

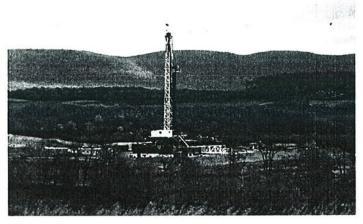
College of Agricultural Sciences • Cooperative Extension

School of Forest Resources

Water Facts #28

Gas Well Drilling and Your Private Water Supply

Gas well drilling has occurred for decades in much of western and northern Pennsylvania with tens of thousands of active gas wells in the state and over 5,000 new wells drilled each year. Most of these wells tap gas reserves a few thousand feet below the earth's surface. With discoveries of new gas reserves in the Marcellus shale and new drilling technologies to reach previously untapped gas reserves, both the number and depth of gas wells are expected to rise dramatically over the next several decades.



A typical Marcellus gas well site (Tom Murphy, Lycoming County Cooperative Extension).

Potential Water Quality Impacts from Drilling

Gas well drilling can occasionally impact groundwater resources that are the source of water for household water wells and springs. A single gas well can produce hundreds of thousands of gallons of waste fluids during drilling and during years of gas production. The wastes fluids generated from a gas well can be classified into several categories including:

- Top hole fluids are the fresh water aquifers that are encountered usually within the first few hundred feet of the drilling process.
- Bottom hole fluids are very old salt water deposits encountered deep underground during drilling

below the fresh water aquifers. These fluids are commonly referred to as "brines".

- Stimulation or flow back fluids are fluids that are used to improve gas recovery from the rock and are returned to the ground surface. An example is "hydrofracturing" which uses high pressure fluids to break the gas-producing rock to improve the flow of gas. Along with large amounts of water, various other materials may be used or mixed with the water for the fracturing process including sand, oils, gels, acids, alcohols and various manmade organic chemicals. The exact additives have traditionally been difficult to determine because they were considered proprietary. Recent changes to the state gas well drilling permit along with action by River Basin Commissions requires disclosure now additives used in hydrofracturing as part of the gas drilling permit application and approval.
- Production fluids are produced along with the natural gas after the well is in production.
 Production fluids usually have a similar chemistry to the bottom hole fluids.

The volume of fluids produced during gas well drilling and operation can vary considerably depending on the depth and location of the gas well. One study in Pennsylvania found average volumes of water produced during shallow gas well drilling in western Pennsylvania was 25,000 gallons during drilling, 50,000 gallons during stimulation and 150 gallons per day during production. Drilling of deeper gas wells in Marcellus formation relies hydrofracturing which requires several million gallons of freshwater. On average, about 10 to 30 percent of the water used for hydrofracturing Marcellus wells returns to the ground surface as a "flow back" waste fluid.

While top hole fluid is usually representative of groundwater used for local water wells and springs,

e remaining water encountered during gas well frilling (bottom hole, stimulation and production fluids) may be contaminated with various pollutants.

Groundwater Pollutants from Gas Wells

Pollution of private water supplies from gas well activity has occurred in Pennsylvania. This contamination may occur from absent or corroded gas well casings (on older or abandoned gas wells) or it may originate from flooded or leaking waste fluid holding pits or spills at the drilling site.

Gas well waste fluids usually contain levels of some pollutants that are far above levels considered safe for drinking water supplies. As a result, even small amounts of pollution from waste fluids can result in significant impacts to nearby drinking water supplies. The broad categories of pollutants in gas drilling waste fluids includes:

- Salts—most notably sodium and chloride. Gas well waste fluids can have over 100,000 mg/L of these compounds. Other pollutants that can occur as various salts include magnesium, calcium and potassium. These salts cause the "total dissolved solids" in the wastes to be very high.
 - Metals—including iron, manganese, barium, arsenic and trace amounts of other heavy metals.
- Organics—these include both natural and manmade materials that are used during the drilling process such surfactants, detergents, oil, grease, benzene and toluene. Dozens of other manmade organics may be used in small concentrations during hydrofracturing.

Another problem that can occur from gas well drilling is methane gas migration from gas wells into nearby water wells. The methane gas will rapidly escape from the groundwater and may pose an explosion hazard in confined spaces. Methane gas testing in water is difficult but it usually creates obvious symptoms in the home including effervescence and spurting faucets due to gas build-up. To learn more about methane gas problems in private wells, consult the Penn State Extension publication entitled Water Facts #24—Methane Gas and Its Removal from Wells in Pennsylvania available from your local Cooperative Extension office or online at:

http://pubs.cas.psu.edu/FreePubs/pdfs/XH0010.pdf

How Common are Problems?

Contamination of private wells and springs can occur from gas well drilling but it has not been common over the past few decades. Data from various regulatory agencies responsible for enforcement of gas well drilling regulations indicate that more than 95% of complaints received by homeowners suspecting problems from nearby gas well drilling are, instead, due to pre-existing problems or other nearby land use activities.

A study by McKean County Cooperative Extension and Penn State University in 2007 looked at water quality in 200 private water wells in an area that has undergone extensive oil and gas well drilling for several decades. About three percent of these private water wells exceeded drinking water standards for total dissolved solids, barium or chloride (three of the most likely water pollutants from gas well drilling). Another five percent of these private wells had elevated levels of at least one of these pollutants that could be tied to gas well drilling. A similar study of 200 water wells in the northeast region of the state in early 2008 did not detect any water wells with these same pollutants prior to intensive Marcellus shale drilling activity.

It is important to note that the McKean County study did not attempt to differentiate between effects from past versus current gas well drilling. Given the changes and strengthening of regulations on gas well drilling that occurred in the mid 1980's, it is likely that most of the groundwater contamination found in McKean County occurred from past drilling practices. Still, these results point to the importance of remaining vigilant in properly testing and monitoring private water supplies near gas wells using the strategies outlined later in this publication.

