

**Cooper, Kathy**

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**From:** RegComments@pa.gov  
**Sent:** Monday, May 18, 2015 11:35 AM  
**To:** Environment-Committee@pasenate.com; apankake@pasen.gov; IRRC;  
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:

Susan Carty  
League of Women Voters of Pennsylvania ([sc51446@aol.com](mailto:sc51446@aol.com))  
226 Forster Street  
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Comments entered:

No text comments were provided as part of this comment submittal. Please refer to attachments below.

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: [Comments re Unconventional Wells \(3\).docx](#)

Please contact me if you have any questions.

Sincerely,  
Patrick McDonnell

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Patrick McDonnell  
Director, Office of Policy  
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Chapter 78a UNCONVENTIONAL WELLS  
Subchapter A. GENERAL PROVISIONS

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78a(1) Definitions should be consistent with FEMA and those found for conventional wells Chapter 78 as suggested below:

*Abandoned Water Well* is defined too broadly and should only include those that are properly abandoned under DEP Chapter 7 Well Abandonment Procedure. This is required because such a well 1) *eliminates the physical hazard of the well (the hole in the ground)*, 2) *eliminates a pathway for migration of contamination*, and 3) *prevents hydrologic changes in the aquifer system, such as the changes in hydraulic head and the mixing of water between aquifers*.

*Approximate original condition* is fraught with subjectivity and “to the extent practicable” is equally nondescript. This term, as mentioned on pages 82 and 84 relative to post-plugging events, should contain the terminology “to best management practices available” or ABACT (antidegradation best available combination of technologies).

*Centralized impoundment* – Should be clarified to hold only freshwater. All other liquids from oil and gas operations should in contained tanks.

*Certified Mail* should be amended to delete “or the attempt to deliver to document to the proper address for the intended recipient.” This must be clarified as well as “verifiable.” As is, this definition has the potential to dismiss citizens from vital information.

*Containment systems* should be limited to above-ground, closed storage tanks that must include secondary containment and protection from third party activity. A plastic bag (synthetic liner) is not a system.

*Conventional well* should further be clarified with the prohibition that all wells should remain as per their original intention, should not be grandfathered and subject to any change of use at a future date.

*Floodplain* – measured distances must take into consideration of slope and calculated accordingly. If not, all distances should be increased from 100 to 500 feet of a perennial stream and 250 feet from an intermittent stream. Each of these stream types must also be defined or clarified by reference to other regulations. The term floodplain is far less encompassing than a wetland and should never be used as a substitute for limiting the protection for our waters.

*Freshwater impoundment* – should be limited to fresh water, surface water, and groundwater only and no other fluids. This is misleading to the public.

*Mine influenced water* should be defined to include acid mine drainage and its regulation by the Clean Streams Act regardless of its beneficial use or reuse alone or in mixtures with other substances. Such water is a hazard to the environment and public

health given its highly acidic nature and its contamination by toxic metals such as arsenic and mercury.

*Modular Above Ground Storage Structure* – must include secondary containment and protection from third party activity.

#### *Oil and Gas Operations*

iii. Centralized Tank Storage should include more descriptive language so that it includes secondary containment systems and protection from third-party activity.

*Other Critical Communities* are defined by various plant and animal species that are of concern to conservationists. This term should be broadened or another term defined (i.e. areas for special consideration) to include areas of historical, archaeological, or geological significance along with facilities with special or at-risk populations such as school-aged children, the sick, the elderly, pre-school youngsters, and the like.

*Pit* is defined too broadly. It should include only fresh water and all other fluids and wastes should be maintained in containment vessels. Pits should not hold wastewater, flowback, mine-influenced water, drilling mud and drill cuttings given the potential for contamination.

*Regulated substance* must be changed to pollutional substance given that all wastes from the oil and gas industry must be treated the same as any other waste from another industry. If a waste is hazardous, it must be treated as such, regardless of its source.

*Reportable release* of brine should be reinserted into the document given its composition and potential for degrading soil and water.

