisions pose a significant financial impact to conventional and unconventional well operators without a justified environmental benefit. The initial cost benefit analysis regarding these draft revisions indicates that the cost calculations are very much understated and would create far reaching impacts, especially to the traditional, small conventional operator with limited available staff.

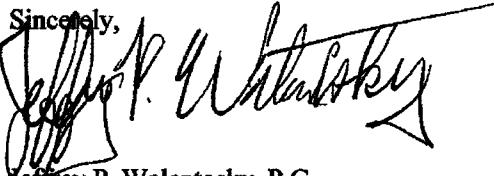
The Department references forms for completion within the proposed regulations. These forms should be provided for review as part of this comment period.

During the TAB workgroup meetings in 2013, there were four significant issues of concern that were discussed – public resource protection, protection of water supplies, abandoned and orphaned well identification and waste management on well sites. Although there were significant discussions between the work groups, there were no changes made to the draft regulations as a result of those meetings.

Specific Comments

- Protection of water supplies – as a professional geologist, I have conducted hundreds of investigations relating to the development and use of residential, industrial and community water supplies within the Commonwealth of Pennsylvania. This state is one of the few in the United States that has no drilling and construction standards for new and existing residential water supplies. Past proposed legislation in Pennsylvania has not been successful in affording the residents of the Commonwealth assurance that proper practices and guidelines are followed to minimize the risk of drinking water contaminants. Without this legislation in place, it is unreasonable for the Department to expect industry to be obligated to restore water supplies back to applicable safe drinking water standards if the supply did not previously meet these standards or possibly an improved water quality. The proposed restoration standards should be made to meet “pre-drilling” or “baseline” water quality.
- Abandoned and orphaned well identification - the identification procedure in this section of the proposed regulation outlines a very difficult process. Traditionally, the operator has completed its “due-diligence” in order to avoid potential environmental impacts and communication with abandoned wells. The introduction of a map finder identification tool will be helpful. However, the use of a questionnaire with adjacent property owner will likely cause some issues from the standpoint of property access or lack of, or inaccurate knowledge regarding the existence of abandoned wells.
- Reporting and remediating releases – even though the Oil and Gas Spill Policy was established in 2013, there are still significant consistency issues. Some common oil/gas related contaminants do not have established standards that need to be met to ensure proper measures have been taken in accordance with the professional opinion of Department representatives. Without additional clear guidance and standards to follow, this section of the proposed regulations can create inconsistencies between regional office and unclear expectations of what remedial obligations an operator will have following an unexpected release, resulting often in a lengthy legal debate and an unresolved site remediation issue.

This concludes my verbal remarks. I would like to thank the EQB and PA DEP representatives for holding these hearings and the opportunity to present my testimony.

Sincerely,

Jeffrey P. Walentosky, P.G.
Interested Citizen

Environmental Quality Board
PO BOX 8477
Harrisburg, PA

RECEIVED
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INDEPENDENT REGULATORY
REVIEW COMMISSION

Dear Environmental Quality Board,

Hello, I am Veronica Coptis and I live in Carmichaels, Greene County, a community with heavy shale gas activity. I commend the DEP for updating the oil & gas regulations and holding public hearing to get our input. I think these changes are step in the right direction but they can go much further to protect people from the impacts and make living in community like I do safer.

Here are my suggestions on how you can make these regulations protect us even better:

- 1.) Pre-drill water testing and the restoration and replacement of contaminated water supplies:
 - a. Through DEP records drilling operations have impacted water supplies. The DEP also leaves it up to the driller to decide when, where, and how to conduct water quality test before drilling begins.
 - b. DEP should require an operator to restore contaminated drinking water that meets Safe Drinking Water Act Standards no matter what the quality of the water before. All drillers to use a consistent list of parameters for pre-drill water testing, which DEP must establish before the proposed regulatory changes are adopted and all drillers make pre-drill data available to the public
- 2.) Standards for frack pits and impoundments:
 - a. Prohibit operators from using open pits for storage of regulated substances, including wastewater, drill cuttings, and substances (like gels and cement) that return to the surface after fracking. Many spills, leaks, and other problems involving pits have occurred statewide that contaminate water, soil and air. Waste should be stored only in closed systems.
 - b. Prohibit the onsite processing of shale drill cuttings, which often contain hazardous substances and radioactive materials and require thorough analysis and special handling.
 - c. Define "freshwater" that is used in oil & gas operations. Water leftover from fracking and contaminated fluids being recycled for fracking (such as from mining or sewage) is often mixed with clean water for additional operations. The lack of a clear definition allows operators to avoid regulations on the use and disposal of polluted substances.
 - d. That existing impoundments and pits not be grandfathered under the old regulations and be ordered to convert them to closed systems.
- 3.) Disposal of brine, drill cuttings, and residual waste:
 - a. Prohibit the burial or land application of drill cuttings

