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3/7/14

LET'S BE HONEST

2014 MAR 12 AM 4:10

The market for Natural Gas is huge. Domestically *and* internationally.
And the companies that profit from it are not going away.

I believe in demanding the safest, most environmentally conscious
fracking methods – including honest contracts, modern and sophisticated
drilling, closed “frack pits”, restoration of contaminated drinking water and
severe/comprehensive penalties for companies that don't comply with
these simple and humane requests.

Unfortunately, the desire to make money RIGHT NOW trumps any kind of
commitment or concern for the future of our children and long term
environmental sustainability.

DEP has to demand full transparency and the ability to prosecute any
organizations who fail to comply with safe and responsible fracking/drilling.

My name and address is:

Doug Hill
310 Cedar Lane
Wallingford, PA 19086
doughill@gmail.com

Please let me know what's happening, thank you.

DH



Cooper, Kathy

From: RegComments@pa.gov
Sent: Wednesday, March 12, 2014 3:23 PM
To: Environment-Committee@pasenate.com; apankake@pasen.gov; IRRRC;
RegComments@pa.gov; eregop@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:

Douglas Mason
(dmm551@psu.edu)
120 E. Beaver Ave
State College, PA 16801-4985 US

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2014 MAR 12 AM 4:10

Comments entered:

Chapter 78 PA DEP Contact
regcomments@pa.gov

Thank you for considering this comment in the rulemaking process.

Open impoundments that store flowback water used in the fracking process pose a health risk to nearby landowners from pollutants that evaporate or degrade from chemicals in pits, or are released into the environment and vaporized into a community's air. For instance, multiple residents in southwest PA who live near a centralized wastewater impoundment had blood and urine analyzed and were told by doctors that they had chronic exposure to volatile organic compounds (VOCs). Some doctors believed their patients' levels were high enough to advise moving away from the impoundments. I support DEP's ban of central wastewater impoundments, but even so-called temporary impoundments storing hazardous chemicals can still have serious health and environmental impacts, are not needed and should not be allowed. While I believe that no allowances should be made for open storage pits, the suggested 9 months would be far too long to allow for temporary storage at a drilling site.

There are many justifications for why DEP should ban all open wastewater impoundments. The technology exists to properly contain hazardous substances in closed-looped systems and tanks immediately after fracking and completion occurs, as some companies in Pennsylvania are already using it. North Dakota and Illinois have already implemented bans on open wastewater impoundments except for emergency situations. Even the conservative and industry supported

Center for Sustainable Shale Development includes in their standards a condition to use closed-loop systems to eliminate the use of pits for all wells. In addition, DEP should prohibit operators from storing any solid wastes such as drill cuttings in open pits. Drill cuttings can contain radioactive materials that pose serious health risks to workers and nearby residents.

I also urge DEP to more adequately address abandoned and orphaned wells in the proposed Chapter 78 revisions. According to DEP estimates, there are an estimated 200,000 abandoned wells in Pennsylvania. Unplugged wells will continue emitting gases such as methane and VOCs over time and DEP has dealt with dozens of situations in which methane reached the earth's surface through abandoned wells. There have also been cases in Pennsylvania in which companies drilled into abandoned wells, one in particular that resulted in a 30 foot methane geyser and required multiple flares over many days to remediate. Some estimates show old wells in our state alone could be emitting tens of thousands of tons per year of methane, an extremely potent greenhouse gas, and VOCs, which include chemicals known or suspected to cause cancer in humans.

It is critical that DEP require companies to identify existing abandoned wells and to appropriately address these wells before site construction and drilling occurs. Drilling companies must be responsible for preventing pollution and accidents from occurring by correctly plugging, sealing, or otherwise remediating potential issues caused by the presence of old wells. This would save a company time and money from removing the risk of potential accidents and subsequent remediation.

In addition, DEP should require companies to search within a quarter mile radius of a proposed drilling site for potential abandoned wells and to also include other pathways for methane in their search, such as major and minor fault lines and fractures. Companies should be required to contact landowners to ask about any known abandoned wells. The Council urges DEP to update their maps with any new information and make the data available to the public on their website.

I believe that no drilling or fracking should be allowed in or near our parks and forests. DEP's current proposal in the Chapter 78 revisions requires companies to notify relevant agencies when applying for permits within 200 feet of a public resource. This distance and low hurdle for applicants is woefully inadequate to protect public resources from the impacts and nuisances of fracking and flaring. I believe DEP should prohibit drilling on and at least a half mile around key public resources including publicly owned parks, forests, game land or wild life areas, national natural landmarks, or historical or archaeological sites. These special areas belong to the public, provide significant ecological, recreational, and economic benefits, and should therefore be preserved for the enjoyment of present and future generations.

Thank you for the opportunity to comment on the proposed revisions to Chapter 78. Please take the comments in this period into serious consideration.

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
Office: 717-783-8727
Fax: 717-783-8926
RegComments@pa.gov

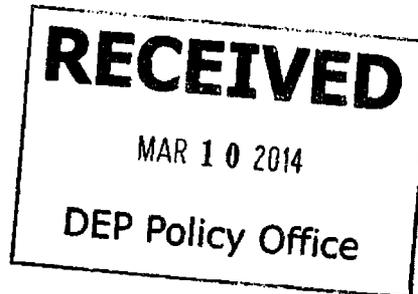
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2014 MAR 12 AM 4: 10

Gregory L. Davis
490 James St.
King of Prussia, PA 1906
gdaviskop@aol.com
610-337-8293

Environmental Quality Board members
RE: Environmental Protection Performance
Standard Oil and Gas Well Sites
Po Box 8477
Harrisburg, PA 17105-8477

March 4, 2014



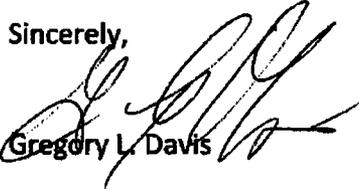
Dear Board Members,

What do the citizens gain from fracking? Recent articles in newspaper and magazines tell of the Propane being shipped oversea, in order to get a higher price. The only thing I see fracking causes is wells are contaminated, as well as rivers and streams. Please prohibit using open air frack pits which often leak toxic chemicals into groundwater and soil. Please demand that operators restore contaminated drinking water supplies to a safe standard. I believe it is a must to require comprehensive pre-drilling testing of nearby water supplies.

Governor Corbett has allowed these contractors to ruin water supplies throughout the state. Yet the citizens of Pennsylvania do not receive any benefit. No tax is collected for extracting the gas. WHY? Our water supply is being contaminated and will be if this practice is allowed to continue.

Please put a stop to fracking. Safeguard the water for my grandchildren.

Sincerely,


Gregory L. Davis

Cooper, Kathy

From: RegComments@pa.gov
Sent: Wednesday, March 12, 2014 3:15 PM
To: Environment-Committee@pasenate.com; apankake@pasen.gov; IRRC; RegComments@pa.gov; eregop@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:

Derek Hoffman
(derekmhoffman@gmail.com)
126 Market St
Lititz, PA 17543 US

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2014 MAR 12 AM 4:10

Comments entered:

Dear Department of Environmental Quality Board Members,

I am concerned about the existing and potential impacts to Pennsylvania's state and national parks from increased hydraulic fracturing. The proposed changes to Chapter 78 of the Pennsylvania Code simply do not do enough to protect Pennsylvania's state and national treasures.

I ask that three changes be made to the draft Chapter 78 rules:

1. Increase the setback for new wells near a publicly-owned park, forest, gameland, or wildlife area. Two hundred feet is simply not enough space to protect our parks from fracking impacts, including air and water contamination, wildlife habitat fragmentation, and disruption of pristine viewsheds. A setback of at least half a mile would provide stronger protections.
2. Include stronger provisions to find and plug off the state's 250,000 "orphaned or abandoned" wells. These wells are a danger for methane release and other chemical contamination.
3. Add language specifying that hydraulic fracturing will continue to be banned in the Delaware River Basin until a full environmental impact study is completed. The Delaware River Basin contains some of the most beautiful land in the country, hosts some of America's most visited national parks, provides clean drinking water for 15 million people, and is home to a rich diversity of wildlife. Permitting fracking to take place within the basin before potential impacts are understood could forever harm one of the greatest treasures of this state and the nation.

