

**Terry & Carole Lawson
1042 Highland Street Extension
DuBois, PA 15801**

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U.S. E.P.A.

RE: Windfall Oil & Gas, Inc.
PERMIT #: PAS2D020BCLE
PERMITTED FACILITY: Class II-D injection well, Zelman #1

2014 NOV 25 PM 12:17
ENVIR. APPEALS BOARD

November 17, 2014

Clerk of the Board
U.S. Environmental Protection Agency
Environmental Appeals Board
1200 Pennsylvania Avenue, NW
Mail Code 1103M
Washington, DC 20460-0001

Dear Environmental Appeals Board,

We purchased our property in 1975. A short time later we woke up to no water. My father came to see if he if he could do anything. He was a driller for Fairman Drilling Company. Our neighbors were having a gas well drilled. The well had not been cased off. My father assured me that as soon as the casing was put in that our water would come back. It was approximately three days and our water did come back after the casing was put in. We have never run out of water since that time. Over the years however when the gas company did any maintenance with that well our water became dirty with sediment for a short time. We know that our water is affected by this well. This is why we are concerned that the proposed injection well will cause the fluids to migrate to our water source. Our water well is not the only one affected by this gas well already in the injection zone. This well also is known to have brine constantly being removed on an almost daily basis when the well was being operated previously. Please do not let the injection well proceed in our neighborhood!

As stated in our original testimony to the EPA, "In this area, we all have private water wells and history has shown that in 1968 in Erie, this type of waste traveled underground for 5 miles." Migration of fluids will also happen with this disposal injection well. The proposed injection well waste will push other fluids to migrate like the brine being removed, so other fluids underground will be displaced and would potentially push up around the old gas well casings. The plugging of the old deep gas well records show many differences that were questioned by residents that cause many concerns, since these penetrate into the injection zone (See binder from Darlene Marshall comment #7, #8 & #13). These penetrations will allow fluid migration, especially since some of these old gas wells show signs of problems. Plugging is only good for about twenty years if done correctly and these plugged wells have already exceeded that time period.

Additionally, the area has recently been surveyed and a map has been made available of the area being reviewed for a planned Marcellus well for this entire area. After this appeal process

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is over we will not be able to do anything if the Marcellus well goes into the area and they penetrate into the confining layer zones and fracture. This would be a disaster for the entire area with so many other fractures through the confining layers already.

Fractures of the old deep gas wells would go into various zones and be fractured. More importantly the injection zone has fractures from these gas wells that are located on the edge of the 1/4 mile area of review. The gas well logs show where the fractures have been done on each well and also into the injection zone area show fracturing. Even using a conservative estimate on fracturing being 500 feet, from an old Department of Energy test well in Pennsylvania done in the early 1980's, fractures would be throughout the review area. More recent Department of Energy testing shows fractures can go 1,800 to 2,000 feet that would put fractures throughout the entire proposed injection zone. Response Summary page 15 #13 the zone of endangering influence even being 400 feet has potential to affect our area if anything happens or a fracture exists in the confining layer above the injection well, especially with a shallower gas well right above the proposed site that had fracturing done. Residents request the permit be denied.

Our original letter to the EPA stated, "Item # 3 - The area of concern as noted by the EPA is 1/4 mile radius of the injection well. Every time the gas company does anything to the one deep well near the injection well our water turns murky for several days. We are outside the 1/4 mile radius of review. This radius needs to be expanded to at 'least' one mile." This concern was not addressed in the EPA response summary. This old gas well may even be in the 1/4 mile area of review. A small map in the permit noted that the map was based on accuracy of 10 feet +/- so the 1/4 mile area of review may be different than drawn on all the permit maps. These +/- affects the location of each gas well on the maps.