- b. Prohibit the onsite burial of waste pits
 - c. Prohibit the use of brine for dust suppression, de-icing, and road stabilization
 - d. Prohibit the land application of top-hole water, pit water, fill or dredged material
- 4.) Identification of orphaned and abandoned gas and oil wells:
- a. Identify existing wells before site and well construction and drilling not just fracking, so that the locations of new well can be changed if needed.
 - b. Plug and seal or otherwise appropriately address abandoned and orphaned wells 1,000 feet from the horizontal lateral and the vertical well bore.

Making regulatory changes are great way to start protecting communities but they will only work with strong enforcement. In Greene and Washington Counties we have seen to many times a lack of enforcement of environmental regulations. I encourage the DEP to bring on more inspectors and strictly enforce these regulations so that the DEP can fulfill its mission to protect Pennsylvania's air, land and water from pollution and to provide for the health and safety of its citizens through a cleaner environment.

Thanks you,

Veronica Coptis
408 N Eighty Rd
Carmichaels, Pa 15320

Comments on EQB Proposed rulemaking concerning 25 Pa. Code Chapter 78 Subchapter C

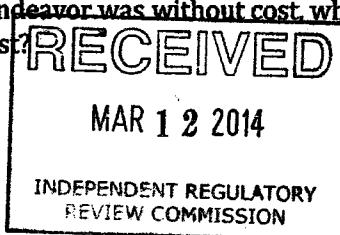
My name is Matt Kropf, and I provide these comments on the EQB's proposed rule-making as an individual. Professionally, I am a college professor teaching Energy Science and Technology and Petroleum Technology at the University of Pittsburgh at Bradford where I also direct the Energy Institute and chair the Campus's Sustainability committee.

My reasons for commenting on the proposed rule-making is the potential impact it would have on the conventional oil and gas producers in Pennsylvania, the inadequate justification of these regulations for conventional producers given in the Agency's Regulatory Analysis Form, and the embarrassingly unrealistic and incomplete cost of compliance analysis to conventional producers provided in the Agency's Regulatory Analysis Form.

In section 10 of the Regulatory Analysis Form, the EQB justifies the new regulations explicitly based on the growth of the number of unconventional wells being drilled in the common wealth, with not a single mention of any justification related to the conventional producers. Furthermore, I would expect a careful regulatory analysis to include some indications of the numbers and types of actual incidents that new regulations would prevent if enacted. It seems that the justification for the new rule-making, as presented in this form, is reliant on a general perception that there are widespread environmental impacts and that they are implicitly and equally attributable to the conventional oil and gas producers as the unconventional producers. The analysis form fails to draw any connection between real environmental impacts from oil and gas production to the conventional producers.

In section (15) of the Analysis Form, the EQB incorrectly asserts that conventional oil and gas producers do not employ the practices regulated by the proposed provisions, particularly, hydraulic fracturing. In fact, conventional producers in this State have used hydraulic fracturing as a means for well stimulations for over 50 years. This is an indication that the EQB is unintentionally or even unknowingly proposing new rules in response to unconventional drilling operations that can directly affect conventional producers.

The most disappointing component of the Regulatory Analysis form is section 19 which details the expected costs of compliance of the new rule making for conventional producers. The calculations are based on an expected 2,000 wells permitted per year. This number is not representative of an average count of well permit over the past 7 years. Furthermore, the analysis seems to forget to include the cost of compliance associated with existing wells, bringing the count up many thousands. There are several cost estimates that the EQB attributes a 0\$ cost to based on either an inability to anticipate the costs, or in some cases without any explanation at all. For example, the EQB estimates that the cost of Identifying Abandoned or Orphaned Wells to be negligible for Conventional Producers. If this important task was without cost, than why hasn't the DEP been able to reconcile its own estimates of hundreds of thousands of abandoned or orphaned wells with its paltry list of only 12,127? If the endeavor was without cost, what excuse does the DEP assert for not having compiled a complete list?



