

August 29, 2013

Mr Stephen Platt
EPA Region III
Ground Water & Enforcement Branch (3WP22)
Office of Drinking Water & Source Water Protection
1650 Arch Street
Philadelphia, Pennsylvania 19103

Dear Mr. Platt,

This letter is being written to express my concerns and comments on the proposed issuance of an Underground Injection Control (UIC) permit, PAS2D020BCLE, to Windfall Oil and Gas, Inc. (Windfall). I will limit my concerns to the induced seismicity and earthquake issues although there are other pertinent concerns such as water quality/contamination.

The first article I would like you to be aware of is in Science Magazine dated July 12, 2013. It is written by William L. Ellsworth. Mr. Ellsworth is a part of the Earthquake Science Center, U.S. Geological Survey, Menlo Park, California 94025. This article specifically addresses the fact that earthquakes with a magnitude greater than or equal to 3 in the United States mid-continent have increased steadily from 2001 to present with a peak of 188 earthquakes in 2011. Before 2001 these mid-continent earthquakes averaged about 21 events per year. The increasing amount of earthquakes is thought to be human-induced. Fracking is part of the problem but wastewater disposal by injection into deep wells poses a higher risk, because this practice can induce larger earthquakes. For example, several of the largest earthquakes in the U.S. mid-continent in 2011 and 2012 may have been triggered by nearby disposal wells. The largest of these was a magnitude 5.6 event in central Oklahoma that destroyed 14 homes and injured two people. The mechanism responsible for inducing these events appears to be the well-understood process of weakening a preexisting fault by elevating the fluid pressure. Is this not what Underground Injection Wells and fracking do?

This article also states the quantity and timeliness of information on injection volumes and pressures reported to regulatory agencies are far from ideal for managing earthquake risk from injection activities. In addition, seismic monitoring capabilities in many of the areas in which wastewater injection activities have increased are not capable of detecting small earthquake activity that may presage larger seismic events. So what this means to my family and neighbors is that by the time your agency is aware of problem it will be too late. The timeliness of information has always been a problem with these companies as evidenced by problems caused by EXCO Resources in our area.

According to another article published by the National Academies of Sciences (NAS) and placed on the www.energy.gov website, the factor that appears to have the most direct consequence for inducing seismicity is net fluid balance – the total balance of fluid introduced into or withdrawn from the subsurface. “Energy projects that are

designed to maintain a balance between the amount of fluid being injected and withdrawn, such as most oil and gas development projects, appear to produce fewer seismic events than projects that do not maintain fluid balance,” an NAS report says. “Future research is required to better understand and address the potential risks associated with induced seismicity.” Has this future research be conducted since this article was written in 2012? Where and when will the fluid be withdrawn if this Underground Injection Well is allowed to operate.

When I did a basic Google search for research on this specific subject it generated 313,000 results in 0.34 seconds. This many results concerns me because you address the induced seismicity and earthquake issues as unlikely to pose a risk. Although these issues are currently affecting areas in the midwest with dramatic results. I think further research on this subject should be conducted before any more Underground Injection wells are allowed to operate in an area where old fractures/faults are present due to previous coal mining and abandoned gas wells.

My family has already dealt with consequences of living near a gas well that recently was being reclaimed after being abandoned for years. We had lived at our home for 5 years without any water problems from our well or well pump. After EXCO Resources began working at the gas well, our water pressure began to drop and we were having sediment concerns. These problems resulted in additional costs for us and eventually resulted in purchasing a new well pump. Both EXCO Resources and DEP stated the reclamation of the gas well could have, but also may not have, caused our water pressure issues. We were told there could be many things that could have caused our water problems and that it just so happened to have coincided with the reclamation of the gas well. We also had many concerns with the company utilizing Gearhart Lane to have access to the gas well site. Gearhart Lane is a private lane which is exclusively maintained by our family. The large trucks, equipment, and trailers caused havoc on our road since the road was not build to withhold heavy vehicle traffic. More recently our well became artesian after the old gas well was plugged. Because we did not have a water diminution or a current quality issue we did not fall within the current Oil and Gas laws. EXCO Resources had to do nothing to correct the excessive water problem. We had to pay out of our pockets to have the water diverted before it began to intrude into our basement. Over four months later EXCO Resources then decided that they would pay for the water diversion if we signed a release of liability and no admission of fault statement. This statement also included wording stating that any future problems that may arise will be our full responsibility. This should attest to the responsible and timeliness actions that result from business with these such companies.

Placing fines and post approval restrictions on underground injection wells is the worst, less proactive thing that can be done. Halting operation of future underground injection wells until more research into better and safer alternatives is what should be happening. I have noticed the moratoriums that are placed are after problems have occurred or in areas where most of the people that regulate their operations live. The U.S. Environmental Protection Agency needs to live up to its name and protect the environment before it is destroyed. Viewing our water sources as a commodity and not protecting them only hurts our children in the long run.

I appreciate your time and hope the EPA will take into account my family's concerns.

Sincerely,

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