

## Northeastern Group of the Pennsylvania Chapter

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DRBC  
P.O. Box 7360  
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### RE: PROPOSED DRILLING REGULATIONS IN DRB

Dear Ladies & Gentlemen:

The Northeast Group of the Pennsylvania Chapter of the Sierra Club (the Group) represents 1100 citizens who reside in Northeastern Pennsylvania including Wayne and Pike counties. On behalf of these members, the Group demands the Delaware River Basin Commission to ban all deep shale drilling. No regulation is sufficient to ensure that the process known as "fracking" will not affect water quality in the Delaware River Basin. Time after time, the deep shale drilling industry has demonstrated it is not capable of preventing releases and resulting pollution. PaDEP has demonstrated time and time again that it is not willing or able to enforce its own regulations concerning hydro-fracturing. No enforcement body exists that can adequately oversee the deep shale drilling industry at its current level of deployment let alone the projected future development in the Delaware River Basin. There will never be enough money to employ sufficient numbers of men and women to inspect and oversee the deadly fracking process nor the political will in Pennsylvania to enact legislation that will protect the drinking water and air quality of its citizens.

PA DEP is not equipped to oversee site development, well installation and clean up. PaDEP is short-staffed, under-funded and poorly equipped to regulate because of the legislative failure to adequately regulate the deep shale fracking industry. PaDEP fines are insufficient to act as a deterrent. The DRBC cannot rely on PaDEP to protect the drinking water and environment for over 15 million people. They have failed in this regard in the Susquehanna River Basin and in countless communities already under siege by gas companies so it is irrational to expect the PaDEP will be able to assist the DRBC with its mission to protect the waters of the Delaware River Basin. Therefore, you'd have to supercede the PaDEP and come up with the money necessary to protect the waters of the DRB if you are seriously considering allowing this invasive fracking technology to enter the basin.

You are lying to yourselves and the people you are charged to protect by pretending that you can make drinking water sources safe in the Delaware River Basin by creating regulations. Nothing can make hydro-fracking safe for any environment. You do not know what the long-range cumulative impact will be if all or even a smaller number of the proposed wells are drilled and developed. You cannot regulate the unknown. You cannot trust the gas companies to follow your regulations nor can you ensure that your regulations are sufficient to guide this unwieldy industry to safe production.

If you actually believe you can regulate the gas extraction industry to safety, you need to muster up a lot tighter and more enforceable set of regulations than those you have recently published. You must employ thousands of men and women to be on each and every well site every day of the week, 365 days a year if you expect your regulations to make even a tiny bit of difference to these indifferent gas men.



The regulations you have proposed rely on the false belief that these regulations will prevent contamination to drinking water. History tells us that regulations cannot make safe, pro-active gas drilling companies. History tells us it is impossible to prevent releases 100% of the time. History tells us that even the most diligent companies make mistakes. History tells us that just 1% failure means catastrophic danger to millions of people and this gas industry has a 65% failure rate. You can't protect people when 65% of all the well sites have failures and all you've got to protect them is a general permit fee and reliance on PaDEP that can't even keep up with the drill companies now. By making the following suggestions, we do not mean to tell the DRBC that the Sierra Club thinks any plan to allow deep shale fracturing in the Delaware River Basin is acceptable. We point out these shortcomings in your proposed regulations to show you why you must ban all deep shale drilling in the basin.

