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**Cooper, Kathy**

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**From:** RegComments@pa.gov  
**Sent:** Friday, May 08, 2015 1:18 PM  
**To:** Environment-Committee@pasenate.com; apankake@pasen.gov; IRRRC;  
RegComments@pa.gov; eregop@pahousegop.com;  
environmentalcommittee@pahouse.net; gvitali@pahouse.net  
**Cc:** ra-epmsdevelopment@pa.gov  
**Subject:** Comment notice for - Advanced Notice of Final Rulemaking - Environmental Protection  
Performance Standards at Oil and Gas Well Sites (7-484)



**Re: Advanced Notice of Final Rulemaking - Environmental Protection Performance  
Standards at Oil and Gas Well Sites (7-484)**

**The following comments have been received regarding the above-referenced advanced  
notice of final rulemaking.**

Commentator Information:

Jan Milburn  
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114 Mountain Road  
Ligonier, PA 15658 US

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Comments entered:

Attached you will find comments on the DEP Chapter 78, 78a  
Pennsylvania's Proposed Oil and Gas Regulations.

Jan Milburn

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These links provide access to the attachments provided as part of this comment. You are  
advised to save the attachments to your local computer or a network share when prompted by  
your browser.

Comments Attachment: [Jan Milburn ANFR Comment 7-484.pdf](#)

Please contact me if you have any questions.

Sincerely,  
Patrick McDonnell

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Patrick McDonnell  
Director, Office of Policy  
PA Department of Environmental Protection  
Rachel Carson State Office Building

3042

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IRRC

2015 MAY -8 PM 2: 46

**DEP Chapter 78 , 78a**  
**Pennsylvania's Proposed Oil and Gas Regulations**  
[RegComments@pa.gov](mailto:RegComments@pa.gov)

Jan Milburn  
114 Mountain Road  
Ligonier, PA 15658  
May 5, 2015

There are now hundreds of research reports evaluating the environmental and health effects of fracking. Despite the fact that 96% of those studies indicate problems with health, 72% indicate pollution of water, and 95 % indicate pollution of the air, the DEP has done little to protect the public. Recommendations have been submitted numerous times during comment periods yet the following issues remain unresolved. In the meantime, Pennsylvania has become a Gasland with water contamination from spills, leaks, and migration; air pollution from toxic chemicals released during flaring and vapor emissions; and destruction of the beauty of our state through unlimited industrialization.

It is increasingly clear that DEP is not sufficiently regulating the gas industry. According to DEP data, as reported in the Pittsburgh Post Gazette, **"Emissions from the expanding natural gas drilling industry increased in four of six air pollution categories in 2013.** VOCs increased 19%, PM increased 12%, NOx increased 8%, and SO2 increased 57%."

(<http://powersource.post-gazette.com/powersource/policy-powersource/2015/04/20/Pennsylvania-DEP-says-emissions-increased-from-expanding-natural-gas-industry/stories/201504200129>)

In Washington County, public health assessment reveals **that after only six years of drilling, human exposure is occurring and people are getting sick.**

"The presence of any sick people gives lie to industry claims that high volume hydraulic fracturing (fracking) is "safe." The early results from the Southwest Pennsylvania Environmental Health Project study implicate **air contamination as the likely cause of three-quarters of the associated illnesses documented.**

(*Statement on Preliminary findings in Southwest Pennsylvania*, Larysa Dyrszka, MD; Kathleen Nolan, MD, MSL; and Sandra Steingraber, PhD, 8/14)

Researchers examined air around **gas production sites in Pennsylvania and stated that the spikes in air pollution will certainly lead to a cancer increase in** surrounding areas. They noted that the eight poisonous chemicals found pose a significant public health risk. (D. Carpenter, *Environmental Health*, 2014)

Meanwhile, the most basic protections have not been provided for residents who will suffer the results of unlimited industrialization through increases in cancers, respiratory, neurological, and hematological disease, and increase in birth defects in infants.

We again ask that with expediency you impose the following regulations, which are critical to protecting the health of our children:

\* **Frack pits should be prohibited (Sections 78.56, 78.57, 78.58, and 78.59)**

Frack pits leak and emit hazardous air pollutants, thus polluting both air and water. DEP should amend the final regulations to: prohibit operators from utilizing any open-air pits and tanks regardless of size or location for storage and treatment of drilling and fracking wastes, including wastewater, drill cuttings, and dangerous substances (like gels and cement) that return to the surface after fracking. The new revisions prohibit the use of production pits at shale gas well sites, an important change that should be supported, but the use of huge open impoundments to service multiple wells will still be allowed. **Centralized impoundments should be prohibited**

\* All existing **waste impoundments should be required to be properly closed immediately upon the effective date of the regulations.** Allowing operators 3 years to properly close their existing impoundments, allows toxic pollution to continue, threatening air and water quality.