Thank you for taking all necessary steps to protect our heritage.

Sincerely,
Derek Hoffman

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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RegComments@pa.gov

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February 9, 2014

To: Pennsylvania Environmental Quality Board,

Regarding your efforts to improve regulations, I have this to say: Pennsylvania is my home state. I was born and raised there, graduated from college there, hiked, took many photographs, swam, and canoed there. Both of my sons graduated from college there. Many family members continue to live in Pennsylvania.

You have allowed my beautiful home state to be destroyed. You have permitted a rogue industry to harm many human, animal, and plant lives. You have allowed the rape of Pennsylvania's forests, the contamination of its streams, the pollution of its air and crops. You have stood in allegiance with the oil and gas industry and turned a blind eye to those you swore to protect.

If the following ten parameters were met, I would say, drill on:

1) If there were no other options.

However you know that conservation, energy efficiency, and renewable await development.

2) If the gas were not bound for foreign markets.

However, you know it is. Realistic assessments say we have 12 years of natural gas supplies. These are needed for renewable infrastructure, not for shipping abroad.

3) If it would not jeopardize our climate.

Methane released from drilling and pipeline routes is 100 times more potent a greenhouse gas than CO₂ and threatens to engage feedback loops that end our ability to adjust to climate change. No regulations can stop the 6-8% initial well-casing leakage rate, increasing with age.

4) If oil and gas industry tactics wouldn't require perpetual vigilance.

Gag orders on those whose water is harmed, gag orders on doctors, midnight dumping, thousands of violations do not bode well for this industry.

5) If Pennsylvania were not a beautiful state to visit.

Travelers don't wish to share the roads with thousands of heavy trucks; nor do they want to refresh their spirits in an industrialized landscape.

6) If there was a place to ditch its radioactive toxic waste.

Ohio and New York are not proud to be Pennsylvania's dumping grounds for its frackwaste.

7) If it would not come back economically to bite you.

Already there are boarded-up restaurants and hotels in Pennsylvania and increased crime and there are no sustainable businesses rushing in to fill the gaps and pay the bills.

8) If it would not harm air, water, or food.

The "List of the Harmed" and increasing numbers of studies point to the life damage caused by toxic emissions from drill sites, compressor stations, and pipelines.

9) If there were no residents or animals living there.

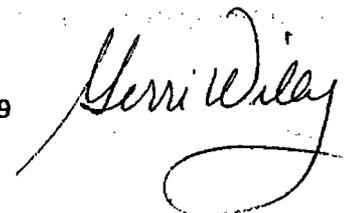
Every square inch of the shale is required for unconventional drilling, accessed by thousands of drill sites and serviced by a web of pipelines and ancillary structures that do not serve life. Just as biocides are needed to kill life underground, people and animals are simply "in the way" of this extreme fossil fuel technology.

10) If it did not undermine our democracy.

Our elections have become a charade, as our representatives are paid to do the oil and gas industry's bidding.

Because none of the ten guidelines above can be met, I implore you to stop high-volume, unconventional drilling in my beautiful home state of Pennsylvania! No "performance standards" will suffice to protect the residents of Pennsylvania.

Gerri Wiley, RN, 19 Lake Street, Owego, NY 13827, gerriwiley@yahoo.com, 607-342-3159



Catherine F. Smith

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Re: Comment on Proposed Regulations, 25 Pa. Code Chapter 78 (Oil and Gas Wells)
2014 MAR 12 AM 4:10

As a Pennsylvania resident and voter, I think the far-reaching impacts from oil and gas development are profoundly and adversely impacting our Commonwealth. As an active observer of the North Carolina Mining and Energy Commission's effort to create regulations prior to authorizing oil and gas development in that state, I know that Pennsylvania's regulation is influential. What we do here is being watched elsewhere and will have impact beyond our borders.

Pennsylvania could be a national leader in regulating oil and gas industry for the general welfare and in the public interest. Now, however, in the eyes of many, it is a public policy laboratory for worst-case scenarios and a case study of inadequate regulation.

Proposed changes in Pennsylvania's regulation do not go far enough. In view of Article 1, Section 27 of Pennsylvania's constitution protecting reserved environmental rights of the Commonwealth's citizens and public natural resources, please require the following:

Sections 78.51 and 78.52

- Operators to restore contaminated drinking water to a quality that meets Safe Drinking Water Act standards
- 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.

Sections 78.56, 78.57, 78.58, 78.59

- Prohibit operators from using open pits for storage of regulated substances.
- Prohibit the onsite processing of shale drill cuttings
- Define "freshwater" that is used in oil & gas operations

Sections 78.60, 78.61, 78.62, 78.63 and 78.30

- Prohibit the burial or land application of drill cuttings
- Prohibit the onsite burial of waste pits
 - Prohibit the use of brine for dust suppression, de-icing, and road stabilization
- Prohibit the land application of tophole water, pit water, fill, or dredged material

Section 78.52(a)

- Identify existing wells before site and well construction and drilling
- Plug and seal abandoned and orphaned wells

Environmental Quality Board
P.O. Box 8477
Harrisburg, PA 17105-8477
RegComments@pa.gov

Re: Comment on Proposed Regulations 25 Pa. Code Chapter 78 (Oil and Gas Wells)

I am providing comment to the Environmental Quality Board regarding the Pennsylvania regulations governing oil and gas wells for two reasons:

First, as a Pennsylvania resident and voter, I think the far-reaching impacts from oil and gas development are profoundly and adversely impacting our Commonwealth. Second, as an active observer of the North Carolina Mining and Energy Commission's effort to create regulations prior to authorizing oil and gas development, I know that Pennsylvania's regulations are an influence. In every NC MEC session that I attend, I hear references to Pennsylvania's experience with natural gas extraction and its regulation along with that of Arkansas and Oklahoma. What we do here will have impact beyond our own borders.

Pennsylvania could be a leader in regulating oil and gas industry for the general welfare and in the public interest. However, in the eyes of many in Pennsylvania and elsewhere, it is a laboratory for worst-case scenarios and a case study of inadequate regulation.

I appreciate the opportunity to voice my concerns and to express my hope for courageous leadership. I take my comments (cut and pasted) from two organizations, Berks Gas Truth and Delaware Riverkeepers. Please consider my comments as endorsing and emphasizing theirs.

I have read the proposed changes to Pennsylvania's regulation. I am very concerned that they do not go far enough to control the damage our communities and environment are experiencing as the gas and oil industry develops its wells, frack pits, impoundments, pipelines, and related operations across the entire Commonwealth. I support the tighter controls you are proposing. But they are too few and simply do not go far enough to make a difference in the harm that is being done.

This is especially true today because of the Pennsylvania Supreme Court ruling that requires government to consider how actions being taken affect the reserved environmental rights of Pennsylvania citizens and public natural resources. (Robinson Twp., Washington Cnty. v. Com., --- A.3d ---, 2013 WL 6687290, *33 (Dec. 19, 2013). I believe you must consider how these proposed regulations fulfill Article 1, Section 27 of the Pennsylvania Constitution before you act.

Article I, Section 27 declares:

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

In my opinion, these Chapter 78 proposed changes do not serve this inalienable right. I ask that you revise the proposed rulemaking to include consideration of how to meet this constitutional mandate.

Specifically:

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 top hole 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.

Sincerely,
Catherine F. Smith
PO Box 132
246 Brush Mountain Road
Spring Mills PA 16875
smithcath@ecu.edu

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TESTIMONY

2014 MAR 12 AM 4: 10

DOUGLAS SHIELDS
2321 TILBURY AVENUE
PITTSBURGH, PA 15217

412 422 0272

Pennsylvania Environmental Quality Board (EQB)
Proposed Regulations for Oil and Gas Surface Activities
(Amendments to 25 Pa. Code Chapter 78, Subchapter C)

Washington & Jefferson College
Washington, Pennsylvania
January 22, 2014,

The Regulations Are Not Reflective of What is Now Required by The PA Constitution at Article I, Section 27. The Regulatory Process Is Illegitimate.

Prior to specific comments on the proposed regulations, it is important to point out to the PA Environmental Hearing Board (EHB) that consideration of any new regulations is inappropriate at this point in time.

