

DRBC Draft Hydraulic Fracturing Regulations Public Hearing #1

Waymart, PA January 23, 2018

My name is Gregory Lotorto. I am from Milford, PA. The Delaware River has always been a part of my life. Growing up I fought to stop the Tocks Island dam and more recently have been working to prevent the basin from being negatively impacted by gas extraction and gas infrastructures. I am here today to ask you, the DRBC to continue to protect the basin for the future generations.

The DRBC was created in 1961 for the purpose of bringing the Delaware River under collective and balanced control, and to ensure fair usage by the 4 states that share the basin. To this end it is involved in water quality protection, water supply allocation and water conservation.

Today we are discussing the proposed regulations for hydraulic fracturing and associated operations within the DRB.

First, I would like to state that Fracking cannot be done safely as supported by many studies throughout the country. I agree with the DRBC in their decision to exclude this practice within the basin.

Second, I encourage the DRBC to not allow water withdrawals of any amount for the purpose of being used for fracking in other areas. This is counterintuitive. If fracking is not safe in one area it should not be supported in another area.

Third, The DRBC must not allow processed water to be allowed to be discharged into the Delaware River or any of its tributaries or waterways that flow into the river. This waste water contains toxins that will ultimately contaminate the watershed.

Let us look at the process of Hydraulic Fracturing as it relates to water. Millions of gallons of water mixed with multiple chemicals and sand are injected down into a bore hole to fracture shale formations in order to release methane and other gases. Right from the beginning there are hazardous risks. Many of the chemicals that are added to the water are toxic. When these compounds are injected into the shale they mix with other indigenous chemicals that are also toxic. In addition to the mixing of compounds the shale formations at the depth they are being injected are naturally heated to as much as 100-300 degrees Fahrenheit. As the fracking progresses some of the fluid flows back to the surface and is recaptured. This highly toxic cocktail is what we are talking about sending to a water treatment facility and then discharging it into the river.

There is no treatment process that can guarantee that all of the toxic components of this waste water can be removed. The process of treating frack water is completed in 3 stages

Stage One – Pretreatment Frack water enters the water treatment facility and is stored in tanks where it is tested for chemical composition and suspended solid content. The water is then run through a pretreatment system to remove particulates and elements, such as barium, a naturally occurring radioactive mineral (NORMs) and organic materials. The sludge containing these particulates and precipitates go to a filter press and the compressed sludge is disposed of in landfills.

Stage Two – Concentrating Pretreated Water Water that has been pretreated flows to a concentrator where the total dissolved solids (TDS) are concentrated into smaller volumes of high TDS water. At this point some of the water is distilled out and is considered reusable by the gas producer and the high TDS water is sent to the crystallizer

Stage Three – Crystallizer (Desalinization Plant)

This final stage of the treatment is meant to process the solution of high content TDS (sometimes referred to as brine) into separate products: distilled water, salt products and calcium products.

It has been shown that regulatory agencies cannot protect us from backflow water sent to treatment plants for several reasons:

- Transporting of backflow water to and from treatment plants is frequently a source of water contamination due to spills.
- There is not enough screening during the process to ensure removal of toxic compounds
- Information on toxicity levels for the various chemical compounds is not fully studied.
- Many of the chemicals used in fracking are newly developed and not disclosed for proprietary reasons. If treatment facilities do not know what is in the backflow water it is questionable whether they can remove it.
- Disinfectant compounds such as Bromide that are mixed with treated water can produce higher levels of cancer causing agents such as tri-halomethane and haloacetic acid. This has been documented in the Monongahela River in western PA where flow back treated water has been regularly discharged into the river.
- The water that is produce from the treatment process is intended to be reused by gas producers not discharged into surface water systems. Complete and verifiable testing of this water is not practical nor possible due to the complex methods that are necessary to detect all of the chemical contaminants.