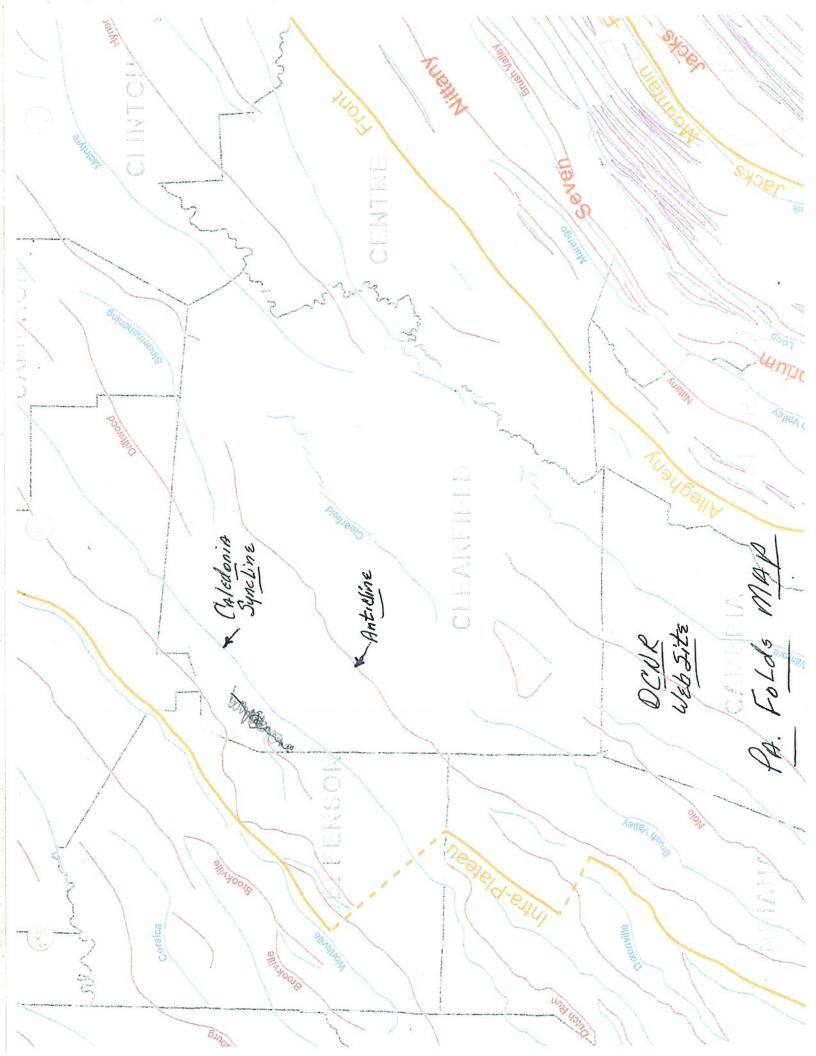
Regulations to Protect Water Supplies

Gas well drilling is regulated by the Oil and Gas Act of 1984. This Act regulates the permitting, construction and abandonment of gas wells drilled throughout the state. A summary of the various relevant components of the Oil and Gas Act are provided here.

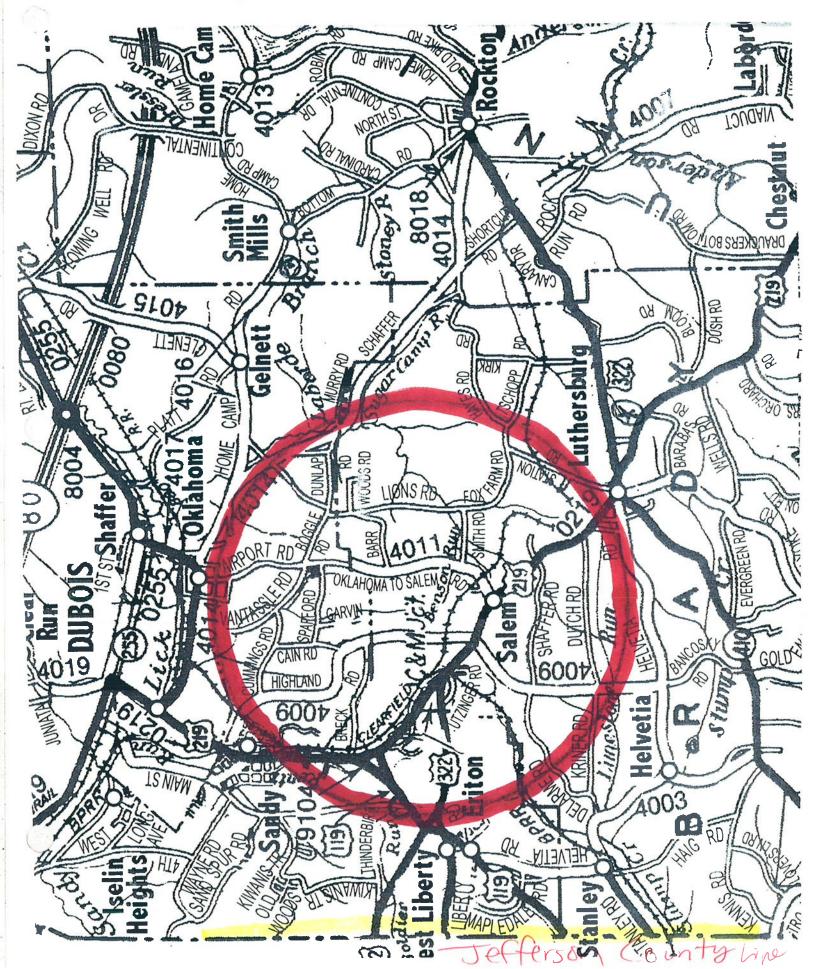
1) Permits

Before drilling a gas well in Pennsylvania, the operator must submit an extensive permit application for approval from the Pennsylvania Department of Environmental Protection (DEP). Among other things, the permit application must include a map showing the location of the gas well, proximity of the gas well to coal seams, and distances to nearby surface water and water supplies. The map must also

Caledonia Syncline



Two Mile Radius



Letters



CITY OF DuBOIS, PENNSYLVANIA

P.O. BOX 408

16 W. SCRIBNER AVE.

DuBOIS, PENNSYLVANIA 15801

TELEPHONE: (814) 371-2000

FAX: (814) 371-1290

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

Dear Mr. Platt,

This letter is to request a public hearing on the Zelman #1 Class 2 Disposal Injection Well proposed for Brady Township, Clearfield County, PA.

Please put these comments on the record:

When House Bill 2350, known as the Injection Well Safe Water Act, was introduced in April 2012, the DuBois City Council, Mayor and City Manager immediately responded with a letter of support urging the Environmental Resources and Energy Committee to adopt this bill.

As a municipal water service provider, we felt this proposed bill provided necessary water protection measures such as a 5,500-foot setback from public water supplies. The bill also bans the deep waste-disposal wells in floodplains and provides a 2,000-foot setback from trout streams and High Quality/Exceptional Value waterways.

The earthquakes in Ohio, which have been linked to injection wells near Youngstown, were felt by residents in the City of DuBois. It is our understanding that geologic fault lines run through the Brady Township area where a well has been proposed. Brady Township is 2 miles from the City of DuBois corporate boundaries.

Approximately 6 acres of deep mines exist within the quarter-mile review area for the proposed disposal injection well. The deep mines begin in Brady Township and stretch to the area of the DuBois Mall. If there was ever a breach with frack water, it could go so far as the DuBois Mall and into Sandy Lick Creek. Sandy Lick Creek runs along the City's park system and is a designated catch and release fishing site. Much volunteer time and taxpayer money made this park possible.

We must do everything possible to ensure the integrity and protection of our water resources. Ohio has recently adopted new regulations to address many of the DIW issues, and we should do the same.

Sincerely,

Gary D. Gilbert

Councilman

James Aughenbaugh

Mayor

John "Herm" Suplizio City Manager

Range CHANGT

Randy Schmidt Councilman Diane Bernardo Councilwoman

Edward Walsh

Edward Walsh Councilman

"Gateway To Big Game Country"



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Planning Commission November 29, 2012

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

Dear Mr. Platt,

The waste injection well proposed by Windfall Gas and Oil and the Hoover's on the Zelman property in Brady Township is not just a Brady Township Concern. It is an issue for the DuBois Area, Clearfield County and all of Pennsylvania.

Historically, industries have targeted small municipalities with limited financial resources and multiple municipal boarders for locating this type of unacceptable land uses which we call ULU. They take advantage of a natural reluctance of municipalities to influence land uses in adjoining municipalities.

Five area municipalities with adjoining borders worked together to formulate the Northwest Clearfield County Regional Comprehensive Plan. Representatives from the City of DuBois, Sandy Township, Brady Township, Huston Township and the Borough of Falls Creek invested in 2 years of planning meetings and the hiring of a professional consultant with the vision of future area growth. The comprehensive plan was unanimously adopted by all 5 municipalities in June 2009.

The Northwest Clearfield County Regional Comprehensive Plan clearly identifies the Highland Street Area as a Village. This neighborhood residential designation of Highland Street, as it crosses the boundaries of DuBois, Sandy Township and Brady Township, has been long standing. Sandy Township and Brady Township neighborhoods are predominately single family homes with on-site wells and septic systems.

If the proposed Hoover Zelman waste disposal well is allowed to locate in this long established residential area, it will be the first such well located in a residential area in Pennsylvania. This action will negate countless hours of hard work on our area's future land planning and will open the door for more of these unacceptable land uses in residential areas.