Concerning the removal of underground storage tanks, the DEP does not assert a cost of compliance based on the Department being "unable to estimate the number of buried tanks". If the DEP cannot estimate the number of tanks, how can they justify the need for new rulemaking to begin with, let alone the cost?

On the whole, it appears that the EQB did not adequately consult with conventional operators on the costs of compliance, as several other cost estimates are considerably lower than anyone with a working knowledge of a conventional well site would estimate. For example, the costs associated with equipping tanks with valves and access lids to prevent unauthorized access seems to omit the scenario where existing tanks are incompatible with such modifications, requiring the operator to remove and dispose of the old tank and purchase and install new tanks.

Still other estimates are difficult to comprehend how such a low number could possibly be attributed to the tasks required. For example, installing secondary containment for all existing fluid structures costing only \$3,000 per well clearly doesn't account for even the lost time in production associated with such a comprehensive operation.

In section 20 the form estimates that there are no costs to local governments, however, it did not present appropriate economic models verifying that conventional producers would not have to decrease, or even cease, production; which would manifest as a lost source of tax revenue for local municipalities.

In section 24, part C, the form indicates that the DEP has made efforts to minimize the costs of compliance to small businesses, particularly conventional well producers. However, these efforts were not enumerated. From the costs estimates, it appears the only effort to minimize costs to the vulnerable small businesses was to underestimate the costs of compliance. The form also sites a 2011 study indicating a \$1.145 billion dollars in economic activity associate with tourism to State Parks. However, it should be noted that this economic activity occurred under existing regulations. Furthermore, the form fails to indicate the economic activity associated with conventional oil and gas producers. In this way, the form makes no effort to quantify the impact to the affected small businesses, even in reference to its questionable cost estimates.

In summary, while I appreciate the efforts and responsibility of the DEP to protect our environment, the documentation generated in support of these new rules does not adequately justify the need, nor accurately anticipate the impact to the conventional producers of Pennsylvania. Considering that these small businesses and associated industries are significant providers of employment in the struggling economies of rural Pennsylvania; a more careful justification and complete cost estimate is owed to the citizens. Without more careful consideration, these new rules risk decimating jobs in the areas already worst off.

My name is Robert Longnecker and I live in Bradford, Pennsylvania. I would like to thank this board for giving me the opportunity to speak.

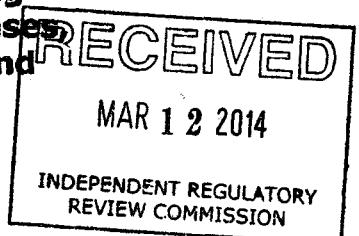
I am a Marine Corps veteran of the Vietnam War and a retired history and economics teacher with a great interest in the Pennsylvania oil industry. My interest dates back to the days when I was a young boy and accompanied my uncle to work. As a teacher, I had my students read the book THE PRIZE by Daniel Yergin. This book stressed the important role that oil played in the industrialization of the United States, our growth as a world power, and our economic problems partly caused by and exacerbated by our declining production and increased reliance on foreign sources.

When I retired from teaching, I worked for five years running an oil lease for a small independent producer. The 12 wells on the lease each produced less than a barrel a day.

I became acquainted with many of the Bradford area producers at their monthly breakfasts and I learned about producing oil from them and by on the job training. I enjoyed working outside and fixing things. I can truly understand how oil is not only a livelihood but also a way of life for these producers. It is their lifeblood.

The current proposal to put the conventional shallow well oil industry under the same regulations imposed on the shale gas industry, lacks sound judgment and common sense. Why should a 150 year old oil industry with lower profit margins, smaller well sites, smaller environmental impacts, and rich historic and cultural traditions, be subjected to the same regulations as a 10 year old industry?

Furthermore, will the additional costs imposed on the small producer by these burdensome regulations yield greater economic benefits than the additional economic costs of these regulations? No. The reverse would likely be true. I submit that a reverse economic multiplier would occur. Higher economic costs of compliance would result in declining production and drilling, plugged wells, abandoned leases, higher unemployment, decreased business activity, and reduced refinery operating capacity.



Our local and national economies already have enough problems caused in part by over regulation. Please do not adopt the "one size fits all" approach by imposing these regulations on the conventional producer. With all due respect, please think before you act. Thank you.