*Residual Waste* is a term worthy of elimination. The waste from natural gas operations should be categorized according to the same criteria and deserving of the same treatment as wastes of any other industry. The Commonwealth can and should provide restrictions greater than that of the federal government in compliance with Article I, Section 27 of the Pennsylvania Constitution.

*Temporary Pipelines* should be reinserted into the document as they pose a threat to air, water, and land. They are not regulated, subject to leaks, generally unmarked, and a matter of third-party activity. They can transport flowback and wastewaters that are toxic to other sites for reuse and/or storage.

*Water source* should not include mine pools and dischargers or any other waters that are used for drilling or completing a well in an unconventional formation. This is too inclusive and misleading to the public.

78a.15 Application requirements

(b.1) Increase the 100-foot buffer to 500 feet minimum with consideration of steep slopes that are more conducive to potential contamination. This is essential to keep pollutants from groundwater and aquifers.

(b.2) An abandoned water well, as defined in this document, should constitute a water well because of its potential for aquifer contamination. If redefined as suggested, it may be appropriate.

1)(v) Add to this section 500 feet from any school property, high density population area, and/or facility in which elderly, young, or ill reside.

(1)(vi) The 500-foot distance should be at the borders of the school district's property as playgrounds and ancillary uses, as presently located in a given area, may change with time. This would put a population at risk unnecessarily.

(3)(b.2) An abandoned water well should be given consideration as a water well given that it is a potential source of contamination to aquifers. Its use may also change dependent on the fluctuations of the water table.

(d) Relative to threatened or endangered species, what constitutes a "demonstration?" This requires clarification and must be site specific.

(1) Limit of Disturbance should be extended beyond 200 feet to prompt avoidance.

Mitigation has been difficult, if not impossible in many of these areas of that require special consideration.

(vi) School properties should be to their boundaries given potential expansion and existing access of students to the entire property.

(g) Mitigation does not protect as shown by Act 54. Avoidance through alternatives is necessary. The burden of proof should not be with the Department but with the operators to show that no probably harmful impact will be done to a public resource. Bonding funds should be collected that are adequate to mitigate any damages that might occur over time.

#### 78a.19 Permit application fee schedule

Fees should be quadrupled and range from \$16,800 to \$20,000. These funds are needed to pay for additional staff needed by DEP for oversight.

### OBJECTIONS

This is an important process about which landowners and citizens need to be informed.

### Subchapter C ENVIRONMENTAL PROTECTION PERFORMANCE STANDARDS

78A.41 NOISE MITIGATION is critical. Limits, in terms of decibels, duration, and frequency of sound must be specified according to standards based on scientific and medical studies. Monitoring must be done by others in addition to the operator with averages being unacceptable as a standard. (d) Terms such as "regular, frequent, and comprehensive inspections" need to be further defined. Could remote sensing devices be required to monitor noise from natural gas operations?

#### 78a.51 Protection of Water Supplies

(c) The timelines are too long given the consequences of an incident requiring investigation. The 10 calendar days should be reduced to 7 calendar days and 45 calendar days should be reduced to 25 calendar days. Pollution from well-site construction needs to be addressed with operators held accountable.

#### 78a.52 Predrilling or prealteration survey

Does the testing include drinking water as part of a “water supply?” If not, it must test specifically for drinking water related to wells and springs as well as obtain baseline readings 500 feet or more from boundaries of the site. Hydrogeology pathways are not necessarily linear in nature.

#### 78a.52a Area of review

Operators of **all** wells should identify the location of orphaned and abandoned wells for future reference given their serious implications.

78a.53 The inclusion of stormwater management is to be applauded.