1. The DRBC has neglected to address the impact of air quality on water quality in your proposed regulations. Your area of concern should also include air quality since air quality directly affects water quality in the micro as well as macro environment throughout the basin.
2. DRBC should demand a cumulative impact study before allowing any deep shale drilling in the Delaware River Basin. Until we know the cumulative impacts, we should not allow our drinking water and our natural environment to be the science lab for deep shale drilling companies.
3. The DRBC should set much more stringent spacing requirements to reduce cumulative impacts based on the cumulative impact study. Current DEP spacing regulation allows too many wells in too small an area.
4. Each and every well site should be subject to public hearing as each and every site is unique. We believe that 3,200 leased acres and 5 well sites are arbitrary levels that allow companies to bi-pass the public permit process. Each and every site should be subject to public scrutiny, as should each and every gas company and/or pipeline company. Public hearing should be held for permits considered for any company regardless of the size of its operation and acreage under lease. Each site is unique and size of lease holdings is irrelevant to the need to evaluate each proposed siting.
5. What little inspection and oversight authority once available to guard against soil migration and sedimentation pollution in Pennsylvania was further reduced when the Commonwealth removed the Soil Conservation Districts from this responsibility. If the DRBC cannot incorporate the Conservation Districts into its regulatory process, the DRBC must find a way to replace the services that the Conservation District would typically provide. DRBC must step up oversight of soil and sediment control plans in the sections of the Delaware River Basin in Pennsylvania. In addition to PaDEP inspections, DRBC should be prepared to make daily inspections of all well sites at all stages of development, use and decommission/restoration. Inspections should be performed by independent technicians without monetary or other ties to any gas related company. The inspectors should change regularly to prevent inappropriate ties between inspectors and site/gas company personnel.
6. Local municipalities have ordinances that pertain to permitting well drilling operations. The DRBC must assist these townships in reviewing permit applications and educate township officials about their rights to refuse an application or to regulate the operation through zoning ordinances. It is irresponsible of the DRBC to allow this vital part of protection to the PaDEP since PaDEP has failed at this already.
7. A setback requirement of 500 feet from surface water bodies is insufficient to protect water bodies from contaminant plumes in many situations. Set backs should be 2500 feet or greater. 2500 feet might allow sufficient time to mitigate a release before it reaches a surface water body. If the commission refuses this setback distance, an alternative might be to determine setback distance to at least 1000 feet on a site by site basis with authority to increase the setback distance where needed. A worst case scenario could be utilized to formulate set back requirements on a per site basis. Each site should have a fate & transport study for each constituent of concern that will be introduced into the gas well. The Fate & Transport would have to be substantiated by contour mapping and statistical data specific to the



geologic formation into which the drilling will migrate and not just the Marcellus layer. This data should be compiled in a site characterization report submitted along with the permit application. This would assist the Commission to determine the setbacks required to prevent each constituent from entering groundwater as well as surface water. The parameters of the site characterization will have to be developed by scientists advising the Commission.

8. No injection wells should be allowed.
9. Gas companies are using diesel fuel in their fracking mixtures and have publicly stated that they do not agree that the Commonwealth specifically prohibits the use of petroleum products in the fracking mixtures. The DRBC should make it clearly illegal in the Basin and attach hefty fines to violators.
10. DRBC should issue no permit without a traffic study. Truck traffic affects water quality in multiple ways. DRBC should be concerned with impacts from salted travel-ways, accidental truck releases, under-road culvert deterioration, leaking truck bodies, and stagnant air pollution settling down into surface water bodies.
11. Each company should be required to develop and employ an emergency response plan and unannounced inspections should make sure that each site contains minimal safety equipment and qualified personnel to address sudden and accidental releases of all magnitudes at all times.
12. Each company should be bonded to provide drinking water to all potentially affected residents/businesses and have plans in place to replace water supplies if an accident occurs. This would prevent hardship to millions. A bond to ensure gas companies will supply water to affected consumers is necessary to prevent the atrocious handling we've seen throughout the Commonwealth of Pennsylvania. Each company should be required to post multi-million dollar bonds sufficient to bring water to affected households for bathing and drinking. This is not a water buffalo so it will take millions to ensure water will be there for us when we need it. FA should be on a per site basis. FA should not be reduced or removed just because a site is within a NGDP.
13. A \$125,000 bond is insufficient for well decommission and site restoration. Financial requirements should be per well, not per site. Nor should the FA be reduced or removed just because a site is within a NGDP. The whole purpose of bonding is to ensure money is set aside to accomplish the bonded activity. Reduction in the amount of the bond before all is accomplished makes the bond futile.
14. A three strikes and you're out regulation should be adopted. Any gas company with three violations, no matter what the level or nature of the violation, should be banned from further well drilling in the Basin.
15. The DRBC should develop a company vetting mechanism. No drilling company or subcontractor should be allowed to lease and/or drill for gas in the basin that does not meet the minimum expertise and equipment requirements set up by the vetting regulations.
16. Make this industry subject to the Clean Water and Clean Air Acts of the United States and utilize the standards set in these both Acts to regulate the deep shale drilling industry.
17. Require double walled fiberglass holding tanks for all produced water. The above ground tanks should be then further supported with double walled steel sumps that contain interstitial monitoring alarms. Allow no holding ponds whatsoever.
18. Increase the sphere of assumed responsibility to 2500 feet from 1000 feet so it is in line with the regulations concerning petroleum product releases in the Commonwealth.
19. Do not allow the re-use of fracking piping. One of the leading causes of gas escaping is pipe failure. These small diameter flexible hoses eventually fail due to wear and tear and should not be allowed to be used over and over again.
20. Define the terms you intend for decisions to extend permit time frames. The pending regulations merely indicate that the executive director can extend a permit beyond 10 years if he/she determines that there have been no substantial changes to the site and/or DRBC regulations. The benchmarks of this decision should be well outlined. Any re-permitting should be also subject to public hearings, as the executive director must have all information to determine the merits of extending a permit.