With this information it is obvious that the risks involved in allowing frack water to be treated and discharged into the waters of the basin are just not worth it. I urge you, the Delaware River Basin Commission to Ban Fracking and all related processes within our river basin.

Gregory Lotorto

495 Log Tavern Rd

Milford, PA 18337

(570) 686-2624

lotorto@ptd.net

Where did the carcinogen come from and how did it disappear ?

- **REGULATORS AND AGENCIES ARE NOT EQUIPPED TO SUCCESSFULLY PROTECT US FROM CHEMICALS IN FLOWBACK WATER SENT TO WASTE TREATMENT FACILITIES**
- **NYS Draft Supplemental Generic Environmental Impact Statement prepared by the NYSDEC Showed us that disposal of flowback by POTWs creates a substantial risk of contaminating surface waters with toxic chemicals that go undetected by the screening process.**
- **In 2009 the first example, 4- nitroquinoline-1-oxide (4-NQO) was documented in 24 out of 24 samples of return water.**
- **The compound 4-Nitroquinoline-1-oxide was then deleted because it was not found in detectable levels in any flowback analysis provided to URS by industry via NYSDEC.**
- **A typographical error??**
- **Chapter 5 of the 2011 RDSGEIS explains that NYSDOH reviewed information on 322 unique chemicals present in 235 products proposed for hydraulic fracturing of shale formations in New York and categorized them into chemical classes, but did not develop any recommendations for prohibiting specific HF additives. The 2011 RDSGEIS merely concludes that the 322 unique chemicals studied did not identify any potential exposure situations that are qualitatively different from those addressed in the 1992 GEIS.147**

What do DRBC's draft regulations say about fracking wastewater?

Regarding Pollutants of Concern:

- **For Special Protection Waters, effluent cannot exceed background concentration of each pollutant in the receiving water**
- **For all other waters, pollutant must meet the water quality criteria or not exceed background concentration of the pollutant**
- **Monitoring and reporting MAY be required to ensure compliance with numeric limits, to support development of new numeric limits**
- **Point of compliance* is the point of discharge, but mixing zone may be considered for any pollutant where it's permitted in Estuary**

*Point of Compliance is the point where the water quality criteria must be met. If at point of discharge, it is where the treated wastewater (effluent) hits the receiving water. If a mixing zone is allowed, the contaminant can pollute the stream until a specified location, such as a drinking water intake (that is how PADEP applies effluent standards)

MISTAKE ON THE MOHONGAHELA

- Bromide concentrations increased significantly in the Monongahela River in Pennsylvania in 2010–2011.
- These bromide levels led to increases in trihalomethane and haloacetic acid
- From mixing with drinking water supply disinfectants.
- Even very low bromide concentrations are associated with increased cancer risk from trihalomethane and haloacetic acid.
- “Bromide levels in Monongahela River rose in 2010, remain high”

PITTSBURGH POST-GAZETTE Nov 4 , 2011

- “ Bromide pollution persists in Allegheny River in Western Pa.”

Associated Press Nov 13 , 2012

**EPA Finds Health Concerns With Drilling/Fracking Chemicals,
But Drilling Companies Hide Chemical Identities With
Confidentiality Claims Making it Difficult to Know
Where Chemicals are Used**

- If drilling and fracking is allowed in the basin, it is likely that drilling companies will be using secret and potentially dangerous chemicals. These chemicals could contaminate water supplies through a variety of routes. Water supplies could also be contaminated even if fracking is banned but wastewater treatment is allowed. The EPA has found that fracking wastewater can contain chemicals injected in fracking. Therefore, if fracking wastewater is treated in the basin, it is likely that treatment facilities will be treating unknown and potentially dangerous contaminants. If the facilities don't know what they're trying to remove from the water, they are unlikely to remove it and could discharge contaminated wastewater into waterways.
- The use of secret chemicals for which the EPA, itself, has identified health concerns is a good reason to prohibit drilling, fracking, and oil and gas wastewater treatment in the basin.