#### 78a.55 Control and disposal planning

This section is inadequate. Because the wastes of the oil and gas industry are defined as non-hazardous, they are deemed residual. However, they should be treated as hazardous and have plans beyond a pollution prevention and contingency plan. Operators need to be held accountable for their wastes - what is in them as well as where and how they are disposed. As, for the most part unregulated in the Commonwealth, residual wastes from oil and gas operations can be disposed of in municipal landfills along with household wastes. Consistency with the Solid Waste Management Plan and the Clean Streams Law is important. However, other safeguards need to be put in place. Given the magnitude of produced wastes and their consequences, it is imperative that regulations be a proactive to prevent problems rather than responding to one after the fact. The control and disposal planning should be reflective of hazardous substances not residual ones. A superfund needs to be established to deal with unanticipated consequences.

(b) Requirements of the plan should be a review of the pressure barrier policy developed by the operator by a professional engineer to determine its appropriateness relative to a given site.

(e) Copies should be provided to other agencies as well with the connecting word being and/or not just or.

(f) The PPC plan should be supplemented by the Control and Disposal Planning as the Pollution Prevention and Contingency plan, in and of itself, is inadequate. Each plan should be site-specific taking into consideration the unique features of the location.

78a.56 Temporary Storage – A timeframe, such as six (6) months, should be included to define “temporary.”

(a) Pollutational substances should be reinserted as opposed to regulated. It is a more inclusive and protective. Further, with any storage structure, there should be secondary containment required as well as protection from third-party action.

(2) All modular storage systems should require department approval regardless of size or capacity.

(5) Open storage structures should not be allowed given their impact on air quality. If the subsection is violated, the operator should be required to revamp the containment system and fix it to prevent any future incident.

(6) The word "reasonably" protected should be deleted and a surrounding fence (as omitted in original (5) should be re-inserted into the text.

(7) The word "reasonable" is fraught with subjectivity. The reinsertion of the deleted language from (5) should correct this problem.

(8) The words "identifying its contents" needs to be clarified to include specific chemicals and substances that are included. For example, flowback is inadequate. If low-level radioactive materials are contained, this must also be specified. This would be important for emergency personnel who may need to respond to an incident. Warning information is essential but data sheets are more instructive in the event of injury or spill response.

(10) Aboveground tanks needs secondary containment and protection from third party activity.

(b) The operator requesting equivalent or superior protection must provide proof of such claim.

(c) Tests should be required to determine if the drill cuttings are "uncontaminated?"

#### 78a.57 Control, storage and disposal of production fluids

The removal of pits is to be applauded. However, further conditions need to be included as follows:

(d) Tanks, series of tanks or above ground storage structures should be certified by a professional engineer of the operator prior to being submitted for the approval by the Department.

(e) Underground or partially buried storage tanks should be certified by a professional engineer of the operator. This certification should be included as a part of required forms to the department.

(f) Above ground tanks require a secondary containment system as well as protection from third-party activity.

(g) Underground tanks require a secondary containment system as well as protection from third-party activity.

(i) Forms submitted should be supplemented with dated photographs as additional documentation in the event of an incident.

#### 78a.57a Centralized Tank Storage

All plans for such facilities must include certification by a professional engineer.

(b) Is denial for any failure to comply at any site at any time or only for the specified area under consideration? Does this include subcontractors of the corporation?

(f) Distances need to be expanded to consider the slope of the land.

(1) In a WETLAND (not just a floodplain)

(2) 300 feet should be extended to 1000 feet of an exceptional value wetland and within 500 feet of any other wetland regardless of size. The distances should be amended to take into consideration of slope.

- (4) Expand 500 feet from a building to 1000 feet with consideration for slope.
  - (5) Expand 500 feet to 1000 feet from any watercourse with consideration of slope.
  - (6) Expand private water supply from 500 feet to 1000 feet with consideration of slope.
  - (7) Expand from 1000 feet (a football field length)) to 2000 feet distances from an existing water well, surface water intake, reservoir or other water supply extraction point used by a water purveyor.
  - (8) Expand from 300 yards of a building to within 500 yards of a property owned by a school or district as use changes over time.
  - (h) The labeling of tanks should be consistent with the specifications of those of all other industries so if it is hazardous it is so labeled.
  - (i) Design and construction should be certified by a professional engineer.
- What constitutes a “demonstration” of equivalence? All modifications and specifications (1-17) should be certified by a professional engineer (not just a design engineer or a generic “engineer” with the burden of proof on the operator.
- (k) A professional engineer should provide oversight not only a design engineer and such work should be certified in subsequent section (l).