We have a unique opportunity for local governments to retain some control over land use within their municipalities. It is time we stood together as municipal governments and with a stronger participation by county governments.

Consider this a request to enter the Northwest Clearfield County Comprehensive as part of the comments and testimony at the EPA hearing.

Sincerely.

Nancy Moore

E. Woore

Chairman

Gregory Wachob/

David Volpe (

Matthew Marusiak

Jóhn Micks

"Gateway To Big Game Country"



CITY OF DuBOIS, PENNSYLVANIA

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December 5, 2012

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

Dear Mr. Platt:

Please consider this letter a request for a public hearing on the Zelman #1 Class 2 Disposal Injection Well proposed for Brady Township, Clearfield County, Pennsylvania. Please also consider this a request to enter these comments on behalf of the City of DuBois Watershed Committee:

The proposed injection well on the Zelman property in Brady Township is not only an issue for the residents of the surrounding communities, but also the state of Pennsylvania, as it would be the first injection well located within a residential area.

The area in question happens to be located near two watersheds – the Susquehanna and Ohio River basins and is also close to the DuBois Reservoir, which is the main water supply for the City of DuBois and neighboring communities.

The DuBois City Council was very quick to respond to the Injection Well Safe Water Act, which was introduced under House Bill 2350 in April 2012. As a municipal water service provider, it was felt that this bill would ensure necessary water protection.

After earthquakes were linked to injection wells near the Youngstown area, the state of Ohio adopted regulations to address Disposal Injection Wells and it is strongly urged that we do the same. Our water is one of our most valuable resources and we must take every step necessary to protect it.

Your time and consideration concerning these comments are greatly appreciated.

Sincerely,

Mike Murray

Chairman - Watershed Committee

Duane Marshall 1070 Highland Street Extension DuBois, PA 15801 (814) 583-7325 mrdewy@yahoo.com

November 28, 2012

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

RE: UIC Permit PAS2D020BCLE (Windfall/Zelman 1)

Dear Mr. Platt,

This letter is testimony on the Zelman #1 Injection Well proposed for Brady Township, Clearfield County due December 10, 2012. Thank you for holding the EPA hearing in Brady Township, Clearfield County on December 10, 2012 and consider this letter my request to hold this EPA hearing. My specific concerns deal with contamination of the underground sources of water.

Our private water well is approximately 360 feet deep and this proposed disposal injection well outer casing is only going 375 feet deep. It seems in the permit application notice of deficiencies some concerns are discussed about the lower most underground source of water and the best depth for the second string casing almost sounding like a catch twenty-two situation. This raises concerns for us about the actual protection of our water. How can we trust that our water might not be affected if something like the Irvin injection well violation in Clearfield County occurs.

My drinking water source is a private water well right outside the 1/4 mile area of review. This disposal injection well has the potential to contaminate my water well through the disposal of waste underground near my home. Two of my neighbor's water wells are affected when any work is done on the deep well (over 7000 feet into the Oriskany) on the Atkinson property. Another deep well (Carlson Stewart) behind my home gives off gas smells constantly causing me to believe it isn't properly plugged and its depth is over 7,000 feet into the Oriskany and its located just feet outside the 1/4 mile area of review. These old deep well casings may also allow leakage of waste up into underground sources of water.

We have really good water now and we are concerned that this will not be the case if you allow this disposal injection well to be placed in our neighborhood. We request you extend your area of review outside the 1/4 mile because our home is just feet outside this line and we have many private water wells surrounding us near these old deep gas wells. At least fourteen residents are closely located (just feet) directly outside the 1/4 mile area of review near the line and close to the Atkinson and Carlson Stewart deep gas wells. This residential area and all our families rely on private water wells along with all the residents inside the 1/4 mile area of review.

Duane Marshall 1070 Highland Street Extension DuBois, PA 15801 (814) 583-7325 mrdewy@yahoo.com

Abandoned wells could provide a pathway for methane migration into drinking water wells into the aquifer. Some of these abandoned wells may not be plugged properly for example the Windfall permit application provides information on well logs. The well log information seems like the wells may not acutally have been plugged properly. Just a few feet outside the change to 1/4 mile review at least 4 deep wells are located in the same Oriskany formation that are able to transmit toxic fluid into water wells if casings are old, perforated or not plugged properly. We would request all these old wells be reviewed before any permit is issued to Windfall Oil and Gas for a disposal injection well.

At 7,250 feet the Carlson Stewart well is not plugged properly. The smell coming off this well currently isn't coming from a few feet down since natural gas is not found near the surface. The Carlson Stewart well has 1,160 feet unplugged from the surface based on the permit well logs, so it has just an open air pocket. It has been plugged 33 years. The plugging below 1,160 feet was a mixture of salt and water to cement and the metal casing (10% salt stated in well log) no longer is the casing present or if it is it is perforated. Below the air pocket is 15 feet of gravel and then they layered cement and gelled water. After so many years this causes too much chance of the waste coming back up and one accident with the pressures being used would push the waste into our underground sources of water or our well.

The discrepancy between the wells that are plugged in the early 1960's and 1970's aren't sufficient to believe they are plugged correctly. For example, the Carlson Stewart well had 145 bags of cement used and the Ginther well on Atkinson's property had 375 bags of cement used. The well logs state that twice as much cement was used in the Ginther well, which was half the depth of the Carlson Stewart well. We can't take this for granted in the deep wells in our area with waste being injected near these wells.

Attachment G mentions definitive boundaries in the Oriskany. These boundaries may confine the waste and so the waste will follow the path of least resistance. That path will be upwards towards the surface, ground water or coal mines. Any crack or crevice from prior fracturing listed on the permit application well logs could give the waste a place to migrate. It would not be good if the path of least resistance allowed this waste to travel into the deep coal mines and into the old deep gas wells or around the old gas well casings that are probably perforated.

Ground faults are located in the area close to the proposed disposal injection site. The proposed injection well may be located in an earthquake prone area. Taking the chance to lubricate these faults could additionally jeopardize our underground sources of water. An earthquake is the last thing you need near a disposal injection well to crack the casing and leak this into our private water wells or the deep coal mines within the 1/4 mile area of review. Any small fracture or leak has the potential to seep into these mines and carry waste under the City of DuBois and into surrounding areas like Sykesville and Reynoldsville. These mines are full of water and are all over our area, so these deep mines would transmit toxic fluid into water sources.

Taking the chance of a surface spill happening in this area that would go directly into the aquifer is a concern. Due to all the springs feeding off the hill near the proposed disposal injection well site along with area headwaters having their source of water come from near this proposed site is a major concern for our area. Underground sources of water have the potential to be contaminated.

Duane Marshall 1070 Highland Street Extension DuBois, PA 15801 (814) 583-7325 mrdewy@yahoo.com

We request that the EPA extend the area of review and look beyond the original 1/4 mile area of review. A better understanding of the area should be done due to the all the deep wells in the Oriskany already near our homes and private water wells. The City of DuBois being located so closely is another major consideration. Water supplies for many city and township residents are very close to this proposed site along with many private water wells.

The cost to plug the disposal injection well should be much higher than \$30,000 and we feel this is insufficient. We have heard that some abandoned wells in Pennsylvania could cost over \$100,000 to plug. The company should also have the money in the bank and it shouldn't be a line of credit. Especially, taking the chance so near a residential area full of private water wells. We request residents are ensured funds are available for any potential costs incurred if water becomes contaminated in the area. We know it would cost over one million dollars to bring water to our area from the City of DuBois through Sandy Township based on their projected figures.