Since shale gas exploration and exploitation by means of hydraulic extraction process (commonly referred to as fracking which describes the entire process - from leasing to seismic mapping, pad construction, fracturing, extraction and including related mid-stream operations, i.e., pipelines, compressors, distillation facilities and the like) has never been appropriately vetted for implementation.

The Commonwealth did not perform any due diligence by way of environmental impact studies (impacts to the as built and natural environment), public health impact studies or any due diligence designed to answer this question: *How are the people of the Commonwealth of Pennsylvania impacted by virtue of the fact that Pennsylvania sits atop the second largest shale play in the world?*

Without answering that question, any regulations promulgated by our institutions of government cannot legitimately be responsive to the health, welfare and safety of the people.

The health, welfare and public safety of the People is primary function of our government - a government whose ultimate authority rests with we, the People.

On December 19, 2014, the Pennsylvania Supreme Court ("PA S.Ct.") rendered a landmark decision declaring key portions of PA Act 13, the state law which governing shale gas extraction operations, unconstitutional. The Court also

remanded other crucial matters at law back to the Commonwealth Court for hearings on the merits of the cause of actions filed by a physician (challenging the physician's gag order) and an environmental advocacy organization (preventing a clear harm to the community if drilling was allowed in a specific area).

It is notable that the Opinion of the PA Supreme Court states:

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 future generations, and potentially on the public purse, perhaps rivaling the environmental effects of coal extraction."

Aside from that, the Court also comprehensively defined the meaning of the PA Constitution's Article I, Section 27.

Natural Resources and the Public Estate Section 27. The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.

Article I - Section 27, adopted by the People, forty-three years ago, sat dormant until December 19, 2014. The Courts decision now clearly defines the import and application of Section 27. It is far reaching and touches upon every aspect of the development of mineral, coal, gas, timber and any other natural resource within the state.

It fundamentally changes the premise for consideration of any regulations now before you and for the Peoples consideration. These regulations were promulgated prior to the Court's ruling in Act 13. The constitutional provision at Section 27 was not considered in their construction.

The proposed regulations you now ask the People to comment on were developed under the premise of Act 13. That Act has been significantly crippled by the Court's decision and any premise it provided for development a regulatory scheme applied to shale gas extraction is now moot.

The proposed regulations you seek my consideration on have not been developed with the provisions of Article I Section 27 in mind. You are required, by law and right, to reject them. The PA DEP must go back to the drawing board and apply the provisions of a Constitutional commandment to any proposed regulation.

That should be enough to stop this process and begin anew. However there is more. The institutions of my government have never fully consulted with the people on the fundamental aspects of fracking operations in PA.

During the development of Act 13, the State Assembly do not seek public comment, provide any comprehensive information to the People about fracking operations, or held any substantive public informational hearings throughout the state. The Assembly failed miserably to inform the People as to the hazards and risks we are to assume in perpetuity.

Members of the Assembly promoted the benefit and disclosed nothing as to adverse impacts. They looked away from their Constitutional obligations. It is also well documented that leadership in the Governor's office and Assembly received approximately \$28 Million in campaign contributions from the Oil & Gas industry. (See: <http://marcellusmoney.org/>) Money cannot be the arbiter of public policy or regulation.

Act 13, largely written by industry interests, was fatally flawed, did not look to the health welfare and safety of the people and was not compliant with Article I, Section 27 of the Constitution. It was done to maximize profits and minimize costs for one particular, select industry in PA.

In developing Act 13, the Governor formed an Advisory Committee that was heavily weighted with industry interests, significant political campaign contributors of the Governor and, notably, not one person with a medical practitioner or public health professional. Perspective was not part of the make up of this group. The recommendations made by this task force were a foregone conclusion. It was given a charge, handpicked and produced what was expected in order to give some illusion of legitimacy to legislative action that resulted in the enactment of Act 13.

The regulations you now seek the People's comment on are derived from a place that was contaminated with private political and business interests. That makes these proposed regulations illegitimate in of themselves.

Now, look at this flawed regulatory comment process. The regulatory process is a very detailed and technical one. Few citizens fully understand or appreciate its complexities. As a former environmental law paralegal I am well acquainted with the regulatory process.

I ask this question of all of you: How is the public – the People from whom you must obtain consent – to offer any comment on such matters if we were not fully apprised of these proposed regulations by our institutions and government?

I, and my fellow Pennsylvanians, received no detailed information from our elected representatives or the PA DEP. There were no public informational meetings sponsored by the Commonwealth to inform us of what is at stake or why. There was

no community dialogue organized so that we may participate in our own processes of government. We did not hear fairly from proponents and/or critics of these regulations.

If that is so, how do you honestly expect to hear thoughtful, educated comment for your consideration? This is not a public process in any sense of the word – it is an insider's game and a fraud upon the People.

I ask you, why is it that there is such a short comment period on such a weighty matter with no information widely disseminated before the comment period began?

Why is it that your public hearings are only conducted in small population centers? It is notable that PA's two largest cities, Pittsburgh and Philadelphia were excluded from this process.

Why is it that the only information to be gotten is at a web site that offers little as to why these regulations are being proposed?

PA DEP Secretary Abbruzzo stated: "Public participation is a key part to forging the best regulations possible" I take from the deliberate design to mute public participation that the Secretary is not looking for the best regulations possible.

As the former President of Pittsburgh's City Council, I am well acquainted with the tactics employed by special interests to game the public process while creating an illusion of legitimacy.

As such this process, like Act 13 itself, is fatally flawed and it is not designed to obtain serious public comment at all but rather to give some legitimacy to the illegitimate.

At the end of the day these regulations were based upon Act 13. Act 13 is now in legal shambles and Article I, Section 27's commandments are nowhere to be seen in the fabric of these proposed regulations.

Comment on Regulations

The stated purpose of the Regulations

The purpose of these proposed regulations is to:

Ensure the protection of public health, safety, and the environment.

Protect public resources to minimize impacts from oil and gas drilling.

Modernize the regulatory program to recognize advances in extraction technology.

Specify the acceptable containment practices to prevent spills and releases.

The regulations fail to achieve these stated goals.

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 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 78.15(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 78.15(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 wastewaters 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.

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 78.59c(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 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.

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.

Key Omissions

Furthermore, none of these regulations distinguish any difference between drilling operations in a remote area or say, an elementary school. Children and other sensitized populations are far and away impacted by toxic exposures that adults. Airborne toxics and prolonged exposures to them are not taken into account.

The EAB has not consulted with any public health or medical practitioner in the development of these regulations.

See: Theo C Theo Colborn is Founder and President of The Endocrine Disruption Exchange (TEDX) - <http://www.youtube.com/watch?v=2r2Rx8VRq48>

None of these regulation are responsive to property devaluation or loss and enjoyment of it's use by the owner.

See: Analysis: U.S. drilling boom leaves some homeowners in a big hole
<http://www.reuters.com/article/2013/12/12/us-fracking-homeowners-analysis-idUSBRE9BB0GS20131212>

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Comments on 25 PA.CODE CH.78 Specific to WASTE DISPOSAL

2014 MAR 12 AM 4: 10

Dr. Helen M. Hazi
1900 Triphammer Road, South Park PA 15129
hmbazi@verizon.net 1/22/14

“Waste Disposal” (para 2) is among the topics included in this ACT, yet omits two items. The Act omits 1) the handling, monitoring and storage of radioactive waste and 2) waste disposal in landfills an industry-accepted method of disposal of the waste of the hydraulic fracking process, fracking fluid and drill cuttings.

Current language of the Act calls this waste “contaminated” (e.g. §78.62), yet classifies it as “residual waste.” Since fracking fluid and drill cuttings contain Radium-226, radioactive material, provisions should be made for safe handling and disposal. Radium-226 has a half-life of 1601 years and will forever remain to impact the health of residents and the environment.

The ACT fails to mention Radium-226, TENORM or the radioactive nature of this waste. In fact, “radioactive” is found once in the document in §78.123 re: logs maintained on the well. Radiation should be addressed since the Solid Waste Management Act (35 P.S. §§6018.101-1003), referred to §78.58(d) has limited provisions for radiation. In addition the *Guidance on Radioactivity Monitoring at Solid Waste Processing and Disposal Facilities* (Document 250-3100-001) was offered only as a best management practice in the absence of regulation. This *Guidance* is dated written in 2004, only handles small quantities of TENORM, did not anticipate the nature and volume of fracking waste disposed in landfills, and carries no regulatory authority.