#### (78a.58 Onsite Processing

- (b) These operations should **not** be permitted as they can trigger changes in listing and hence treatment under hazardous waste regulations – be they solids, liquids, gases, or sludges.
  - (1) Mixing fluids with freshwater (diluting the solution)
  - (2) Aerating fluids (releasing VOCs)
  - (3) Filtering solids from fluids (creating potential hazardous waste)
- (h) Sludges, filter cake or other solid waste should be tested for radioactivity before the solid waste leaves the site.

#### 78.59b Freshwater Impoundments

- (g) The restoration to “approximate” original condition should be changed to restoration using the best management practices available or ABACT to original condition. The landowner should not be able to waive this provision given its impact to surrounding lands.
- (h) Storage of mine-influenced water in a freshwater impoundment is problematic even with DEP approval. “Mine-influence water” is contaminated by acid mine drainage and is considered a serious pollutant. Once it is used in oil and gas production activities or becomes in contact with the produced oil or gas, its classification changes. There are serious liability issues in such activity and should not be allowed at this time under these regulations.
  - (1) (i) What constitutes a “demonstration?”
  - (ii) Tracers should be added to all fluids in impoundment pits to promote accountability in the event of an incident.
  - (iii) What limits are being put on the tested water? Where will the data be kept?
- (2)(i) The Department requires all water sources to be tested prior to storage in a fresh water impoundment.

#### 78a.59c Centralized Impoundments

(2) Restoration of the site to “approximate” original conditions should be clarified to use the term ABACT or using best management practices available.

#### 78a.60

(b)(1) Pollutional should be reinserted for regulated to provide protection to our waters as would be consistent with other industrial operations.

(b)(4) More stringent tests should be administered beyond a sheen of oil or grease. Assessments should be made for toxic substances, endocrine disrupters, and heavy metals consistent with such unconventional operations. “Water” that exceeds recommended scientific/medical limits for organisms should be disposed of using other approved techniques.

(b)(7) The area of land application should be extended to 500 feet of a water supply or 300 feet from a stream, watercourse or body of water or a wetland. Floodplains are less easily determined, variable, and limited in scope relative to a wetland.

#### 78a.61 Disposal of drill cuttings

(a)(2) A regulated substance should be replaced by pollutional material for optimum protection given definitions that are less restrictive for the oil and gas industry.

(a)(3) The disposal area should be extended to 500 feet of a water supply or 300 feet from a stream, watercourse or body of water or a wetland. Floodplains are less easily determined, variable, and limited in scope relative to a wetland.

(a)(4) The disposal area should be should be extended from 200 feet to 500 feet from a water supply given the ability of substances in cuttings to leach. This distance should be expanded as the mass of volume cuttings increases at a given site.

(b)(2) Contamination by a regulated substance should be replaced by pollutional material for optimum protection given definitions that are less restrictive for the oil and gas industry.

(b)(4)The disposal area should be should be extended from 200 feet to 500 feet from a water supply given the ability of substances in cuttings to leach. This distance should be expanded as the mass of volume cuttings increases at a given site.

(d ) Exception should not be permitted as such would fail to protect the Constitutional rights of Pennsylvanians and financial incentives may prompt owner requests.

#### 78a.62 Disposal of residual waste – pits should not be allowed.

#### 78a63a Alternative Waste Management

A demonstration of an alternative waste management practice for its equivalent or superior protection needs to be clarified so that accountability and the burden of proof rests with the operator. What constitutes a “demonstration?”

#### 78a.64 Containment around oil and condensate tanks.

(a) The capacity of the tank should be reduced to 660 gallons given the nature of substances in a condensate tank. Small quantities can be quite toxic.