This toxic waste dump & industrial activity should not be placed in an area designated residential. The chance being taken is dangerous if our water is contaminated because any emergency in our area would have the potential to need water brought in since we don't have fire hydrants and tanker trucks must be used. Emergency personnel understand this risk more fully and have expressed concerns of any accidents.

Respectfully we request you deny this application due to all the concerns listed with our underground sources of water. Thank you for your consideration of my testimony.

Sincerely,

Duane Marshall

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

Dear Mr. Platt,

This letter is to request a public hearing on the Zelman #1 Injection Well proposed for Brady Township, Clearfield County. According to recent information in the news media and information I have received a hearing has been scheduled on December 10, 2012.

I am opposed to the drilling of Zelman #1 Injection Well (Z1IW) in Brady Township Clearfield County for the following reasons. According to a map drawn by Lional Alexander, Professional Land Surveyor 22887-E there are 7 other gas wells in the area within 1800 feet of the proposed (Z1IW). I understand that 3 of these are plugged wells. There is also the deep mines of shaft #1 and shaft #2 located beneath this area. It's my understand that there are numerous private water wells in this immediate area.

My concern is that the pressure that is applied to (Z1IW) while injecting the waste water will make its way to the surface or into one of these areas described above and cause contamination. The 7 wells mentioned above may have been drilled as far back as the 1950's and even if they were properly sealed at the time over the past years the seals could have eroded.

The mine water from shaft #1 and shaft #2 comes to the surface on the DuBois Mall property and runs into Sandy Lick Creek. This is alkaline water with a PH of approximately 7.

If the pressurized water from the injection well makes its way to any of these sources listed above through any type of method it will be disastrous especially those who live close by and obtain their drinking water from the ground.

I respectfully request that the permit for the proposed Zelman #1 Injection Well to be located in Brady Township, Clearfield County be denied.

Sincerely,

Brady R. LaBorde, Sandy Township Supervisor

Cc Brady Township Supervisors

Duane Marshall

file

December 6, 2012

Laurie Wayne 5498A Wayne Rd DuBois PA 15801

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

RE: UIC Permit PAS2D02BCLE (Windfall / Zelma 1)

Dear Mr. Platt,

This letter is testimony on the Zelman #1 Injection Well proposed for Brady Township, Clearfield Count. Many local residents are very concerned about the underground sources of water being contaminated and want to have their concerns heard. Just some of our concerns are:

- 1. Possibility of a surface spill that would go directly into the aquifer.
- 2. Methane migration into the aquifer
- 3. Deep mines transmitting toxic fluid into water wells
- 4. Deep wells transmitting toxic fluid into water wells (near proposed injection well site we already have six deep wells in some formation)
- 5. Deep coal mines transmitting toxic fluid under the whole City of DuBois out to the DuBois Mall or towards Sykesville.
- 6. Proposed injection wells could be located in an earthquake prone area
- 7. Concerns that the gas well on Zelman property needs plugged (site of proposed disposal injection well)
- 8. Abandoned wells could provide a pathway for methane migration into drinking water wells.
- 9. Why is a toxic waste dump or toxic industrial activity being put into a residential area?

Sincerely.

Laurie Wayne

Leslie Barr 310 Olive Avenue DuBois, PA 15801

November 28, 2012

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

RE: UIC Permit PAS2D020BCLE (Windfall/Zelman 1)

Dear Mr. Platt,

This letter is testimony on the Zelman #1 Injection Well proposed for Brady Township, Clearfield County due December 10, 2012. I appreciate you holding the EPA hearing in Brady Township, Clearfield County on December 10, 2012. Please consider this letter as my request to hold this EPA hearing. My specific concerns deal with contamination of the underground sources of water.

My fiancé has recently bought a house approximately 1.5 miles from the proposed injection well site. I am most especially concerned about the coal mines that are located in the ¼ mile radius of review. Any small fracture or leak has the potential to seep into these mines and carry waste under the City of DuBois. These mines are full of water and are all over our area, so these deep mines would transmit toxic fluid into water sources.

This could affect my drinking water, and the land my house sits on. The thought of having a toxic waste dump so close to my house makes me want to move to a different town. This dump could potentially risk or harm thousands of people. Please do not allow this to happen.

Sincerely,

Leslie Barr

Rev. James Green 815 Reynoldsville Sykesville Road Reynoldsville, PA 15851

November 30, 2012

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

Dear Mr. Platt,

RE: UIC Permit PAS2D020BCLE (Windfall/Zelman 1)

This letter is testimony on the Zelman #1 Injection Well proposed for Brady Township, Clearfield County due December 10, 2012. Thank you for holding the EPA hearing in Brady Township, Clearfield County on December 10, 2012 and consider this letter my request to hold this EPA hearing. My specific concerns deal with contamination of the underground sources of water:

- #1 My drinking water source is now the City of DuBois as my home is in Sykesville where they just brought water lines. Previously we've had well water. I'm concerned with the potential of this water source to be contaminated through the disposal of waste in Brady Township, Clearfield County.
- #2 Ground faults are located in the area close to the proposed disposal injection site. The proposed injection well may be located in an earthquake prone area. An earthquake near a disposal injection well would not be good because the casing would crack and leak.
- #3 Coal mines are located in the ¼ mile radius of review and any small fracture or leak has the potential to seep into these mines and carry waste under the City of DuBois. These mines are full of water and are all over our area, so these deep mines would transmit toxic fluid into water sources. These mines even come over into the Sykesville area where I live and down towards Reynoldsville where my church is located.
- #4 Abandoned wells could provide a pathway for methane migration into drinking water wells into the aquifer. Some of these abandoned wells may not be plugged.
- #5 Just a few feet outside the ¼ mile review at least 5 deep wells are located in the same formation (Oriskany) that are able to transmit toxic fluid into water wells.
- #6 The 1/4 mile area of review is not sufficient to understand the scope of the area and all the deep wells right outside the 1/4 mile review are potential sources of contamination to our drinking water. The City of DuBois being located so closely is another major consideration. Water supplies for many city and township residents are very close to this proposed site along with many private water wells. These water supplies extend to us between Sykesville and Reynoldsville
- #7 The cost to plug the disposal injection well should be much higher than \$30,000 and we feel this is insufficient. It is also important to ensure funds are available for any potential costs incurred if water becomes contaminated in the area. Sincerely,

Rev. James Green

Rw James Green

Sherry Green 815 Reynoldsville Sykesville Road Reynoldsville, PA 15851

November 30, 2012

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

Dear Mr. Platt,

RE: UIC Permit PAS2D020BCLE (Windfall/Zelman 1)

This letter is testimony on the Zelman #1 Injection Well proposed for Brady Township, Clearfield County due December 10, 2012. Please hold the EPA hearing in Brady Township, Clearfield County on December 10, 2012. My concerns deal with contamination of the underground sources of water.

We have lived in the Reynoldsville area for many years with water wells. Our home is above the coal mines creating an issue with having good water. Recently our area was provided the City of DuBois water through an extension of the lines into Sykesville, PA. My concern is the potential of the DuBois City water source to be contaminated through the disposal f waste in Brady Township, Clearfield County.

Coal mines are located in the 1/4 mile radius of review that intersected with the mines near Sykesville and probably connect to those below my home. Any potential leak into these mines would be disastrous and could affect the Sandy Lick Creek because the coal mines stretch under the DuBois Mall. We know the coal mine water could be cleaned up and used. If this waste being disposed of went into the mines accidentally it would go below many homes and has a serious far reaching affect.