As previously cited in this letter the old deep gas well casings are a major concern. The EPA and EAB need to not ignore what we cited in our original EPA testimony, "Item # 4 - We had our water well redrilled in 1984 by R. L. Cryster drilling. He decided upon looking at topographic maps of the area that if we drilled more than 273 feet, our water would be lost into a mine shaft. There are many mine shafts in the area going in different directions. We are concerned that if a leak or malfunction occurs with the injection well it could enter the mine shafts which travel clear to and under DuBois Mall. Also these could affect the Highland Street School. This would impact an area greater than the 1/4 mile radius and not just Brady Township." The EPA not addressing the old deep gas well casing issues and plugging issues in the response summary appropriately is not protecting residents' water resources. As I stated in my original EPA testimony, "Item # 5 - The deep wells in the area and the injection well will all be in the

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underground formation of Oriskany sand. The pressure of the injection well could compromise the structure of other wells in the area."

In our original EPA testimony we stated, "Item # 6 - There are also 2 fault lines in the area. There have been minor earthquakes here that could possibly crack the fault lines, thereby making a path way for the waste water to travel." All the faults, fractures and coal mines in the area make for a potential disaster that would be unable to be cleaned up especially if it took time to figure out something accidentally happened for an extended period of time. This appeal shows many concerns for two regulations that give basis to deny the permit. 40 C.F.R. §146.22 (a) All new Class II wells shall be sited in such a fashion that they inject into a formation which is separated from any USDW by a confining zone that is free of known open faults or fractures within the area of review. 40 C.F.R. §146.22 (c) (2) & (d) (2) Well injection will not result in the movement of fluids into an underground source of drinking water so as to create a significant risk to the health of persons. How will you protect residents' water sources with our knowledge that old deep gas wells already have conduits to our water wells? This must be addressed now and not later after something happens to us.

Our EPA testimony stated, "Item # 7 - My father worked the gas and oil fields his whole life. Many times he commented that when they sealed a well, it wasn't always done to specifications." This area can take no chances based on old well logs that the EPA even stated were done inferiorly. As stated to the EPA, "There have been documentations of other injection wells failing. Why then are they putting this in a populated area?" A well failure in this area is unacceptable as our water will be one of the first to be affected.

As we again stated in our EPA testimony, "This is like playing Russian roulette. Would you want to take a chance of this injection well being put in your neighborhood?" Now the new Government Accountability Office report findings show our concerns from June 2014 on the "EPA Program to Protect Underground Sources from Injection of Fluids Associated With Oil and Gas Production Needs Improvement leading to pollution of underground sources of drinking water (USDWs)." We are unable to afford any risk in our residential area with our private water wells and this level of risk should be unacceptable to the EPA and the EAB.

This is our petition for review (appeal) of the EPA permit for Windfall Oil & Gas for a disposal injection well in Brady Township. This petition for review provided sufficient evidence that the permit be denied for this proposed location. It is our opinion, the permit decision and the permit's conditions appealed are objectionable because of: 1) factual error and 2) the EAB should review a policy consideration.

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Any penetrations in the injection zone should be researched, especially since they are conduits for disposal fluids in the future to reach private water wells due to prior problems cited by residents. These gas wells are on the edge of the 1/4 mile area of review and might actually be inside the review area. This was an incorrect statement in the EPA Response Summary #12 Page 13 that these gas wells are over half a mile or a mile away (See binder from Darlene Marshall comment #7, #8 & #13).

We request this permit be denied because of the proximity of so many other Oriskany wells (6 to be exact, so close or inside the 1/4 mile) along with a shallow gas well close to the proposed site that was also fractured. These wells would have been fractured and these fractures would have went into the 1/4 mile area of review. (See binder from Darlene Marshall #57). In addition, coal mines are throughout the review area and technically they also had fracturing done. This means that this permit would violate the 40 C.F.R. §146.22 regulations previously cited. Response Summary page 13 #12 concerning fractures, no one knows what will happen or what is below our ground here. This data is insufficient to protect residents from prior fracturing at various depths due to drilling in prior years. Residents request the permit be denied.

