

From: Betty Tatham
Sent: Friday, November 15, 2013 4:59 PM
To: Hanlon, Edward
Subject: written testimony attached

Thank you for the opportunity to give oral comments, but I would also like to send these, much longer comments for the Advisory Panel and others at EPA to consider.

Elizabeth Tatham

**Comments on the EPA Study for the EPA, the EPA Science Advisory Board and the
SAB Hydraulic Fracturing Advisory Panel on the
EPA STUDY OF POTENTIAL IMPACTS OF HYDRAULIC FRACTURING ON DRINKING
WATER RESOURCES**

**By Elizabeth Tatham, a Stakeholder from Pennsylvania
November 14, 2013**

Personal History

Since testifying at the EPA hearing on the Design of the EPA Study of the *Potential Impact of Hydraulic Fracturing on Drinking Water Resources* in Binghamton, NY in September, 2010, I have followed this Study closely. I learned that EPA chose study sites where local citizens had requested EPA's investigations because of water contamination and adverse health effects. I have participated in all webinars to which I was invited and I gave oral comments at both the beginning and the end of the Advisory Panel's two day meeting in Arlington, VA on May 7 and 8 where I attended the entire event. My comments will be based on my observations and notes of presentations, questions and answers from EPA staff and others taken at that meeting, review of minutes and study of the *EPA December 2012 Progress Report* which was the topic of discussion at this EPA sponsored public meeting last May.

Request Additional Information To Be Included in The Study

In my first comment I asked that the EPA reinstate Dimock, PA as an official Study site which it had been until the study there was suddenly stopped in 2012 and Dimock was relegated to just a footnote (page 143) in the Progress Report.¹ The history of Dimock residents requesting help goes back to early 2009 when a water well exploded, tossing a slab of concrete into the owner's yard. PA DEP responded, tested wells where water quality had changed and gave the company 4 months to fix the problem. Since the water contamination continued, DEP in April, 2010 ordered the gas company to plug three gas wells for contaminating 18 water wells.²

Complaints from residents have continued during the past 3 years, but EPA stopped the Study in Dimock in 2012 and free water deliveries were also stopped. Since then, most affected home owners have signed nondisclosure agreements in return for financial settlements. I would like to add to my request for EPA to reinstate this Study site, that all documents gathered by the DEP, EPA, CDC and other government agencies be analyzed and findings included in the Final EPA Report on the Study.

I would also like to add a request to my second public comments made on May 8 at the EPA's Arlington meeting that the Bradford County site, which is part of the EPA Study now, be added to the analysis on well spills and leaks. I would ask that the CDC's detailed analysis of water contamination of water wells after this major accident be included in the data on which the Final EPA Report is based. That spill was not totally stopped for 11 days, though the major release of methane and frack wastewater was contained after 13 hours by a crew flown in from Texas to subdue the well eruption. While the PA DEP fined the gas company close to

\$1,000,000 for this Bradford County contamination of a stream that is a tributary to the Susquehanna River, local residents whose water wells were contaminated, received little help.

The public has a right to know what can happen when a blowout occurs. There have been at least three in PA alone since 2010 - in Clearfield County (2010) and in Bradford and Tioga Counties (2011). As the EPA Study moves forward, if its direction is not returned to what it was in late 2010 and January 2011, some of the most critical information available will be ignored or fact finding relegated to industry self-reporting (FracFocus) and to "literature review" – with the panel itself denied the ability to review the literature on which findings and recommendations will be based until the Final Report will be released (Jean Balent at Panel Meeting in May).

Need to Include Existing Studies That Indicate High Likelihood of Water Contamination from Hydraulic Fracturing Activities

Several members from the public and a few panel members asked that existing relevant studies done by the EPA, USGS, CDC and other government agencies be reviewed and included in this Study. Peer reviewed studies, such as the EPA study conducted over many years in Pavillion, Wyoming, which had test results verified by USGS, the aborted EPA Study in Weatherford, Texas and other highly relevant studies that showed a high probability of hydraulic fracturing related water contamination should be included.

Time is Needed to Conduct the Promised "Prospective Study" of Well Sites That Have Yet to be Built

Jean Balent announced at the Panel Meeting that this part of the EPA Study had not started yet, even though two gas companies had volunteered to each drill a gas well under EPA observation, take water samples before any work started and record any contamination of water that might be found in subsequent water samples as the well continued to produce. This is a serious omission.

Omission of Vital Information in This EPA Study

Ms. Balent answered many of the questions from Advisory Panel members and we learned that the following subjects which can impact drinking water contamination from hydraulic fracturing related activities will not be addressed in the Final Study Report: 1. groundwater contamination, 2. deep Injection wells, 3. bromide related halomethanes in streams and rivers. This news was deeply disappointing since groundwater contamination can easily lead to drinking water contamination, deep injection wells may cause aquifer contamination and potentially carcinogenic trihalomethanes have been found in PA streams and rivers at levels far above standards. While not specifically mentioned, radioactivity from Marcellus and some other shales is a critical matter for investigation and should be included in this study. According to an October 2 article published by the journal *Environmental Science and Technologies* about the 2 year study conducted by Duke University scientists in Blacklick Creek in western PA,

sediment samples taken at the bottom of this stream were 200 times higher than those taken above the Josephine Brine Treatment Facility.²

Time Table of Study

At the Advisory Panel Meeting it was announced that the Final Report on the Study will be issued in 2016, instead of 2014. This was a wise decision since it is impossible to have any data on the two prospective study sites by the end of 2014. More time is also needed for a thorough EPA review of findings from earlier EPA conducted studies and those conducted by other government agencies. However, the synthesis and analysis of documents already in the EPA's possession on Dimock should begin now and they could most likely be completed in a much quicker time frame. The same may be true of the proposed study on the massive Bradford County spill. Getting this Study right is more important than doing it 2 years sooner. Its credibility will depend on making changes in both direction and content of material to be included. Many people will depend on this study, not only in our own country, but also around the world.

1. <http://yosemite.epa.gov/sab/sabproduct.nsf/a84bfee16cc358ad85256ccd006b0b4b/928483abb4f2a13285257b02004ab250!OpenDocument&Date=2013-05-07>

2. http://www.huffingtonpost.com/2013/10/02/fracking-study-pennsylvania_n_4030748.html

Message to Mr. Hanlon:

Thank you for the opportunity to give input. Since some of the links to newspaper articles no longer work, I can furnish hard copies of any information referred to above. Please contact me if further information would be helpful.

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