Deep and shallow gas wells are located all around this proposed disposal injection well site and have the potential to leak waste around old casings. They could provide a pathway for methane migration into drinking water wells in the aquifer. Some of these abandoned wells may not be plugged. Just a few feet outside the 1/4 mile review at least 5 deep wells are located in the same formation (Oriskany) that are able to transmit toxic fluid into water wells. Near my family is a deep gas well that we are concerned needs plugged.

Please extend the 1/4 mile area of review since it is not sufficient to understand the scope of the area. The City of DuBois being located so closely is a consideration. Water supplies for many city and township residents are very close to this proposed site along with many private water wells. These water supplies extend to us between Sykesville and Reynoldsville. Please make the cost to plug the disposal injection well higher than \$30,000 as we feel this is insufficient. It is also important to ensure funds are available for any potential costs incurred if water becomes contaminated in the area. Please deny this permit. Sincerely,

herry Green Har

Vivan Marshall
St. Michaels Terrace
111 West Long Avenue
Apartmenet 5E
DuBois, PA 15801

December 8, 2012

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

Vinan Marshall

RE: UIC Permit PAS2D020BCLE (Windfall/Zelman 1)

Dear Mr. Platt,

Please accept this letter as testimony on the Zelman #1 Injection Well proposed for Brady Township, Clearfield County. I'm unable to attend the public hearing so I wanted to submit my comments in writing. My specific concerns deal with contamination of the underground sources of water.

My water source comes from the City of DuBois. The dumping of waste products that are toxic near our City is unacceptable. It concerns me because this waste water has the potential to go into deep gas wells and open coal mine shafts in the surrounding DuBois area. It has the potential to move into our sources of underground drinking water.

Much of my life I lived in the Brady Township area in Luthersburg. My family and friends live in the proposed area of the disposal injection well and I know the importance of having water on a daily basis. It is also important to know your water is safe to drink. Pumping waste near this area with faults and prior fractures in the ground would make anyone question if their future water would be safe to drink. My grandchildren and their children should have the right to access safe water.

The source of my water will be less than two and a half miles from this proposed site. Research should be done on this residential area and this permit should be denied.

Sincerely.

Vivian Marshall

ear Mr. Hatt,

I am writing comments for the ablic hearing to be teld on 12-10-13.

the Beady lux. Emmunity Aldg.

" scheduled, concerning permission having an injection well so close to recidential area.

I have 3 good well and alternate which want to love my nate wont to love my an end up in my well removed which a saing can must through in 10 years and cause leaked being too close to lone.

There are old coal mines throughout me ared also. Frogerty values will drop.

1

Residents in outlying areas de know that fracking can affect them, too.

Sesidential areas will have the same problem. Hould you wan this to happen in your neighbor hood? Love and situation?

Hank you,
Loute you,
Asette Slatter

Swant to thank Congressman Labler. for his help & concess.

Pat Erickson 1673 Main Street Brockway, PA 15824

December 4, 2012

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

RE: UIC Permit PAS2D020BCLE (Windfall/Zelman 1)

Dear Mr. Platt,

I am writing this letter to express my opinion on the matter of having industrial activity placed in a residential area. This action is wrong since it could be a threat to the drinking water, not only for the present users, but for future generations.

Sincerely,

Pat Erickson

Pat Erichson

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

November 28, 2012

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

RE: UIC Permit PAS2D020BCLE (Windfall/Zelman 1)

Dear Mr. Platt,

The purpose of this letter is to state our concerns about the Zelman #1 injection well proposed for Brady Township, Clearfield County, Pennsylvania.

#1 - We would like to know why this injection well has to be placed in a residential area. We realize the need for a waste disposal, but it should be in an isolated area. This well has been designated for Marcellus Wastewater that is hazardous and similar to toxic waste such as hospital waste, etc. Hazardous waste wells have a two mile area of review.

2 - We all have private water wells and history has shown that in 1968 in Erie, this type of waste traveled underground for 5 miles.

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.

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.

5 - The deep wells in the area and the injection well will all be in the underground formation of Oriskany sand. The pressure of the injection well could compromise the structure of other wells in the area.

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.

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.

#8 - There have been documentations of other injection wells failing. Why then are they putting this in a populated area?

This is like playing Russian roulette. Would you want to take a chance of this injection well being put in your neighborhood?

Sincerely,

Terry & Carole Lawson
Sevry Lawson
Carole Hawson

John Parsons
St. Michaels Terrace
111 West Long Avenue
Apartment 2K
DuBois, PA 15801

November 29, 2012

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

RE: UIC Permit PAS2D020BCLE (Windfall/Zelman 1)

Dear Mr. Platt,

Please accept this letter as testimony and request to hold the EPA hearing on the Zelman #1 Injection Well proposed for Brady Township, Clearfield County. My specific concerns deal with contamination of the underground sources of water.

My summary of this disposal injection well is defined as backwash. This concerns me since it has the potential to go into the open shafts of coal mines and get into our sources of underground drinking water. The potential to get into our City water or the private water wells in our area is of great concern to me personally. As a water drinker on a daily basis I want to protest against this proposed disposal injection well site.

As a new resident in the City of DuBois, I have city water and I live less than three miles away from the proposed site for the disposal injection well. Yet I realize the source of my water will be less than two and a half miles from this proposed site. We should ensure that we don't repeat history like what happened in Erie in the 1960's where waste from a disposal injection well came up five miles away. As a hunter, I know we have many coal shafts in the area, old gas wells, and many abandoned wells in Pennsylvania that have not been plugged. More research on this residential area should be done and this permit should be denied.

Sincerely,

John Parsons

Ethel Marshall 115月 Highland Street Extension DuBois, PA 15801 (814) 583-7661

December 7, 2012

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

RE: UIC Permit PAS2D020BCLE (Windfall/Zelman 1)

Dear Mr. Platt,

This letter is testimony on the Zelman #1 Injection Well proposed for Brady Township, Clearfield County due December 10, 2012. Thank you for holding the EPA hearing in Brady Township, Clearfield County on December 10, 2012. My specific concerns deal with contamination of the underground sources of water.

My drinking water source is directly outside the ¼ mile area of review (feet from the line). We have "outstanding" water now and we are concerned that this will not be the case if you allow this disposal injection well to be placed in our neighborhood. The possibility of a surface spill that would go directly into the aquifer is a concern.

Coal mines are located in the ¼ mile radius of review and any small fracture or leak has the potential to seep into these mines and carry waste under the City of DuBois. These mines are full of water and are all over our area, so these deep mines would transmit toxic fluid into water sources.

Abandoned gas wells are just a few feet outside the ¼ mile review. At least 5 deep wells are located in the same formation (Oriskany) that are able to transmit toxic fluid into water wells. The 1/4 mile area of review is not sufficient to understand the scope of the area and all the deep wells right outside the 1/4 mile review are potential sources of contamination to our drinking water. The City of DuBois being located so closely is another major consideration. Water supplies for many city and township residents are very close to this proposed site along with many private water wells.

The cost to plug the disposal injection well should be much higher than \$30,000 and we feel this is insufficient. It is also important to ensure funds are available for any potential costs incurred if water becomes contaminated in the area.

Sincerely,

Ethel Marshall

Ethel Marshall

Robert Marshall 115⁴ Highland Street Extension DuBois, PA 15801 (814) 583-7661

December 7, 2012

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

RE: UIC Permit PAS2D020BCLE (Windfall/Zelman 1)

Dear Mr. Platt,

This letter is testimony on the Zelman #1 Injection Well proposed for Brady Township, Clearfield County due December 10, 2012. Thank you for holding the EPA hearing in Brady Township, Clearfield County on December 10, 2012. I'm unable to attend the hearing and I wanted to share my thoughts.