The following need to be added to the Act.

Radiation: This should include the monitoring and labeling of waste disposed of and stored on-site at well in 1) temporary and permanent impoundments, storage tanks, pits and by other means, and in its 2) transport to permanent sites such as landfills and injection wells.

Centralized impoundments should be monitored for Radium-226 and other markers of radiation. It should be listed with other parameters in §78.59c(h)(6)

Drill cuttings that are radioactive should not be disposed of, spread on, nor incorporated into the soil 78.61(b) nor in pits §78.62, 78.63.

Landfill waste disposal where DEP permitted: the following should be addressed:

- Standards for radiation monitor alarm set points.
- Limit radiation of fracking waste to no greater than > 50 mrem¹ dose per truck as an Action Level Two requiring immediate notification of the DEP and disposal at another site.
- Monitor radiation on landfill perimeters and in storm run-off and streams nearby.

¹ A current provision of *Guidance* that should have the force of regulation.

- Annual public disclosure of radioactive drill cuttings and fluid accepted to include truckloads, tons, gallons, doses, with a focus on increasing trends in leachate results and future plans, especially to those residents living within a 5 mile radius.
- Quarterly testing and reporting of landfill leachate to the DEP for the presence of radium-226 and other markers (e.g., tritium, barium, bromides) of fracking residual waste.
- Quarterly testing and reporting of landfill flairs to the DEP for radon and other markers of radium-226 by-products.
- If leachate is pumped to waste treatment facilities, the testing and reporting of flow to such waste treatment facilities. When this sludge is returned to landfills, the radium-226 and other markers are similarly quarterly tested and reported to the DEP.
- Discussion about the effects of rationing of radioactive waste in landfill sections.

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2014 MAR 12 AM 4: 10

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

PAIPL Presentation to DEP at Shale Gas Hearings (January 22, 2014)

My name is William Thwing. I am United Church of Christ Pastor in Johnstown, PA and past President of Pennsylvania Interfaith Power and Light. Interfaith Power and Light consists of 14,000 congregations in 39 states from every faith tradition. We work with Faith Communities here in PA and across America solving the problem of Climate change by advocating for and using clean renewable energy.

Natural Gas which is primarily Methane is a non-renewable fossil fuel greenhouse gas which in the 20 year time horizon is between 75 and 106 x more potent than Carbon Dioxide(CO2). It is already the 2nd major GHG contributing to climate change after CO2. The International Energy Agency predicts that natural gas production will triple by 2035 with over 1,000,000 wells drilled world-wide.... 100,000 of those wells are scheduled to be drilled in Pennsylvania. Pennsylvania is already the 2nd largest producer of natural gas in the USA and therefore 2nd largest producer in the world because gas production in other countries is still in it's infancy. We invented the process for extracting unconventional shale gas right here in Pennsylvania at Penn State University and we are the guinea pig for new techniques and technologies related to the development of Natural Gas nationwide and world-wide. What we do here in Pennsylvania will be copied all over the world. Therefore, it is essential that we get it right. If we get it wrong, then it is going to be wrong all over the world. And, we, Pennsylvanians..are going to bear the primary responsibility for creating a world-wide Climate Change catastrophe which will not only cripple our nation but will cause world-wide chaos, suffering and death and which has the potential of destroying our civilization, causing mass extinctions and possibly even turning our planet into a lifeless wasteland. It's a gamble with very big stakes of Biblical proportions.

Therefore, if we do it at all,,we better do it right. Pennsylvania's Department of Environmental Protection is a lynch-pin in this process. Doing it right means absolute rigorous adherence to "best practices" regulated by law promulgated and enforced by the Pennsylvania Department of Environmental Protection.

There are two resources for "Best Practices" that are immediately available to the Pennsylvania DEP. Both documents are readily available online. The first of these resources is the International Energy Agencies(IEA) 2012 study entitled the "Golden Rules for the Golden Age of Gas". These "best practices" were formulated by energy and environmental experts from across the world representing among others: Exxon Mobil, Chevron, Shell, BP, American Petroleum Institute, US Department of Energy all of whom are active participants in the Marcellus Shale Play. The second resource for Best Practices is the Center for Sustainable Shale Development (CSSD) in the Appalachian Basin, based right here in Pittsbburgh, PA. The CSSD's Performance Standards released in March of 2013, provide a number of measures which can and should be adopted by the DEP in the Environmental Quality Board's "Proposed Rule Making for Environmental Protection Performance Standards at Oil and Gas Well Sites". Although your proposed changes to Chapter 78 includes some of the CSSD's 15 "Water Performance and Air Performance Standards", they fall very short on many of the details. As the IEA's study emphasizes, industry performance standards are not enough to insure compliance with best practices. Stringent government regulation is essential.

Pennsylvania Interfaith Power and Light, which represents a growing number of faith communities from a wide variety of faith traditions across Pennsylvania urges the Department of Environmental Protection to get it right. We do not want an Administration or a DEP controlled by lawless wildcat drillers from outside our state controlling our resources for their own quick financial gain and then externalizing all long term costs for environmental damages on the citizens of Pennsylvania. We want unconventional shale gas development in Pennsylvania... if it is to be done at all, to be done responsibly, lawfully, strictly following best practices in accordance with the Constitution of Pennsylvania.

Cooper, Kathy

From: RegComments@pa.gov
Sent: Wednesday, March 12, 2014 2:06 PM
To: Environment-Committee@pasenate.com; apankake@pasen.gov; IRRRC;
RegComments@pa.gov; eregop@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:

Barbara Hegedus
NONE! (hpixel@peoplepc.com)
404 Fox Trl.
Parkesburg, PA 19365-9198 US

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2014 MAR 12 AM 4: 09

Comments entered:

I STRONGLY OPPOSE ANY FRACKING IN PA. We have a governor who has already sold off so much of our lovely state - AND EXEMPTS THE FRACKERS FROM TAXES TO HELP THE STATE - TAXES EVERY OTHER "FRACKING" STATE COLLECTS.

No wonder they all want to frack up PA!

I believe it is the moral imperative of anyone in office to PROTECT PA from any form of pollution and company filth.

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

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2014 MAR 12 AM 4:09

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

From: Cynthia Walter, Ph.D.
916 Essex Dr.
Greensburg, PA 15601
walteratherton@gmail.com

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

I am a scientist with over 25 years experience teaching and conducting research on water quality in Pennsylvania, and most recently published a report on problems and progress to restore streams impacted from coal mining. My remarks are based on analysis of dozens of peer-reviewed papers, and dozens of talks and interviews with industry scientists, academics, federal and state specialists. I submit the following General Comments and Recommendations to the Environmental Quality Board's proposed regulations, published in the *Pennsylvania Bulletin* on Saturday, December 14, 2013 (43 Pa.B. 7377).

General Comments

The proposed amendments do not provide appropriate protection to the environment or the health and welfare of citizens of Pennsylvania.

In Pennsylvania, we have new shale gas wells within 2 miles of at least 190 day care facilities, 223 schools, and 5 hospitals. Many new shale wells are immediately above or adjacent to well water and municipal water supplies for over two million citizens and many wells are on or adjacent to property with critical public food supplies such as dairy herds. These herds put us fourth in the nation in milk production and top in the number of farms. The DEP has much to protect including a tourism industry of \$33 billion and agribusiness of \$32 billion. Hunting licenses alone collect almost \$1 billion. All this depends on people trusting that our air, land and water are not contaminated or at risk for harm in the future.

The new technologies of shale oil and gas development have created health and environmental impacts scientists have just begun to document. A pattern of harm from normal operations and accidents is emerging. For example, the DEP has sent over 161 letters to residents indicating water sources were contaminated by operations at shale gas wells. In just 2 years, from 2008 to 2010, the DEP recorded thousands of violations of environmental regulations and 241 were at well sites within 2 miles of day care centers and 40 within 2 miles of schools. Many peer reviewed scientific publications and records from the EPA, PA DEP, and agencies from other states document substantial contamination from shale oil and gas development in just the last decade, often originating from surface operations. These wells and their waste will be part of PA decades after the oil and gas are gone. We must limit the damage with clearer, more pro-active regulations. Every recommendation I propose is possible and practical, and many are already in practice in other regions.

