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**From:** spkunz@aol.com  
**Sent:** Wednesday, January 13, 2010 2:38 PM  
**To:** EP, RegComments  
**Subject:** Comments on Proposed Changes to 25 PA Code Chapter 95  
**Attachments:** Comments on Chapter 95 Jan 2010.pdf

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INDEPENDENT REGULATORY  
REVIEW COMMISSION

**Attached** please find my letter of comments on proposed changes to 25 PA Code Chapter 95 (Wastewater Treatment Requirements), as published in the *Pennsylvania Bulletin* [39 Pa.B. 6467] on 7 November 2009.

Thank you for this opportunity to comment.

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*There is too much bad news to justify complacency. There is too much good news to justify despair.* - Donella Meadows

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13 January 2010

Environmental Quality Board  
P.O. Box 8477  
Harrisburg, PA 17105-8477

**In re: Comments on Proposed Rulemaking  
25 PA CODE Chapter 95 (Wastewater Treatment Requirements)**

Dear EQB:

I wish to provide comments in conjunction with proposed changes to 25 PA Code Chapter 95 (Wastewater Treatment Requirements), as published in the *Pennsylvania Bulletin* [39 Pa.B. 6467] on 7 November 2009. I submit these comments as a public service, and not on behalf of any client or interest group. These comments are based on my experience over more than 30 years as a private sector consulting ecologist working within the framework of state and federal water quality regulatory structures.

The quality of water in the streams of this Commonwealth is of utmost importance. We need to make sure especially that our very best waterways, those designated as Exceptional Value or High Quality, as well as all sources of our public and private drinking water, are fully protected. We should be ever vigilant to threats to the quality of our waters. We also should learn from past mistakes: we are still paying to clean up acid mine drainage and other water pollution left as a legacy of lax regulation of the coal industry in times past. Over 3,000 miles of PA streams are still impaired from that irresponsibility. With the expansion of Marcellus gas drilling in Pennsylvania, we need to have strong protective measures in place before another disaster like the 2009 Dunkard Creek incident occurs. Our streams cannot become dumping grounds for frackwater.

Thus, I offer the following specific comments:

- "Frackwater" from gas drilling must be monitored via a chain of responsibility (cradle to grave) of signed paperwork documenting the origin, use, flowback, transportation, treatment, and disposal of all frackwater fluids. This monitoring must include all fluids (aqueous and air) and solids in the frackwater.
- We must set limits of 500 mg/L for TDS (Total Dissolved Solids) 250 mg/L each for sulfates and chlorides in order to meet Federal drinking water

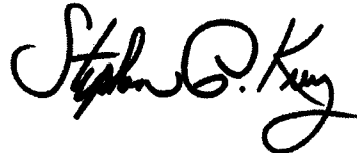
standards. DEP should not weaken the proposed discharge standard for TDS.

- The standard for Total Dissolved Solids (TDS) should be stated as a daily maximum, not a monthly average. In addition, there should be a minimum requirement that no discharge be allowed to raise in-stream concentrations of TDS above 133% of background levels (the Delaware River Basin Commission standard).
- DEP's proposed definition of large TDS sources is good. Do not change it. That proposed regulation is a good way to prevent impairment and regulation of TDS prior to having to utilize a TMDL process. The only suggestion here is that it should clearly state the 2,000 mg/L concentration threshold as a daily maximum. That daily maximum should not be allowed to be circumvented by dilution.
- All large TDS sources should be covered by the standard. New sources and new discharges at existing sources should be covered immediately. Existing sources of large TDS discharges should eventually be covered through the NPDES permit renewal process. How TDS will be measured and reported by dischargers also should be clarified.
- DEP has not proposed standards for a number of contaminants that are frequently found in wastewater from drilling for gas in Marcellus Shale. DEP should add discharge standards for bromides, arsenic, benzene, radium, magnesium, and volatile organic compounds (VOCs). Many of these contaminants are toxic to humans and aquatic life and are very difficult to remove from drinking water systems.
- Due to the highly variable toxicity of both TDS discharges and especially Marcellus wastewater, whole effluent toxicity (WET) testing should be required utilizing both an acute and chronic toxicity standard.
- We need these regulations to be in place as soon as possible to protect aquatic life and drinking water sources. DEP should stop issuing more drilling permits, which increase existing wastewater loads in Pennsylvania streams, until stronger Chapter 95 revisions are in place. DEP should also stop allowing existing or proposed wastewater plants to discharge TDS at levels above the standards established in these Chapter 95 revisions. The effective date should not be extended to accommodate the time frame necessary for a new facility to acquire all necessary permits (such as those for air quality).
- Wastewater Reuse: DEP needs to ensure that all aspects of the generation of Marcellus wastewater are regulated. Currently there is little

oversight over the reuse of Marcellus wastewater and whether in fact this is a waste disposal method as opposed to closed loop water recycling.

Thank you for the opportunity to provide these comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen P. Kunz". The signature is written in a cursive style with a large initial "S" and a long, sweeping underline.

Stephen P. Kunz  
Senior Ecologist