We have always had good drinking water at our home, which is located right outside the ¼ mile area of review. The hydrology report in the permit application you have on file at the DuBois Library shows that the water flows from the proposed disposal injection well towards my home. So I request you expand the ¼ mile review area, especially due to the faults showing on the permit application maps. It states these faults as definitive boundaries, which may confine the waste into our area. The only open space below ground may be towards my home and a deep gas well behind our property.

Additional concerns include the 2011 earthquake felt in our area, Ohio earthquakes due to the deep injection wells and the faults located in our area. These faults could be lubricated and cause an earthquake. Enclosed is an article published in our Penn Lines about a recent United States Geological Survey (USGS) that should be taken into consideration.

Please deny this application for a disposal injection permit in Brady Township. Past history shows we should rethink disposal injection wells in Pennsylvania due to our geology and prior drilling history. This area is covered with deep gas wells and shallow gas wells.

Sincerely, Robert Markott

Robert Marshall

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ich serves Cameron, and Jefferson couned the first mobile ism in the region. It avelers navigate while visiting busities, restaurants and There is no charge to download the mobile app, which can be found at the App Store for iPhone, iPad and iPod touch. The Android app is available from the Google Play Store.

The app is location-based, and turnby-turn directions are available so tourists can navigate to any location on the app. The navigation feature is satellite-driven so it can be used in areas without cell service.

East Coast earthquakes travel farther than previously thought

U.S. Geological Survey (USGS) scientists have found that East Coast earthquakes can travel much farther and do more damage over larger areas than previously thought.

Studies show that 2011's magnitude 5.8 earthquake in Virginia triggered landslides at distances four times farther — and over an area 20 times larger — than previous research had shown.

"Scientists are confirming with empirical data what more than 50 million people in the eastern U.S. experienced firsthand: this was one powerful earthquake," USGS Director Marcia McNutt reported in a USGS release. "Calibrating the distance over which landslides occur may also help us reach

reader input needed

nding a four-page reader survey to a small sampling of ranin Lines readers. In fact, you may have already received a copy

re takes just minutes to complete and all responses are kept in

ne of the important ways in which *Penn Lines'* magazine and suges reader's likes and dislikes and assists them in determining sising content for the publication.

teive a survey in the mail, please complete and return it in the ply envelope. As an added bonus, all those members who survey will be entered for a chance to win an iPad Mini with alue \$329).

/ance for your participation.

back into the geologic record to look for evidence of past history of major earthquakes from the Virginia seismic zone."

The recently released study found that the farthest landslide from the 2011 earthquake was 150 miles from the earthquake's epicenter, which is the greatest landslide distance reported from any earthquake of similar magnitude (earlier studies put the farthest distance about 36 miles from the epicenter of a magnitude 5.8 earthquake).

The USGS reported approximately one-third of the U.S. population could have felt the 2011 earthquake, more than any other earthquake in U.S. history. Reports of shaking came from Canada to Florida and as far west as Texas.

According to the USGS, the difference between seismic shaking in the east versus the west is due in part to the geologic structure and rock properties that allow seismic waves to travel farther without weakening.

State launches free online tool for job seekers, students

Pennsylvania has unveiled "Pennsylvania Career Coach," a first-of-its-kind, statewide, free online tool designed to help Pennsylvania students and job seekers with career choices.

Developed by the Pennsylvania Department of Labor and Industry, Pennsylvania Career Coach will provide up-to-date local employment data such as current and projected job openings, recent job growth areas, estimated earnings and occupations that match with a user's current skills and knowledge, as well as specific educational programs in the local area that will prepare an individual for a given occupation.

"My No. 1 priority as governor is jobs; and today we take another step toward making sure Pennsylvanians are ready for the jobs that become available," Gov. Tom Corbett said during the recent launch of the program.

Pennsylvania Career Coach is part of a more comprehensive job-matching initiative that will be launched soon.

For more information, visit www.pacareercoach.org.



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Valerie Powers 1235 Highland Street Extension DuBois, PA 15801

November 28, 2012

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

RE: UIC Permit PAS2D020BCLE (Windfall/Zelman 1)

Dear Mr. Platt,

This letter is testimony on the Zelman #1 Injection Well proposed for Brady Township, Clearfield County due December 10, 2012. Thank you for holding the EPA hearing in Brady Township, Clearfield County on December 10, 2012 and consider this letter my request to hold this EPA hearing. My specific concerns deal with contamination of the underground sources of water:

Our private water well is approxiamately 90 feet deep and 800ft from proposed disposal injection well site. It seems in the permit application notice of deficiencies some concerns are discussed about the lower most underground source of water and the best depth for the actual second string casing almost sounding like a catch twenty-two situation. This raises concerns for us about the actual protection of our water. How can we trust that our water might not be affected if something like the Irvin injection well in Clearfield County would be repeated.

My drinking water source is a private water well is inside the 1/4 mile area of review. This disposal injection well has the potential to contaminate my water well through the disposal of waste underground near my home.

We have really good water now and we are concerned that this will not be the case if you allow this disposal injection well to be placed in our neighborhood. We request you extend your area of review outside the 1/4 mile. At least fourteen residents are closely (just feet) located directly outside the 1/4 mile review near the line and close to the Atkinson and Carlson deep gas wells. These families rely on their water wells besides all the residents within the 1/4 mile area of review.

Abandoned wells could provide a pathway for methane migration into drinking water wells into the aquifer. We ask Windfall Oil and gas to find and plug all older gas wells.

Ground faults are located in the area close to the proposed disposal injection site. The proposed injection well may be located in an earthquake prone area. Taking the chance to lubricate these faults could additionally jeopardize our underground sources of water. An earthquake is the last thing you need near a disposal injection well to crack the casing and leak this into our private water wells or the deep coal mines within the 1/4 mile area of review. Any small fracture or leak has the potential to seep into these mines and carry waste under the City of DuBois and into surrounding areas like Sykesville

and Reynoldsville. These mines are full of water and are all over our area, so these deep mines would transmit toxic fluid into water sources.

Surface spill that would go directly into the aquifer is a concern. Due to all the springs feeding off the hill near the proposed disposal injection well site along with area headwaters having their source of water come from near this proposed site is a major concern for our area. Undground sources of water have the potential to be contaminated.

We request that the EPA extend the area of review and look beyond the original 1/4 mile area of review. A better understanding of the area should be done due to the all the deep wells in the Oriskany already near our homes and private water wells. The City of DuBois being located so closely is another major consideration. Water supplies for many city and township residents are very close to this proposed site along with many private water wells.

The cost to plug the disposal injection well should be much higher than \$30,000 and we feel this is insufficient. We have heard that some abandoned wells in Pennsylvania could cost over \$100,000 to plug. The company should also have the money in the bank and it shouldn't be a line of credit. Especially with the chance being taken so near a residential area full of private water wells. We request residents are ensured funds are available for any potential costs incurred if water becomes contaminated in the area.. We know it would cost over one million dollars to bring water to our area from the City of DuBois through Sandy Township based on their projected figures.

This toxic waste dump & industrial activity should not be placed in an area designated residential. The chance being taken is dangerous if our water is contaminated because any emergency in our area would have the potential to need water brought in since we don't have fire hydrants and tanker trucks must be used. Emergency personnel understand this risk more fully and have expressed concerns of any accidents. Respectfully we request you deny this application due to all the concerns listed with our underground sources of water. Our families are at risk, please deny this application now.

Sincerely,

Valerie Powers

Valerie Powers

Randell Powers 1235 Highland Street Extension DuBois, PA 15801

November 28, 2012

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

RE: UIC Permit PAS2D020BCLE (Windfall/Zelman 1)

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Our private water well is approxiamately 90 feet deep and 800ft from proposed disposal injection well site. It seems in the permit application notice of deficiencies some concerns are discussed about the lower most underground source of water and the best depth for the actual second string casing almost sounding like a catch twenty-two situation. This raises concerns for us about the actual protection of our water. How can we trust that our water might not be affected if something like the Irvin injection well in Clearfield County would be repeated.