Cynthia Walter

Peer-reviewed scientific reports of impacts from shale gas development under normal operations:

McKenzie 2010 Univ. Colorado - persons living within ½ mile of fracking operations have an increased risk of disease-- both cancers and non-cancers-- due to exposure to airborne toxic chemicals from normal operations.

Adgate 2010 - Colorado School Public Health - chronic health risks near drilled areas were greatest (in order of prevalence) for neurological disease, hematological disease, respiratory effects, and developmental effects.

Mead 2012 – PA Academy Of Natural Sciences."As the density of well pads increased, the number of types of stream insects decreased,"

Hill 2012 - Cornell University – A 25 % increased prevalence of low birth weight and lower apgar scores occurred for babies of mothers who experienced their pregnancy near frack operations.

Currie 2014 - Princeton - Pennsylvania infants born within 2.5 kilometers of frack sites have higher incidence of low birth weight. The chances of a low apgar score doubled. (in Review)

Warner 2013 - Duke University study found methane 6 times higher and ethane 23 times higher if a home was within a kilometer of a gas well, probably through natural pathways underground.

Schug 2013 - University of Texas - Elevated concentrations of arsenic and selenium were in water closest to gas extraction sites.

Nagel 2013 - water samples from sites in a drilling dense region of Colorado exhibited more estrogenic, anti- estrogenic, or anti-androgenic activity than reference sites.

States – 2013 – Pittsburgh Water Authority – Industrial treatment facilities accepting oil and gas waste legally release bromides into source waters, raising drinking water contaminants above allowed limits.

Papers involving a mix of normal operations, poor management and/or accidents:

Osborn 2010 - Duke University - water wells within 1 mile of fracked gas wells had 17 times the methane as reference sites.

Bamberger 2012 – Cornell - farm animals with neurological, reproductive, and acute gastrointestinal problems after being exposed to fracking chemicals

Vengosh 2013 - Duke University - brine from Marcellus shale containing bromide and radioactive radium was incompletely treated and contaminated a PA river upstream from drinking water intakes.

Peer-reviewed Scientific Reports on General Risks

The Texas Commission on Environmental Quality – 2010 - 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

Colburn – 2011 – The Endocrine Exchange – Of the 300 chemicals used on a fracking well site, fluid, over 60% can harm the brain and nervous system, 40% are endocrine disrupting, 1/3 are suspected carcinogens and 1/3 are developmental toxicants.

Specific Recommendations (All underlined statements)
Accompanying justifications/explanations are not underlined.

1. Water Used for Fracking (i.e. water to be sent into well)

- A. Regulations should not permit open containers or "pits": all fluids should be contained only in closed tanks and closed loop systems.**
- B. The tanks and closed loop systems should be permitted only for a designated, limited time, e.g., during weeks of fracking.**
- C. This water should not be called "fresh water."**

The term "fresh water" is confusing to the public and ambiguous for operators. The so called "fresh water" (i.e. water fresh to a well pad) comes from a wide range of sources each with different, often undocumented contaminants.

For example, this "fresh water" can be any of the following:

- a. Produced water from a prior well fracking that is intended to be recycled into a future well; therefore, this water will have chemicals from the previously fracked shale deposits (e.g., salts, heavy metals, organic compounds and radionucleotides) as well as chemicals introduced by the prior fracking company (e.g., acids and preservatives) .
- b. Surface or ground water impacted by another industry, e.g., mercury in rivers downstream from coal burning power plants
- c. Surface or ground water where acid deposition has dissolved naturally occurring metals, such as aluminum.

The water prepared to be put into the well is highly variable in chemistry. It can easily contain enough hazardous chemicals to contaminate the site; thus it must be in closed containers.

Note that the requirement for closed containers/closed loop systems will avoid the use of "natural topographic depressions" within the definitions of an allowed "pit" and/or "freshwater impoundment." No regulations should allow fluids related to oil and gas operations to be managed in "natural depressions."

2. Produced Water (i.e. water returned from fracking well)

- A. Regulations should not permit any open containers.**
- B. Produced water should be in closed tanks and closed loop systems designed for the broad array of chemicals possible in produced water.**
- C. The tanks and closed loop systems should be permitted only for a designated, limited time, e.g., during weeks of fracking.**

Note that the requirement for closed containers/closed loop systems will avoid the use of "natural topographic depressions" within the definitions of an allowed "pit" and/or "freshwater impoundment." No regulations should 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 closed and specifically engineered for the task.

Produced water contains chemicals from the prior shale deposits (e.g., salts, heavy metals, organic compounds and radionucleotides) as well as chemicals introduced by the fracking company (e.g., acids and preservatives).

Produced water poses a threat to the water, soil and air.

- a. **Water threat:** Concentrations of the chemicals listed above are up to 1000 times the allowed limits in surface or drinking water supplies. Numerous cases of harm to well water, municipal water, and stream life have been recorded in PA and in every formation in the US where deep shale operations have occurred.
- b. **Soil threat:** The heavy metals and radionucleotides will permanently contaminate any soil where produced water is spilled. The salts might be washed out, but this simply transfers the problem to water supplies.
- c. **Air threat:** Produced water often contains organic compounds released as volatiles such as the carcinogen, benzene, that travel in plums off site. These toxic clouds are hard to measure, but scientists have begun to document their presence downwind from operations, resulting in a prediction of increased cancer risk to residents living near shale gas operations.

The many threats to water, soil and air will not be eliminated with containers and closed loop systems, but this will reduce the most obvious problems. The US Department of the Interior, advises of pits: "Use of enclosed tanks and closed loop or semi-closed loop systems is environmentally preferable to the use of open pits and is to be encouraged by the BLM. Open production pits are to be strongly discouraged. Closed tanks and systems minimize waste, entry by wildlife, fugitive emissions that affect air quality, and reduce the risk of soil and groundwater contamination. In addition, the use of tanks instead of pits expedites the ability to complete interim reclamation. Costs may be reduced with the use of tanks, particularly when the pit requires solidification or netting." Waste pits are banned in New Mexico. According to news articles: Antero in Colorado does not utilize pits, but a closed loop system. Chief and Rex Energy have moved to all closed loop systems. Andarko Petroleum uses close loop systems in Pennsylvania. The EPA Star program recommends a closed loop system. But Pennsylvania's *new proposed* regulations allow the continuance of frack pits, inviting further pollution and contamination of waters.

3. Fumes, Mists and Liquids Discharged from Storage Tanks

- A. There should be no legally allowed leakage or release of vapors, mists or fluids.
- B. Containers that might accumulate vapors, such as condensate tanks or produced water tanks, must have vapor capture mechanisms that prevent the escape of any fumes, especially known toxins such as benzene.
- C. Air quality monitors that operate continuously must be installed to verify and report to the DEP that harmful gases are not escaping from the site.
- D. Limits for chemical emissions from tanks must take into account
 - (1) the density of tanks in an area as aggregate air pollution sources
 - (2) their proximity to buildings with sensitive populations (e.g., schools, hospitals)

Discharges of vapors and mists during tank checks and leaks during storm water flow are common sources of pollutants. These are occasionally detected by citizens or the DEP, and receive little penalty. Such chronic, small releases add up for the people and animals near the well or industry facility.

The proposed regulations will not prevent flooding, spills, and leak violations that are commonly occurring, but they will motivate operators to plan ahead with a greater margin of safety for liquid and vapor releases. For example, allowing open pits and tanks cordoned off within some general freeboard space, allows a company to receive a lower penalty for a discharge of chemicals if storm water exceeds the freeboard. Even now, violations due to overflow of the

required freeboard occur on a regular basis, companies repeatedly are charged with the same violations, and fines are limited or non-existent.

4. Seasonal High Water Table

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.

5. Fluid Storage Set Back

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 wastewaters 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.

6. Investigation of Water Pollution

The DEP's duty to investigate water pollution should extend to 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.