(d) Before drainage of containment facilities, testing of the contents should be required to determine if, in fact, a discharge would cause harm. A protocol for testing should be established that is inclusive of potential hazards.



E. The capacity of the condensate tank should be reduced to 660 gallons as above.

78a.64a Containment systems and practices at well sites.

- (a) Pollutational substances should be substituted for regulated substances.
- (b) Pollutational substances should be substituted for regulated substances.
- (c) Pits that are open should not be compliant.
- (d)(1) Pollutational substances should be substituted for regulated substances.
- (d)(3) Pollutational substances should be substituted for regulated substances.
- (f)(1) Integrity testing of subsurface containment systems should be certified by a professional engineer prior to being covered as well as meeting other requirements.
- (f)(4) Pollutational substances should be substituted for regulated substances.
- (g) If the containment system is damaged or compromised, it should be reported immediately on inspection to DEP. A record of repairs must be sent to DEP along with plans to implement a replacement or recertification of the containment system.
- (h) Pollutational substances should be substituted for regulated substances.
- (i) Stormwater that comes into contact with "pollutational" (not regulated) substances should be managed as pollutational and/or hazardous rather than residual waste.
- (k) Documentation of chemical compatibility of containment systems with material stored within the system is required to be submitted to the Department.

76a.65 Site restoration

Throughout this section, "approximate original condition" should be replaced by the words original condition as provided by the best management practices available or ABACT.

- (5) The location of the area used for land application and the results of the chemical analysis of the waste soil mixture must be required as part of the clean-up not on request.
- (c) What constitutes a demonstration in the listed areas involving an extension?
- (e)(2) Post-drilling restoration reports should include more extensive testing for all substances known to be related to natural gas development from unconventional wells such as radiation levels, endocrine disruptors, petroleum distillates, heavy metals, and so on.
- (e)(5) Post-drilling restoration reports should include more extensive testing for all substances known to be related to natural gas development from unconventional wells such as radiation levels, endocrine disruptors, petroleum distillates, heavy metals, and so on.
- (f) Post-plugging restoration reports should include a description, including chemical composition, of the types and volumes of waste produced
- (g) Written consent of the landowner should not provide grounds for the operator to not comply with restoration plans. Incentives provided to the landowner may put other neighboring properties and resources at risk.

78a.66 Reporting and remediating spills and releases.

(3)(a) Scope - The substances (regulated) must be expanded to those polluting or threatening air, land and water and consistent with (v) in the preceding section that includes *water, soil or groundwater*.

(3)(b)(1) Reports should be sent regarding the release of any pollutional substance – not just a “regulated substance.”

(3)(b)(1)(ii) “Pollutional” should be substituted for regulated throughout this section.

(3)(b)(1) (iii) The 5 gallon limit for a release may need to be modified depending on the nature of the substance released. In some cases, a few drops of certain chemicals can pollute a significant water source.

(3)(b)(2)(vi) Replace the word regulated with pollutional.

(3)(b) (3)(i) Replace the word regulated with pollutional.

(3)(c ) Remediating releases

Timely testing must be done to determine the level of contamination as a requirement pre and post remediation efforts and periodically thereafter to determine the quantity and nature of the spill/release as well as how the incident was remediated.

(1)The volume of releases or spills should be dependent on the nature of the substance not solely on the quantity. To err on the side of caution would be to reduce the minimum to 20 gallons on the well pad.

(2)The volume of releases to the ground should be minimally 20 gallons given the potential to pollute the waters of the Commonwealth.

(2)(i)(A) Replace the word regulated to pollutional.

(2)(ii) and (iii) Timelines should be reduced to 5 business days from the time of discovery and the report should be submitted within 120 calendar days.

(2)(v) If the remediation is not sufficient, a plan should be produced within 30 calendar days to the Department.

(VI) Progress reports should be submitted every 30 days following the date of the remedial action plan implementation to the Department to determine its effectiveness.