My drinking water source is a private water well is inside the 1/4 mile area of review. This disposal injection well has the potential to contaminate my water well through the disposal of waste underground near my home.

We have really good water now and we are concerned that this will not be the case if you allow this disposal injection well to be placed in our neighborhood. We request you extend your area of review outside the 1/4 mile. At least fourteen residents are closely (just feet) located directly outside the 1/4 mile review near the line and close to the Atkinson and Carlson deep gas wells. These families rely on their water wells besides all the residents within the 1/4 mile area of review.

Abandoned wells could provide a pathway for methane migration into drinking water wells into the aquifer. We ask Windfall Oil and gas to find and plug all older gas wells.

Ground faults are located in the area close to the proposed disposal injection site. The proposed injection well may be located in an earthquake prone area. Taking the chance to lubricate these faults could additionally jeopardize our underground sources of water. An earthquake is the last thing you need near a disposal injection well to crack the casing and leak this into our private water wells or the deep coal mines within the 1/4 mile area of review. Any small fracture or leak has the potential to seep into these mines and carry waste under the City of DuBois and into surrounding areas like Sykesville

and Reynoldsville. These mines are full of water and are all over our area, so these deep mines would transmit toxic fluid into water sources.

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We request that the EPA extend the area of review and look beyond the original 1/4 mile area of review. A better understanding of the area should be done due to the all the deep wells in the Oriskany already near our homes and private water wells. The City of DuBois being located so closely is another major consideration. Water supplies for many city and township residents are very close to this proposed site along with many private water wells.

The cost to plug the disposal injection well should be much higher than \$30,000 and we feel this is insufficient. We have heard that some abandoned wells in Pennsylvania could cost over \$100,000 to plug. The company should also have the money in the bank and it shouldn't be a line of credit. Especially with the chance being taken so near a residential area full of private water wells. We request residents are ensured funds are available for any potential costs incurred if water becomes contaminated in the area.. We know it would cost over one million dollars to bring water to our area from the City of DuBois through Sandy Township based on their projected figures.

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Sincerely,

Randell Powers

Radul R

Duane & Darlene Marshall 1070 Highland Street Extension DuBois, PA 15801 (814) 583-7945 mrdewy@yahoo.com

November 29, 2012

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

RE: UIC Permit PAS2D020BCLE (Windfall/Zelman 1)

Dear Mr. Platt,

This letter is to request the EPA Public Hearing be held on December 10, 2012 on the Zelman #1 Injection Well proposed for Brady Township, Clearfield County. All my concerns deal directly with the potential contamination of the underground sources of drinking water (USDWs).

The water source and my drinking well are a private water well located directly outside the ¼ mile area of review. This disposal injection well has the potential to contaminate my water well through the disposal of waste underground near my home. Many neighbor's water wells are affected when work is done on the deep "Ginther" well, which is over 7000 feet into the Oriskany. My main concern is the Carlson Stewart deep well into the Oriskay behind my home that gives off gas smells constantly. This makes me believe it isn't plugged properly and its depth is drilled into the Oriskany. These two deep wells are just feet outside the ¼ mile area of review. These old deep well casings may also allow leakage of waste up into underground sources of water (USDWs).

We request you extend your area of review outside the ¼ mile because many additional residents have private water wells just feet outside the area of review near old deep gas wells. At least fourteen residents are closely located (just feet) directly outside the ¼ mile area of review and close to the Atkinson and Carlson Stewart deep gas wells. We rely on private water wells along with all the residents inside the ¼ mile area of review.

Sincerely,

Duane & Darlene Marshall

Petition to stop a Frack Wastewater Well Located off Tower Lane, Highland St. EXT. DuBois, Pa. 15801

We the undersigned, petition all agencies in Pennsylvania, Clearfield Co., and Brady Twp., that control and/or issue permits for environmental issues, to halt the permitting process for the frack waste water injection well to be located off Tower Lane, Highland St. EXT., DuBois, Pa. 15801

We, the residents and concerned individuals of this area, believe that the chemicals, radiation and other known and unknown hazardous material contained in this solution do pose a serious risk of contamination to our water sources and our surroundings. Underground migration of frack waste water, air polution, dangers from tanker truck traffic and spills are but a few of our health fears.

We the undersigned also realize that noise pollution and loss of property value will accompany the construction of this waste well site.

If these waste wells need to exist at all in Pennsylvania, they should be located in more remote areas or on the land owners property where the waste was generated. This populated area of Highland St. EXT is laced with old deep mine shafts and gas well sites from the 40s, 50s, and 60's era, that would carry polluted waters to destinations impossible to predict.

We are concerned citizens who are asking our leaders to act now on this very important public health issue.....

NAME (print)		SIGNATURE	DATE
1. Rundall BaiRA SR	1273 Highland St. Ex	t DuBois Towall	Bing 9/25/11
2 Randy Bairel JR 1273	Highland St. Ext. DuBoi	s, Pa Jul & C. Ba	1 9/26/11
3. Shory Flearst	1790 Highlands	st-Ext. Sherry H	earst 9/26/11
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NAME (print)	ADDRESS	SIGNATURE	DATE
1. JOAN SPAFFORD	450 Sport	fraka In Aprifora	1/12/12
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We are concerned citizens who are asking our leaders to act now on this very important public health issue.....

NAME (print)	ADDRESS	SIGNATURE	DATE
1. Terry Nasoni	567 Hungry Hollow Ro, PuBo	5 PR Terry Nasoni	7-5-12
2. Morie Lockhart	- 1298 Highland St Ext	Busicial ASSZA	7-6-12
3. DAND KOVACE	1298 HICHUMOSTER DU	IBUS PA IS ALCO	1/10
4. Don Coleman	8612 Shaff. Rd.		na 7-5-12
5 Ame Than	1 894 1 Leglow	of grant Douga	ex 780-12
6. Lin Mach	' 1/ - /	OR DUBOIS	7/5/12
7. Phristy Fox	600.5 Highland's		1/17/12
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We are concerned citizens who are asking our leaders to act now on this very important public health issue......

NAME (print)	ADDRESS	SIGNATURE	DATE
1. BRAD Dunlap	1399 Solan Rd	Bodelly	9/27/11
2. Share Wilson	20 Evergreen Dri	Maple	9-27-11
3. CHRIS IDWIN	REYNOLDSVILLE PA	CRCh	9.27-11
4. Kevin Hollen	15/6 OKLAHAMA SAKM Rd	1 - 1 4	9-27-11
5. Jim Franca	9035 man	' / X 12	9-27-11
6 Magas Tally	As something pa	Munn John	9-27-11
7. SANDRA Dunl	Ap 150 9 OK L SALEN	Dubou Sendre Du	nleg. 927 11
8. Spine Peterson	1492 CRLAHOM	PA Speneletum	9/27-11
9. JAMES DUNLA	1 1/6 /	Bots Same No	und 9/27/11
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10. 51213 11. 0111	VC) - 505 - 171017-1-1		