7. Pre-drill Water Testing:

- a. All pre-drill water quality testing should be conducted by a certified third-party professional operator, and made available to the landowner .
- b. Testing should occur a minimum of 3 times for of water quantity and quality during low, high and average hydrological conditions
- c. a consistent list of parameters including at least the following measures:
 - Analyte (Inorganic) Analyte (Trace Metal) Analyte (Organic)
 - Alkalinity
 - Barium
 - Chloride Calcium
 - Conductivity Iron
 - Hardness Magnesium Analyte
 - Hydrocarbons (benzene, ethane, methane)
 - Microbiology (Total Coliform/E.coli)
 - Oil and Grease Manganese
 - pH
 - Potassium
 - Radionucleotides (alpha and beta)
 - Residue – Filterable and Non Filterable
 - Sulfate Sodium
 - Strontium
 - Total Dissolved Solids
 - Total Suspended Solids

The above list of items for the test are from the document. "PA-DEP Recommended Basic Oil & Gas Pre-Drill Parameters" (elibrary.dep.state.pa.us/dsweb/Get/Document-91717/8000-FS-DEP4300.pdf).

Note that DEP water resource specialists such as Swistock and advisors from local county and the USDA consistently recommend 3 water tests to represent high, low and average conditions because in PA, the water table and chemistry can change greatly. Also, 3 water tests are needed to stand up in court. The short time of presumed liability makes it easy for a company to avoid responsibility for damage to a water supply because forces that impact water take time to emerge. In such cases, a court case is likely to require at least 3 sample times to prove good water quality existed prior to operations. Families have lost cases in court because they did not have 3 tests; the drilling company paid for only one test. The necessary battery of tests is too expensive for the average homeowner, but 3 water tests per home is a small cost for a multimillion dollar well operation.

8. Water replacement

Contaminated drinking water should be restored to meet the Safe Drinking Water Act standards. If the quality of water was superior to these standards prior to drilling, the operator must restore the water to that higher standard.

Water quality is closely tied to property value and a homeowner with better than average water should have a right to maintain that quality of the property. Also, water quality standards are always being revised; a property with better quality water will more likely meet the new standards. This advantage should not be lost through the fault of the oil or gas facility operator.

9. Presumption of liability

Presumption should apply to all oil and gas activities, including site construction.

78.1 The proposed amendments states, "That the presumption of liability established in 58 Pa.C.S. § 3218(c) (relating to protection of water supplies) does not apply to pollution resulting from well site construction activities." This revision gives the oil and gas industry special treatment. Also, far too many actions can be hidden under the phrase of "well site construction activities."

Operations on and near a well pad occur in a mix of actions and timing before during and after well sites are built before during and after drilling and fracking. Furthermore, sites are often modified during and after fracking. No one can separate the effects of "construction activities" from other effects. Also, separating out construction allows one company to attempt to blame another for harm associated with a well operation. This delays and may make it impossible for a harmed citizen to seek redress.

10. Disposal, Brine and Drill Cuttings:

There should be no processing of drill cuttings on site nor should cuttings should be stored in pits.

Disposal of brine, drill cuttings, and any residual waste should not be allowed for wells drilled on property not previously designated as a waste site.

No burial of waste should occur on private or public forests, farms, parks, airport buffer, school property, etc. .

Any burial of materials should occur only in sites designated as waste sites and, when burial is thus validated, it should meet the standards of the US Resource Recovery and Conservation Act.

The standards state that residual waste including contaminated drill cuttings may be disposed of on site. This is unacceptable for this or any industry. The storage of contaminated (to any degree) including radioactive drill cutting should be prohibited

Presently, the fracking industry is exempt from the regulation of hazardous substances that other industries must abide by. Those standards should be applied to all aspects of the storage, transport, and use of hazardous materials contained in pits, centralized impoundments, and tanks.

Because Marcellus shale is more radioactive than other shale plays, the drill cuttings can be more radioactive, as evidence by alarms activated at waste disposal sites and the high measurement of radioactivity in a study downstream from the Josephine Treatment Plant in Indiana County which treats wastewater from oil and gas drilling. Radium levels of sediment samples collected in Blacklick Creek, downstream from the plant, were 200 times greater than background samples. Researcher Vengosh noted that levels exceed thresholds for radioactive waste disposal and pose "potential environmental risks of radium bioaccumulation in localized areas of shale gas wastewater disposal." There is no mention that evidence of positive radioactivity or chemical toxicity tests precludes the storage of drill cuttings in a pit or on-site burial.

11. Brine:

No brine from hydraulically fracked wells should be used for application on the well pad, industry access roads, private roads or public roads due not only to salinity loads, but to the possible presence of toxic chemicals and radioactive particles that may be contained in flowback water.

Comments in other sections in this paper emphasize the many toxins present in produced water. Furthermore, each truckload of brine is unique in chemistry depending on the formation and the time of flow from the well. It is impossible for an operator to test and certify the safety of each truckload of brine. Once a load of brine is dispersed, its chemicals will travel through surface flow and infiltration in unpredictable destinations, with unknown consequences. Furthermore, operators have no way to tally the combined effects of more than one brine application in an area. Permission to disperse brine will result in harm to leased property and neighbors due to read chemical presence and the perceived risk of chemicals. Just the permission to use brine will lower options for future use of the land because the presence or absence of a brine application will be hard to verify.

12. Land Application:

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

The comments for #11 above apply here as well.

13. Condensate Tanks

All gas facilities including tanks, pits, wells, and compressor stations should have monitors designed and operated by a third party, functioning 24 hours a day, and recording findings that are directly available to the DEP and public.

The gas industry should not be responsible for conducting this monitoring but should be financially responsible for payment of the implementation and conduction of that process. **78.56 (17):**

14. Abandoned Wells:

Those wells must be identified and sealed prior to any gas wells being drilled. Drillers are financially responsible for protecting the waters of Pennsylvania via the identification and plugging process

There are thousands of abandoned wells in PA, increasing the possibility of the migration of methane and other contaminants from fracked wells will move up to abandoned well bores to ground water.

15. Radiation Monitoring and Labeling- on site and transport

All liquid and solid waste must be monitored for all relevant forms of radiation and readings must appear clearly on current labels in at least the following conditions:

1). All temporary and permanent impoundments, storage tanks, pits, that collect discharges from wells must be tested at least quarterly.

2) All liquid and solid materials transported to permanent sites such as landfills and injection wells, must be tested and clearly labeled, regardless of whether the destination state requires such labeling.

See below Recommendation # 18 for comments

16. Management of Radioactive Waste on site

Drill cuttings that are radioactive should not be disposed of, spread on, nor incorporated into the soil 78.61(b) nor in pits §78.62, 78.63.

See below Recommendation # 18 for comments

17. Management of Radioactive Waste Materials to Disposal Sites

DEP should set standards for radiation monitor alarm set points. Trucks carrying above a certain limit must go to sites designated for radioactive waste.

Trucks below a certain radiation limit and volume might be allowed at a landfill site if the landfill meets at least the following features:

- 1.) **the intensity and volume of radioactive substances in the landfill has not already reached a pre-determined limit set by the DEP, and verified by a third independent party.**
- 2.) **The amounts of radioactivity and volumes are publically disclosed on a quarterly basis.**
- 3.) **Residents within a 5 mile radius of the landfill are informed annually of the radioactivity status**
- 4.) **The landfill monitors radiation on landfill perimeters and in storm run-off and streams nearby on at least a quarterly basis.**
- 5.) **The landfill leachate does not move the radioactivity to sites other than those designed for radioactivity. For example, the landfill cannot send radioactive lechate to municipall waste water treatment plants.**

Radiation should be specifically addressed in the new regulations. Other regulations are not sufficient to guide the current oil and shale gas industry because of the uncertain status of various regulations and the use of varied terms. For example, the Solid Waste Management Act (35 P.S. §§6018.101-1003), referred to §78.58(d) has limited provisions for radiation. Also, the *Guidance on Radioactivity Monitoring at Solid Waste Processing and Disposal Facilities* (Document 250-3100-001) was offered only as a best management practice in the absence of regulation. This *Guidance has many deficiencies:*

- a. It carries no regulatory authority.
- b. It is dated written in 2004,
- c. It handles only small quantities of TENORM,
- d. It did not anticipate the nature and volume of fracking waste disposed in landfills.

“Waste Disposal” (para 2) is among the topics included in this Act, yet omits two items. The Act omits 1) the handling, monitoring and storage of radioactive waste and 2) waste disposal in landfills an industry-accepted method of disposal of the waste of the hydraulic fracking process, fracking fluid and drill cuttings.