The revisions give operators the option of using tanks “without lids” to store waste on well sites allowing spills to occur and air emissions to escape. **Tanks used for the storage of waste must be completely enclosed.**

**The onsite processing of shale drill cuttings should be prohibited,** 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.

\* **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.

**\* Disposal of brine, drill cuttings, and residual waste (Sections 78.60, 78.61, 78.62, and 78.63, and 78.70)**

**Prohibit the burial or land application of drill cuttings**, which can contain polluting and radioactive substances.

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

**\* 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.

**\* 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 leachate to municipal wastewater 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.

\* **Prohibit the road spreading of brine/gas wastewater from conventional wells.** The standards would continue to prohibit the use of wastewater (brine) from unconventional wells as a de-icer and dust suppressant, but continue to allow waste from conventional wells to be used for these purposes. Brine contains chemicals, hydrocarbons, and concentrated salts regardless of the type of well it comes from. Limits have been established on contaminant levels in the brine, but there is not a requirement for testing for all contaminants that could be present, requires minimal testing and monitoring, and has not provided scientific evidence that road-spreading is safe for water, vegetation, and wildlife—especially over large areas for prolonged periods of time.

\* **Public resources should be more clearly defined and meaningful protection provided.** (Section 78.15, 78.57, 78a.15, 78.57a) DEP has added schools

to the list of public resources that require additional consideration when permitting oil and gas wells and has extended the setbacks of waste storage from school buildings, parks, and playgrounds. Those setbacks are inadequate. **Recent evacuation zones have been 1.5 miles, the minimum distance fracking should occur from any school.**

This setback should also be applied to locations where other vulnerable populations reside, including nursing homes, hospitals, day care centers,

**All the setbacks in the public resource section are too small** to provide the needed protection and must be expanded to include more sensitive resources, such as private water wells and all our streams and rivers. Current science supports greater protections; see the compendium from Physicians, Scientists and Engineers for Healthy Energy: [http://www.psehealthyenergy.org/site/show\\_list/id/15](http://www.psehealthyenergy.org/site/show_list/id/15)

**\*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):

**\* 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.

**\* Testing Pre-drill Water**

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 must be used,** 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 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](http://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.

**\* Any affected drinking water supplies must be restored either to Safe Drinking Water Act (SDWA) standards or, if pre-existing water quality was higher than SDWA standards, to the better pre-existing condition.** 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.

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.

**\* Orphaned and abandoned gas wells should be identified and plugged prior to new well site construction.** (Section 78.52a) Existing wells should be identified through onsite inspection before site and well construction and drilling so that the location of a new well won’t trigger a pollution incident or pose dangerous conditions. The state doesn’t commit funding to address the large number of old wells, so drillers should be responsible for preventing water and air pollution and for avoiding catastrophes.

Identified wells should be mapped on a publicly available web platform.

**A greater area than 1000’ should be surveyed and inspected for the presence of orphaned or abandoned wells.** Interaction between a newly drilled well and an old well can occur at much greater distances than 1000’ if there is a subsurface connection; scientific research should be used to set safe setbacks. The

Federal Bureau of Land Management's new rules for fracking on public and tribal lands released in March require a survey of a half-mile; Pennsylvania deserves equal protection.

\* **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))

\* **The provisions will not result in meaningful noise reduction** or control at well sites. the noise requirement is vaguely worded and fails to set an objective standard for evaluating problems, making it difficult, if not impossible, to assess compliance.

\* **All regulations must apply to both unconventional and conventional drilling.** Conventional wells also use water and chemicals, create waste, and disturb land. Conventional operators, like unconventional operators, cause spills, accidents, and contamination. Due to the inherent risks of all oil and gas development, DEP should require all operators of all wells to:

**End the use of all open-air production pits for the storage of waste and require the immediate conversion to closed tanks.** Conventional well operators should not be permitted to store their waste in pits and to bury waste at well sites .

Conventional well operators should **develop water management plans that specify the source and volume of the water used in site construction, drilling, hydraulic fracturing, and site restoration.** This is only required for unconventional but not conventional operators. All gas development requires large volumes of water and withdrawals can harm streams, rivers, and aquifers.

\* Oil and gas operators should be required to **electronically file permit applications and all required reports and those documents should be made available to the public on DEP's website.** This should be posted the same day they are deemed complete by DEP. Easy and timely access to information by the public is necessary to ensure agency transparency and operator accountability.

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

Jan Milburn  
President, Citizens To Preserve Ligonier Valley

References include Dr Cynthia Walter