**Robert D. Longnecker
69 Gregory Avenue
Bradford, PA 16701**

I would like to begin by reminding everyone that the Corporations fracking for natural gas are motivated by profit only. The welfare of our state and its citizens are not their concern. Despite the industries spending millions of dollars to claim otherwise, there is nothing clean about natural gas from the beginning of the extractive process to its combustion. It may be cleaner than coal in some respects, but it isn't clean.

The Citizens of this state should not have their quality of life negatively affected by this industry now or in the future. It is very clear that for many Pennsylvanians that is not the case. It is your responsibility to protect the environment and all our citizens. Your responsibility is not the promotion of this profit driven industry. Article One, Section 27 of the State's Constitution demands that you protect our citizens and the environment.

A pre-drilling test is necessary to determine that water quality has not been affected by drilling. It is very important that DEP establish the standards for pre-drilling testing so that the testing includes all relevant contaminants. If a resident's water supply has been affected, then the resident should receive safe drinking water. This is the minimum requirement and in no way should be weakened.

The storage of wastewater should not occur in open pits or impoundments. Tanks should be used and there must be a backup system for containing any leaks. Drill cutting wastes must be tested for naturally occurring radioactive material and in most cases should be disposed at low-level radioactive disposal sites.

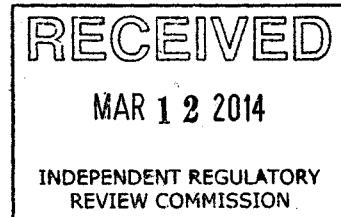
Current DEP regulations do not ensure that the spreading of waste water brine from conventional oil and gas wells will prevent problems. There must be assurance that this brine doesn't contaminate soil, vegetation, groundwater or streams and rivers. This is especially true near drinking water supplies.

A "paper" review of maps and questionnaires is not sufficient to prevent gas migration in old gas and oil fields with old unplugged and abandoned wells. There must be an on-site inspections and assessment to identify any orphaned or abandoned wells prior to drilling.

Climate change and attendant climate disruption present a great risk to our Country. A conclusion to which the Pentagon has come. While carbon dioxide is the primary concern in climate change, methane is a powerful greenhouse gas and a major constituent of natural gas. While natural gas has been promoted because it creates lower levels of carbon dioxide at combustion than some fuels, it still produces carbon dioxide. Any advantage it may have over coal in this regard may be more than offset by fugitive methane leaks at the well site, pumping stations, or pipelines. Some studies show that this may be up to 8% of the produced gas. The industry must control these fugitive emissions. We must reduce our combustion of all fossil fuels if we are to give our grandchildren a climate similar to what we have known.

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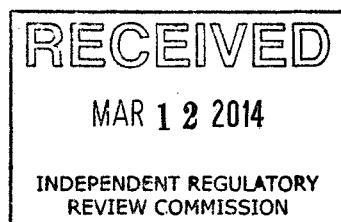


Good evening, my name is Bonnie Elder. My husband Alex is a fourth generation shallow oil and gas producer. Our son, Len is fifth generation. We produce approximately 30 shallow wells in Clarion and Venango counties. These wells range in depth from 900 feet to 1400 feet. Most wells are measured in gallons of oil produced per day rather than BBL's per day. Some of our gas wells presently produce as little as 1000 cubic feet per day. So, as you can see, these are just shallow wells, and noteworthy is the fact that three of these oil wells were drilled in the 1860's and are still producing today.

My husband works from daylight till dark nearly every day seven days a week to maintain production of his wells because this is the way we make a living. Raising our two boys, I can remember making them wait on Christmas morning until dad returned from tending the wells before they could open their presents and this was every holiday. It actually took me a few years after we were married to realize that the oil heritage that was my husband's ancestors was absolutely in his blood also.

We have one employee but, we will probably have to lay him off permanently if these regulations are forced upon us. There's another lost job that we were responsible for.

Farming is also a passion for Alex. At first, I wasn't too keen on living on a farm, but, it has turned out to be a good life of hard work and was a good environment for raising our boys teaching them to be good workers. Alex has tilled several hundred acres of land each and every year watching the rewards of corn, oats, wheat, spelts, and hay grow so, that he can feed his livestock of beef cattle, hogs, and chickens. He loves to watch and smell that good old Pa. dirt as he plows. As he has always said, one of the reasons he does this is because God gave us this land and we do need to take care of it and will not do anything to do harm to our land or the environment. We live here!