#### 78a.67 Borrow pits

These provisions need to be carefully monitored to determine if further regulations are needed to protect the land, air, and water risks that may evolve.

#### 78a.68 Oil and gas gathering PIPELINES

(b) Visible flagging, markers or signs should be consistent and standardized for instant recognition by the public.

(e) Refueling of equipment should be 100 feet outside any water or wetland to maximize protection.

(f) Staging areas should also be 100 feet outside any body of water or wetland to maximize protection.

(g) All gathering lines should exceed federal guidelines in class 4 areas to be consistent with class 3 areas given potential development and safety considerations.

#### 78a68a Horizontal directional drilling for oil and gas pipelines

(e) Staging areas should be increased from 50 to 100 feet from any watercourse or body of water.

(k) Discharges of drilling fluid should be managed in accordance with the Clean Streams Act as pollutional and not residual waste.

#### 78a.68b Well Development Pipelines

Given the nature of the fluids in these pipelines and the susceptibility for damage, greater safeguards must be implemented in all areas. In many cases, they are placed alongside roadways where incidents are more likely to occur. Minimal distances from vehicular traffic should be established. (d) These pipelines should avoid wetlands as well as watercourses or bodies of water. Automatic shut-off valves should be installed.

(e) Discharges should be limited to 50 barrels of fluid given that it may be highly pollutant flowback or mine-influenced water.

(g) Pressure testing should be conducted initially and annually while operational to promote integrity.

(i) Inspection dates, defects and repairs must be documented and made available to the Department on a monthly basis.

(m) The records regarding the location, types of fluids transported, and time of installation of these pipelines must be sent to the Department in the event of liability issues.

#### 78a.69 Water management plan is included.

(b)(8) A reuse plan should consider other options beyond dilution to solve the issues of pollution from not only total dissolved solids but also other pollutants.

#### (d) Approval of WMPS

(1) The most stringent requirements of the SRBC, DRBC or Great Lakes Commission should be consistently applied to all water management plans.

(4) Records should be provided to the Department annually of withdrawal data and in-stream flow measurements.

#### (f) Administration of WMPS

(f)(1) Approvals for water sources within a WMP are renewed every two years based on records sent regarding withdrawal data and in-stream flow measurements.

(f)(2) WMP renewals should be submitted 6 months prior to expiration.

### Subchapter E WELL REPORTING

#### 781.122 Well record and completion report

(b)(6)(iii) Replace the added sentence that includes trade names of chemicals with the original sentence regarding a list of chemicals by name and chemical abstract service number.

(b)(6)(iv) Include the volume of each chemical listed on the Material Safety Data Sheet as well as the trade name.

(b)(6)(v) Include the maximum concentration in percent volume of each chemical intentionally added to the stimulation fluid.

#### 78a123 Logs and additional data

(d) Data should be required to be collected within 18 months of the completion of the well with an extension no greater than 3 years.

## Subchapter G BONDING REQUIREMENTS

78a.309 (Reserved)

(a)(1)(ii) The schedule should be changed to increase the deposits and fees for additional wells. Annual deposits should be tripled with the price for each additional well tripled as well. The burden of failure to comply should not be at the taxpayers cost. Funds must be adequate to cap the wells once resources are depleted.

78.63 – Disposal of residual waste – land application

This should be called “production waste” as it is mostly likely been in contact with the product or comes from the well itself. It and is more likely contaminated.

(3) Bonding requirements should be re-examined and increased given potential degradation.

(5) The owner or operator should notify the surface landowner of all the conditions provided by these regulations in addition to the dates so that on-going monitoring may occur by the landowner as well as the DEP.

(6)(7) and (8) All distances in these sections should be increased to a minimum of 500 feet with consideration for slope doubled to 2,000 feet. The residual wastes should be tested and include tracers in the event of a contamination incident so that liability issues may be addressed.

(19) The owner or operator must be required to conduct soil surveys, monitoring and chemical analysis and submit for verification to the DEP.