21. Wastewater permits should be for one year only. The adequacy of the facility's performance should be evaluated annually. Benchmarks for meeting renewal requirements should be clearly outlined. Public hearings should be held annually before any extension is granted.
22. The annual compliance/monitoring fee is inadequate to properly survey a well site. Annual fees should be an amount equal to the cost of having a daily inspector at each well site regardless of the number of well sites in a general permit area. There should be at least one inspector at each well site per well. So, the fee for this should be adjusted according to prevailing wage rate of persons qualified to perform such inspections.
23. Voluntary reporting of violations is not specific as to degree of release that must be reported. Leaving it up to the gas company to determine if the release has caused "significant harm" is like asking the fox to tell us if he intends to eat the chicken or just play with it first. All violations, large or small, must be reported immediately.
24. Water withdrawal permits should expire annually to allow the Commission to evaluate the impact of the water withdrawn and implement controls necessary during droughts. Although the proposed regulations outline certain limits, an annual review and re-permitting process will ensure compliance. Unused permits for water withdrawal should also be re-evaluated annual to adjust for existing conditions.
25. Water imported should have to be certified free of invasive species before being trucked to a site.
26. The 500-year flood plane should utilized to determine areas that should not be drilled, pads cited or production water stored.
27. No variances should be granted from all setback and flood plain requirements.

**By implying that deep shale drilling can be regulated to safety or cleanliness is slap in the face of the those of us who rely on the DRBC to project this precious water supply for us and generations to come.** For example, gasoline stations are heavily regulated and are required to meet all of the "Acts" from which the Deep Shale play is exempt. Still, thousands of releases of petroleum products from highly developed gasoline purveyance systems occur despite the heavy regulation. Fortunately for neighbors of gasoline stations, filtration can help reduce exposure once the release is discovered. No such effective filtration of radiation, methane and other toxins regularly associated with deep shale fracturing exists for neighbors of these deep shale wells and compression stations. No detection system exists to prevent innocent people from ingesting bi-products of deep shale drilling. Once a release associated with deep shale drilling has occurred, it's too late to call in a *regulator*.

To entrust roughnecks and gas industry representatives to follow regulation or to expect that no mistakes will ever be made is irrational. These gas field workers and executives have demonstrated over and over again that they are not capable of following even the low industry standards that currently exist. These deep shale companies have demonstrated over and over that they will not abide by contract language let alone regulation. Any certified hydro-geologist will tell you that you can't predict what will happen when drilling through the bosom of the earth, no matter how careful one is. Deep shale fracking hasn't been around long enough to enable a competent assessment of its real impact on geology and yet you don't even suggest that this type of assessment should be accomplished.

No amount of regulation changes the bi-products of allowing deep shale drilling. Just the cost of supplying water to those affected by deep shale drilling far outweighs any benefits. For example, bringing potable water to the tiny community of Dimock PA would cost over \$14 million dollars. The PA Dept. of Environmental Protection has the power to bring water to these people but has decided the people should just move because that would be cheaper and refused them water. Gas men want to put six wells in every mile in the Commonwealth of Pennsylvania and connect all of these wells by gas pipelines and compressor stations. Politicians, greased with gas money, are trying to reduce the little regulation that now exists. You



should consider moving here to gasland and then we'll see how you think about deep shale drilling. Want to look out your window everyday and see industrial chaos? Want to open your kitchen window and breathe in the fumes of diesel trucks and methane each and every day, all day long? Want to shower in methane and radio-active deep shale fracking bi-products? Want to fight with your neighbors regularly? Want to lose everything you put into your home? Want to forfeit your life savings and dreams? Want to drink from a plastic water buffalo for the rest of your life? Want to plan around industrial traffic for your daily commute to/from work? Want to worry about your infant's health all day and all night? Want to go to bed each night and wake up each morning in fear? Then come on down. I've got a place for you in Pennsylvania. Maybe Dimock or Lenox would interest you.

No government has the capacity or economy to oversee deep shale drilling to a point where regulation would make even a tiny bit of difference. Please see the attached resolution passed by the Northeast Group of the Pa Chapter of the Sierra Club.

Below is a list of the articles I've attached for your review. When reading these articles, notice that regulations have been futile in preventing the incidents described. We could submit hundreds of news articles to support our position that there is no place for hydro-fracking in a civilized world. Please do not allow deep shale drilling in the Delaware River Basin.

Very truly yours,



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