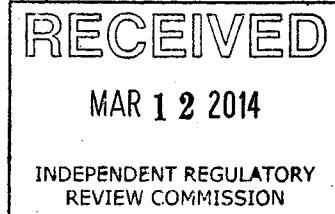
For forty years, we have put the majority of the profits back into producing and expanding our production. This is our lively hood. My husband is 65 years old, he has no 401K or pension plan. I have recently retired after working for several years to help with our income. All we have now is our oil and gas production. I know that each one of these hard working small producers are proud to be able to produce and contribute a product our area is so richly blessed to have.

Please do not take this from us, the small independent producers, with rules and regulations that are implemented for larger industries. These regulations will surely shut us little guys down that depend of this for their living.

Bonnie Elder

February 12, 2014

Environmental Quality Board
P.O. Box 8744
Harrisburg, PA 17105-8477



Dear Board Members,

My name is Michael Arnold. I am employed by Waste Treatment Corporation located here in the City of Warren. I have been with Waste Treatment for 27 years, where I have been the Vice President of Operations for the past 13 years. I am a managing member of ARMAC Resources, LLC, a well servicing and oil producing company, also located in the City of Warren. I am also the president of the Pennsylvania Grade Crude Oil Coalition, an industry group founded last year to protect the interests of local conventional oil and gas producers.

I have been employed directly and indirectly in the Oil and Gas Industry since I graduated high school in 1978. Out of those last 35 years, I have been employed by some of the most highly respected oil producers in the Warren area, I.L. Geer and Sons and Mead Oil for example. I have had the privilege of providing services for local operators and producers in the Warren area as well.

I also have been privileged to live on the pristine Allegheny River for the last 28 years, and I would like to emphasize the phrase PRISTINE. In the 1990's, 90 miles of the Allegheny River was designated as a Wild and Scenic River, and I presume that is due to its PRISTINE nature.

We have had Cabella's hold National Walleye Tournaments, National Canoe and Kayak Tournaments, and the Tidioute Fishing Tournament that have been very successful for many years. The Allegheny River also happens to run right through the heart of a region that has been known for the most productive area of fossil fuel extraction in US history with its extensive deposits of coal, petroleum, and natural gas.

Many people feel that the conception of the Oil and Gas Act 223 of 1984 is the reason our environment is in the condition it is today. I disagree, it may have played a role, however I believe this is an industry of self-regulating. This industry is geared by highly educated, hardworking individuals. This industry has been here for many years and has always given thorough consideration to our environment and to their surrounding communities.

With the vast amount of testimony given on the technical aspect of how the chapter 78 proposed regulations will have devastating effects on our industry, the future impacts it will place on our economy and sustainable jobs in our community, and the incredible loss of tax base depended upon by our municipalities, I will show how this effect has already began.

Waste Treatments Corporation's annual revenue increased an average of 30% between 2000 and 2010. During this same period wells permitted in the Northwest Region increased 67%. This average has taken into consideration and reflects the decrease of wells permitted due to the ANF conflict of interest with the Oil and Gas industry between 2007 and 2010. During 2000 and 2010 Waste Treatment invested an average of 9.4% of gross revenue annually in our facility.

During the period of 2010 to 2013 WTC average annual revenue decreased by 13%. During this same period average wells permitted decreased to a negative 18%. Waste Treatment employed 27 people during 2010 and, in 2013, WTC unfortunately now employs only 23 with the potential to layoff some truck drivers and possibly plant operators. WTC now has 23 employees mainly due to the hiring of office personnel to handle the additional administration concerns that these regulations have established. We have reduced our plant operations from 3 shifts 5 days per week to two shifts combined to cover 12 hour processing time. WTC now has by appointment only weekend deliveries. Under our NPDES permit we are required to add additional equipment at a great expense in order to continue processing waste waters from the oil and gas industry. WTC has committed to doing this upgrade in order to maintain employment and serve our customers as they have served us.

The impact of the new regulation has already begun in the North West region of Pennsylvania. These regulations will not improve this situation and I have yet to see how it will improve environmental concerns when there have been very insignificant impacts on the environment. I don't believe in the proposed regulations and they do violate the small business act which hasn't even been taken into consideration by the State. There are answers to these problems and they can be solved. It will not be simple but it can be accomplished. PGCC is committed to make change as well as PIPP and PIOGA. As I have quoted in the past, for the future of the oil and gas Industry to survive, FAILURE IS NOT AN OPTION.

Thank you,

Michael Arnold