Current language of the Act calls this waste “contaminated” (e.g. §78.62), yet classifies it as “residual waste.” Fracking fluid and drill cuttings in Pennsylvania are known to contain at least Radium-226, a radioactive material. Therefore provisions should be made for measuring radiation and handling waste appropriately. Radium-226 has a half-life of 1601 years and will forever remain to impact the health of residents and the environment.

The ACT fails to mention Radium-226, TENORM or the radioactive nature of this waste. In fact, “radioactive” is found once in the document in §78.123 regarding logs maintained on the well.

18. 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, through the use of an independent, professional analyst with a report provided to the DEP and the public. (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 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 paying for an independent party to determine whether its project would affect listed species and their habitat. The analysis of the habitat and the species at risk can then be reviewed by the public.

19. Response to Comments

The DEP should respond to comments received about a permit that may affect an important public resource. (Section 78.15(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, e.g. drinking water reservoirs, are fully protected, the regulations should require the DEP to respond to comments submitted by public resource agencies.

20. Citizen and Environment Protection

The DEP should not compromise its obligation to protect citizens and the environment by balancing the citizens' constitutionally guaranteed right against private interests in oil and gas. (Section 78.15(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.

Average citizen - my gas prices have not gone down at all.

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Pia Colucci, 4725 Wallingford St., Pittsburgh, 15213

2014 MAR 12 AM 4: 09

Thank you to the Pennsylvania Environmental Quality Board for holding this hearing today. I was sadly surprised that the nearest meeting to Pittsburgh was an hour away. I am confident had a meeting been held in the city, we could have more participants, but be assured, each of us here, against fracking, are speaking for hundreds more. We are their voice tonight.

Extend the hearing time to 240 days, Increase to each county.
It must be the fracking industry's nightmare come true, that the timing of ^{WATER} ~~this~~ ^{we} hearing ~~is~~ ^{is} in the middle of an ongoing crisis where 300,000 ^{these} West Virginians are struggling with a chemical spill polluting the water. I cannot imagine the horror to find out that my family and myself would have been drinking that toxic water for a week before it was announced to not touch it. I reiterate, Not Touch It. Use it only to flush the toilets. Stop for a second, and imagine looking at your child, knowing they drank that polluted water for a week, and you didn't know it. Now what? No one is really sure what that chemical in question will do to the human body. Which brings me to the fact that no one knows what chemicals are used by Frackers as they pump millions of gallons of toxic brew, under pressure, into our Earth, in order to extract natural gas that is then sold ^{*}shipped abroad. Frackers will not divulge the poisons they are using, citing proprietary formulas.

This is why it is paramount to protect our streams, (whether or not they flow continuously year round), creeks, rivers, natural depressions that include (1) "vernal ponds which are a seasonal wetland used for spring spawning", lakes, wells,

ponds, and any other naturally or man made body of water. The toxic brew used by fackers is lethal to human consumption. When contamination occurs to wells, waterways, or any other water source, Fracker response always leaves the likely possibility that humans have consumed that water before the water ban is announced, or toxin laden water is discovered. It is no secret that trucks dump their waste water loads in creeks in the cloak of night. It is documented. This is human nature, to take the easy road vs following the law. **But the law is flawed in anycase.** Holding ponds are breaking the law of our state, in my, and many people's opinions. The Constitution of the State of Pennsylvania states,

**Inherent Rights of Mankind
Section 1.**

All men are born equally free and independent, and have certain inherent and indefeasible rights, among which are those of enjoying and defending life and liberty, of acquiring, possessing and protecting property and reputation, and of pursuing their own happiness.

**Natural Resources and the Public Estate
Section 27.**

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

Another notable timing event is the release of Rich Fitzgerald's *Live Well Allegheny* Campaign. He states, "This is a new day and a new Allegheny County. Our residents are seeking an active, healthy lifestyle and are taking proactive steps to improve their health."

Not only are they focused on physical health, but also on their general well-being. We want to do everything that we can to encourage that interest. Under the leadership of Dr. Hacker and the Board of Health, the *Live Well Allegheny* campaign will stimulate our community to make better decisions for the health and well-being of all of our residents.”

None of this is possible without clean, reliably safe water. It is our job as citizens to demand it, and the job of our government to enforce it vigilently and strictly. There is no room for Fracking in this right. Fracking is and always be, an inherently dangerous and destructive practice, in an industry that is outdated, and toxic. The day of the fossil fuel is over, and the dawn of renewable energy is here. Let's protect our one and only spaceship as if our lives depended on it...because they do. NO LAWS ARE AS POWERFUL OR ENFORCEABLE AS A TOTAL BAN ON FRACKING.

(1) attributed to Jack Wolf, commenting on Penn Future Facts Monday, January 6, 2014

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Proposed Chapter 78 Regulations/Public Hearing
January 23, 2014, Indiana, PA

Testimony by
Paul Hart
754 Nibert Rd
Indiana, PA 15701

MAR 12 AM 4:09

Intro:

I have 28 years of experience providing waste water services for the Natural Gas and Oil Industry. I currently manage four facilities in PA that provide recycling and disposal services. We are the only business in PA that has successfully processed Natural Gas wasted waters to produce saleable salt.

Thank you for this opportunity to testify. The limited time for this public testimony will prevent me from providing more detailed information in support of my recommendations.

General Industry:

The proposed revision to chapter 78 has not complied with the laws of PA. It does not address the needs of small business, and DEP has not conducted the required determination of impact to small business. Most of conventional oil & gas operators in PA are small businesses within the scope of Act 76 of 2012.

The regulatory analysis fails to address the requirements of Act 76 of 2012, which amended the Regulatory Review Act to require an economic impact statement and a regulatory flexibility analysis for any proposed regulation that may have an adverse impact on small businesses. I have spoken to many of the operators and their internal review indicates the proposed revisions to Chapter 78 will have a dramatic impact to their business, and will negatively impact a billion dollar investment, over 20,000 jobs, and domestic energy production. A few natural gas operators have told me the proposed regulations will cause them to stop drilling new wells, and evaluate the continued operation of existing wells.

This Act expressly recognizes that small businesses are critical to Pennsylvania's economy and that uniform regulatory and reporting requirements can impose unnecessary and disproportionately burdensome demands, including legal, accounting, and consulting costs, upon small businesses with limited resources.

DEP is required to consider the establishment of less stringent compliance requirements for small businesses, performance standards to replace design or operational standards, as well as an exemption of small business from all or any part of the requirements contained in the proposed regulations – but DEP has not done so.

Unconventional vs Conventional

The proposed changes to chapter 78 do not adequately address the significant differences between Conventional and Unconventional exploration and production. The industry met with DEP on numerous occasions to address this issue and DEP appears to have disregarded the advice of experts.

Expert Recommendations

No changes to the proposal were made as a result of the Technical Advisor Board workshops, that included recommendations in the following areas:

- Public resource protection/species of special concern
- Waste management at well sites (centralized impoundments/on-site processing)
- Pre-hydraulic fracturing assessment (identification of abandoned and orphan wells)
- Water supply restoration standards

Cost Benefit Analysis

The proposals unreasonably impact conventional oil & gas well operations without a compelling environmental justification. The state should conduct a reasonable cost benefit analysis, to determine if the cost to the industry is justified by the benefits of compliance to the Chapter 78 revisions. It is my opinion that the cost far exceed the value of the benefits, and that the commonwealth will suffer as a result of these requirements.

- The revisions will likely lead to a dramatic reduction of investments in new exploration and reserves of natural gas and oil.
- Revisions will likely lead to a dramatic reduction in production from existing natural gas and oil wells.
- Revisions will likely lead to an increase of plugging, or abandonment of wells.
- Revisions will likely lead to dramatic decrease of jobs associated with conventional wells.

I recommend that the EQB and other state authorities, stop the approval of the current revision of Chapter 78 and require DEP to conduct the necessary review of expert testimony to make changes to Chapter 78 that are in the best interest of the Commonwealth.

Respectfully,

Paul Hart

Cooper, Kathy

From: RegComments@pa.gov
Sent: Wednesday, March 12, 2014 12:47 PM
To: Environment-Committee@pasenate.com; apankake@pasen.gov; IRRRC;
RegComments@pa.gov; eregop@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:

Frank Gielas
(frank.gielas@verizon.net)
418 Neola Circle
Pittsburgh, PA 15237 US

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Comments entered:

As a PA citizen who has found many hours of solitude, peace and enjoyment in our PA state parks over the past 30+ years, it would be hard to overstate their importance to me. Having watched during that time ever more land closed to the public and used for private interests, I find it imperative that we preserve and protect our state parks.