Plugged wells not producing is an inaccurate statement because the old deep gas well that affects our water was never plugged and has been used till more recently and might be inside the 1/4 mile area of review if any calculations are inaccurate based on +/- noted on all maps.

Faults exist in the area. No information is provided to explain the depths of the faults that might be or might not be transmissive (no way to prove if the faults are non-transmissive). No fault is shown that would block the fluid from migrating towards the Carlson well or coal mines; the two faults on the permit would actually block the fluid towards these areas. The information on a fault block is inaccurate (#8 page 10). The EAB should consider the testimony presented at the public hearing by Rick Atkinson on the zone of endangering influence calculation that demonstrated based on the permit assumptions that non-transmissive faults would change the zone of endangering influence making it larger so that the area of review should be extended. The Carlson gas well should also be considered as it is in the same formation as the injection zone and is a source of concern for neighbors as mentioned in testimony because the casing is suspect due to fumes it emits. (See binder from Darlene Marshall comment #8 & #13)

Response Summary page 12 #11 shows confining layer thickness varied & applicant stated 50 feet of thickness yet nothing in the permit application shows this figure as accurate, so what else is inaccurate. It looks to residents that this confining layer varies in thickness from 11 feet

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to 18 feet in thickness and is not always 14 feet thick as stated in the permit. This is a huge concern to peace of mind & knowledge that fluids would be confined, especially with fracturing of old gas wells that have actually fractured the confining layers or all surrounding layers. Residents request the permit be denied on this basis.

Response Summary page 10 #8 proves interesting since we are unable to compare other areas with our geology for seismic activities yet we can compare our area for the permit to all the other injection wells that seem to have never contaminated water wells. Yet residents presented that Pennsylvania has a very limited number of injection wells for disposal, which the number varies depending on circumstances like the Irvin well violation & other injection wells being shut down. Yet we don't present evidence of more than 10 injection wells in Pennsylvania before 12/2012 plus fluids came to the surface or affected USDWs in cases residents cited. We cite these because we believe this could happen if this disposal well is permitted here due to so many known gas wells penetrating the zone proposed for the disposal of waste. The McKean County incident could happen here again based on the information we provided.

Response Summary page 12 #10 even though Clearfield has two other injection wells doesn't mean this site should be permitted since all these sites are different and a mile away would be very different than this site. Residents presented data on fractures, faults and concerns with old deep gas wells in the same formation near or inside the 1/4 mile & we continue to request review of these other deep gas wells. Residents request the permit be denied based on these facts.

Many reviews of the maps on file at the library show no one mile radius topographic map. The EPA permit requested a one mile topographic map from the boundary lines. The library had the maps noted and none of them show one mile from the boundary lines. Even if the maps show a 1/2 mile radius that is still not a one mile from all boundary line map. These maps show our neighbor Gelnett's property to the main highway Route 322 and even driving this distance on our road is not over a mile, so the maps should be required. If the EPA thought they had a better map then they should have provided it to the library for residents to view and no new map was added to the library documentation when last we checked.

We request monitoring of other gas wells to protect citizens based on all the comments submitted to protect resident's water supplies. We requested a comprehensive monitoring plan if this permit is not denied. Gas wells exist that have not been plugged and could be used.

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The recharging zone for this area is located right where the disposal injection well is proposed. Residents cited many concerns & request further study that will deny the permit. Residents need assurances of future protection like insurance & a \$1 million+ bond. We feel this disposal injection well, if not denied, may fail due to concerns we see from knowledge of the industry, so we ask the EAB to give us more protection & ensure water will be provided. Residents are not willing to take any chances with our water wells and already know it would cost over \$1 million to bring water to our area. We already know our water authority in our township has problems that would make it unrealistic to bring water to us for years and they are having problems letting the fire company use hydrants due to the old lines. This permit needs to be denied to protect our residents now not after something happens.

Sincerely,

Terry Lawson
Carole Lawson

Terry & Carole Lawson