This is very important to me as it is my belief that having peaceful wild spaces where nature remains as undisturbed as we can keep it serves a function to the people of our commonwealth that just can't be measured in monetary terms.

Therefore, I respectfully urge you to prevent any fracking development on any of our state or National Park land in PA. If we don't we will only learn once again, to our sorrow, that we have lost what can't be replaced.

Thank you for your time and attention.

-- Francis W. Gielas

No attachments were included as part of this comment.

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January 23, 2014

2014 MAR 12 AM 4: 09

Department of Environmental Protection

My focus is on the lack of DEP regulations to protect public schools from Marcellus shale activities.

Pennsylvania's Act 13 covers the regulations that guide the gas and oil industries drilling/fracking into the ancient radioactive Marcellus Shale. This highly industrial activity imposed statewide by ACT 13 should not be allowed to put our children in harms way.

In 2011 Gov. Tom Corbett and the General Assembly cut \$1 billion from state education funding leaving district education budgets on shaky ground and clouding judgement. Gas lease deals can promise replacement money. And we are seeing gas drilling corporations getting DEP permits to drill next to Public Schools.

But can you believe that DEP does not have a single regulation that deals with drilling/fracking near schools, daycare centers, hospitals, senior living centers or any vulnerable population.

No special monitoring or testing is required:

- not the soil where children will play sports and roll in the grass
- not the water suseptible to methane or chemical migration
- not for the air from deisel trucks, or equipment fumes or well flaring
- and not for any possible chemical contact by students or the teaching staff.

Thousands of industrial compounds have never been tested for their risk to human health and no driller is required to reveal what chemicals they are using or when. NO ONE is required to warn parents or to monitor or test. Risk Assessments haven't been performed.

We KNOW many of these chemicals are carcinogenic or neurotoxic. The Marcellus shale layer is radioactive and Radon can escape every time a well is drilled. Radon is the second most common cause of lung cancer says the American Lung Association.

No trained health expert is required.

No toxicologist or even special training for school nurses is mandatory.

No school safety protocols or evacuation plans are suggested or discussed.

Who will provide life long care for teachers or children if they are harmed?

Our most vulnerable populations should not be used as a shield by the drilling concerns.

Neither the Department of Health nor our hospitals provide public health information on fracking.

We don't send our children to school to expose them to industrial chemical risks.

Currently drillers can follow the same rules for fracking near my outhouse or barn that they use for fracking next to any elementary school. A set back of a few hundred feet.

NOTHING more to protect our children, not one single rule.

According to Penn Environments' study in 2011 there are over a hundred day care centers and fourteen schools within a mile of current drilling activity.

From January 2008 to June 2010 alone, DEP recorded 241 violations of environmental regulations at Marcellus wells within two miles of a day care facility, and 40 violations within two miles of a school - and these numbers don't include traffic safety violations by tanker trucks.

Who pays for the schools: property owners, taxpayers. Heck, the largest checks I write each year are for property tax and school tax.

Why permit Endocrine Disruptors and radiation and carcinogen exposure to harm our children? Research shows a link from toxic exposures to autism, diabetes, asthma, heart disease, even psychotic behavior.

Who writes that check?

Right now establish a one mile set back from schools.

Enforce 10 year monitoring of air and water near drilling sites.

Fund a certified health examiner on site while these industrial processes are happening on already approved sites near a school.

Delay or deny drilling or compressor start dates until school health and safety plans, evacuation plans, and monitoring protocols that include certified daily air and water tests are established.

And include indemnification language that will ensure lifetime health

care for the harmed.

As the Pa Supreme Court (p. 57) just ruled on December 19, 2013:

To describe this case simply as a zoning or agency descretion matter would not capture the essence of the parties fundamental dispute regarding Act 13. Rather at its core, this dispute centers upon an asserted vindication of citizens' rights to quality of life on their properties and in their homtowns. insofar as Act 13 threatens degrdation of air and water, and of natural , scenic, and esthetic values of the environment, with attendant effectrs on health, safety, and tthe owners' continued enjoyment of their private propety. The citizens' interests as a result, implicate continued enjoyment of their private property. The citizens' interests as a result implicate primary rights and obligations under the Environmental Rights Amendment. Article I, Sec. 27.

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 future generations, and potentially on the public purse, perhaps rivaling the environmental effects of coal extractions.

Denise Garrott, Cowansville PA 16218 724-545-2432

Duane & Darlene Marshall
1070 Highland Street Extension, DuBois, PA 15801
Phone: (814) 583-7945 Email: mrdevy@yahoo.com

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DEP & EQB Public Hearing on January 2012 MAR 12 AM 4: 09

Thank you for the opportunity to comment on the updating of our Oil and Gas Regulations. We agree there is a need to better protect our water resources and environment. The comments I will present cover the specific regulations found in sections 78.51; 78.52; 78.56; 78.57; 78.58; 78.59; 78.60; 78.61; and 78.62.

Highland Street Extension residents have worked with community leaders in three municipalities, along with our Representatives and Senators to present over 2,000 comments to the EPA to stop a proposed disposal injection well near the City of DuBois. Many residents fear a disaster similar to the recent West Virginia incident could happen here if a disposal well were permitted to be placed within a residential area. The history of Pennsylvania waste disposal injection wells shows affects can be seen up to five miles away and at least five cases of Pennsylvania disposal injection wells had violations or contaminated water supplies.

Leaders of our community requested we submit all the information collected on the disposal of waste and the protection of our water sources (municipal and private water wells). A binder is being provided with all the information I have collected, which is extremely relevant to protecting Pennsylvania's water sources.

We request the DEP get copies and review all the public comments collected by EPA for December 2012 and September 2013 to aid in decisions on the future regulations dealing with waste disposal from oil and gas production to protect our water supplies. Some information was provided by engineers.

The EPA deals only with underground sources of drinking water and residents found no way to protect above ground water sources. Our local coal mines are of great concern, which are located near the proposed site and extend under the City of DuBois into Sandy Township and into many other municipalities throughout our area. Residents concerns dealt with protection of water supplies, cost to check water sources regularly, roads, air quality, soil, loss of property values and much more. The DEP needs to review all this information collected by private citizens on potential hazards to Pennsylvania water supplies from the waste disposal of the oil and gas industry since it has a direct impact of over a 2 mile radius. Anything happening underground really is an unknown and loss of water to homes is one of the most important items to home owners and to protecting the home owners property values.

Please make sure the regulations prohibit: use of open pits for storage of regulated substances; onsite processing of drill cuttings due to hazardous substances requiring analysis; burial or land application of drill cuttings; onsite burial of waste pits; use of brine for dust suppression, de-icing and road stabilization; land application of top hole, pit water, fill or dredged material; and use of disposal injection wells in Pennsylvania due to the history of abandoned and orphaned wells. Ensure that the regulations will identify existing wells, which include old and abandoned oil and gas wells. Make sure that the regulations plug and seal old abandoned and orphaned wells appropriately prior to new well construction to prevent pollution from accidents.

Operators should be required to do pre-drill water quality testing and make the data publicly available. If contamination of a water source should happen the operator should be required to restore the supply to pre-drilling quality.

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January 2012 MAR 12 AM 4:09

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 Indiana, 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 prescribed comment period. Here are a few of my comments:

General Comments

There is a significant difference between the 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 review of 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.

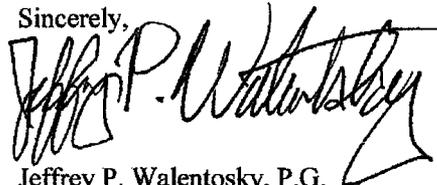
During the TAB workgroup meetings in 2013, there were four issues of concern that were discussed – public resource protection, protection of water supplies, abandoned and orphaned well identification and waste management on well sites. Although there were significant discussions between the work groups, there were no meaningful 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 to the operators. However, the use of a questionnaire with adjacent property owners will likely cause some issues from the standpoint of property access or lack of accurate 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