DATE SIGNATURE NAME (print) **ADDRESS** 1379 Highland St. Ext. Tarry Marsh 9-29-11 indy Crytser 1382 Highland St Ext Candy Crytsu 9. 29-11 ann/Kerfoat 1100 OHIA5A 1em Rd 9-29-11 14. Tony Nason 567 Hungy HolldwRo Do Bois PA 9-29-11 Kon GREATHOUSE 1197 HIgHLAND James W. Mark 74 SUNSET OR Kenneth R Handers 128 Nos Shofts 20. GEACE BERGIN 216 E. SCRIBNER AVE DUBOIS XWAR SONG 9/4/1 he Yelyha 382 Highland St. HARRY Geoples 382 Highland St Ext, 9/28/11 270 Highland St 54+ 9/28/11 Kalph Hamby 101 Brown Rd. Kersay PAIS846 M. a. Como 1754 GAWSHA RO. BROCK WM PA 15F24 Diane Bernalde & Tower Lane DuBois 15801 Noore 300 Green Ridge Pr. DUBOIS 146 East Long Que, DuBois, 31. College K Indr 2977 Lotherston Rocklon Offalkocklon Graldene Spieker Rockton 33. Norma Brubaker 313 W. Darfield ave DuBois, PA 15801

DATE SIGNATURE NAME (print) 125 Souths ROCKTON PS 10/2/11 36. MARK HENRY BERCH TRUE LA 10-2-11 aren Henry 38. Naun are Suith 10-2-11 Luthersburg PA LUTHERS BUCE PA ROGER CAINE 3561 SHAMULEEN TRAJE Louela Kukwood 10-2-11 FLORE WEE HARS 16833 3RAQCTOBE C/O POHT BIGUER, 2011 PA16830 Nancy Potts UTII Montmorena eragway, PA 462 BAZNOCFRD D.Bon PAISBOI 10-4-11 123 KOBIN R. HIGHLAND ST EXT 831 DUBOIS PA 15801 CECIL BELNETT

•	NAME (print)	ADDRESS	SIGNATURE	DATE
59.	Katherne Douglass	Coronert tre DoBas P	A Karlene Donfa	n 10/4/11
60.	BARBARA JOHNS	ON 507 N. 4th ST. D.	Bois Carbara Jo	huson 10/4/11
61	Jeanne Ferraraccio	328TL DuBois, PA	James Herraraccio	<u>- 10/4/11</u>
62.	Debra J. Brubaker	- 400 W. Garfield Ne Di	dois, PA Delvag. Br	ubaker 10/04/11
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		and the	Bos of Firest le	/ / /
65	Koji Awai 6	10T. L. Augus To	relexance 10/5/n.	
66	Clarene Withown	530 Woodel Rd C	scampian Pe	10-85-11
67	Edwin Lundon	213 Church St. Big	Run PA: Edger	in Hondon 10-5-11
			ROCKWAY PAISOZ	
69	. Kim Bonfardine	311 Center Street Ri	dgway PA 15853 Ki	monfardine 10/5/11
70	Joseph L. BUTERBY	4641 218/AAR POBOX 57,	Dickus Ca 15767 Jays	Dutertany to 10/5/1
71	George Kutsk	el 107 Simmone Sti	DUBOIS PA 1580	<u>'</u>
72	. Ein Wilso	n Son TILAKE	Dupois PA 155	Bot Exic Wason
73	. Ken Underce	offer 1510 Village	Rd. Clearfield, PA	16830 Hasson
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Petition to stop a Frack Wastewater Well Located off Tower Lane, Highland St. EXT. DuBois, Pa. 15801

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NAME (print)	ADDRESS	SIGNATURE	DATE
1. Lebecca Reasinge (1270 Highland S	tx1 to becall Xan	and 11/26/11
2. Emily Hulburt	1317 Highland S	1. Ext July Hull	11/20/201
3. Rob Stewart	115 Robin L	ANG Bol Stone	t 11-27-11
4. hori Chambel	1008 Alchland	St Ext. Louis	ibe 11-27-1
5. Janell Re	ay 544 S Heplen	1 STEST	127-11
6 Thauris Efford	1/	Stex JEThank	12-7-11
7. Sames Holyler	206 Robin	LAne	12-4-11
~ /	237 Pohin	lane	12-4-11
9. Duf & Aouch	253 Robin C		12-4-11
10. Jame W W	lack, 74 Sun	ut Dr	12-4-11
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NAME (print)	ADDRESS	SIGNATURE	DATE
1. LORETTA SLATTE	ERY-1079 HIGHLAND S	TEXT. Lorettrellattery	11-6-11
		and ST. EKT. DuBois	Payline Wells 121.
3. GARY DALL	180 BALL 1	Road Gracy Labor	12/7/11
4. Tohn Let	201 com/ Pan	Aug DiBus By Com	Ce 12-12-11
5. TRAVIS P. SMITH	315 Gearbart Lave	Du Boir, PA 15801	12-14-11
6. Perer L. Ericas		DuBois Pa 15801 ptaken	
7. Teresa Bear	& 48 Drauckers Bo	Hom Luthershing At Jew	s Beard 1-27-12
8. Talie Willin	_ 274 Rock dale	Rd FAIls CreekPA 13	
9. Shaly Jus	274 Rougals Po	FAlls GENERA 15840	3/23/12
10.			

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	NAME (print)		SIGNATURE	DATE
1.	John J. Wover	411 S. State St. Dubo	is PX July Jan	1 9/25/11
2	Fleenor Geron	5622 Wayne Kd C	u Bist & Houm	Hem 9/85/11
3	Jacqueline R. Gras	w 183 Sher De Lis Rd	DuBois CA Vacquelis	12 May 9/25/11
4.	Bachan L. Gregg	130 Fuller Ave Falls	Creek RALTYO BOWL	J Gregor 9-25-4
5.	Denise Goo	d 428 Lincour D	r SuBois XII	un God 9/25/
6.	Linde Sno	Hinger 801 West	Lon, Are Du	Both Silly 9/25
7	Dan Anders	BROCK	nort Pa 158	23 9/25/11
	-	A ~ /	1	000
9.	Enrique Cruz	1782 Granvil	18d 2/	9/25-11
10.	Pat Moure	y 228 N Form Showing	ak St syke	501/6 9/25/11
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do	llus under	edwary hars	7	
0	redn't care	ev do lo	<i>Y</i> '	

NAME (print) ADDRESS SIGNATURE DATE
11. Emilee Schaffer 1373 South 8 strat End Sh 9/25/11
12. Melissa Stuart 515 Bort St. Melissa Strievet 4/25/11
13. Denvis MARSh 1379 Hightund 51 Denni Mery 7-2511
14. JACK KELLY 227 STEESSLERD RD 9-26-11
15. Pat Byrrett 486 Bennett Rd. 9-26-11
16. Janes H. MCKEE 422 W. D. BOIS PO 1580/ 1801 9-26-11
17. Jackie Meholick / Sykesville 19 926-11
18. Dand Singer 1794 Trevenu Lake 9/24/-4
19. Laus Caliest 37 domito 47/17
20. Lawande Free 513/2 South 9/26/11
21. Eleanor Kensus R. D. Purtsia 9/26/14
22. Lynn FlesDas 719 Theus une Lake 9/20/11.
23. P. Ray Baker 12496 Rt 372 1 Rober 9/26/11
24. J. H Storn 119 TARISWE Daker 9/26/11
25. JAMES M. MCKEE 107 James M. M. Kee 9/27/11
26. MARILYN MARTINI 1483 TREBSURE KAKE 4/27/11
27. GARL DUTTRY 103 Chesnet St DuBois Carl Daltons 9/5/1)
28 JUTH DUTTRY 105 Chestmin & DuBin, for Guil Dutter 9/211,
29. PAUL J: Meh. Kon Sykesville Parland Mehreral 927
30. Howard M. Quown Howard Illa Lower 5,980 R119 PUNXSY Pa. 1576
31. Donald T, Johnson 722 Chestrul ave 9/27/2
32. M July 1/94 TL DuBon 1580/ 09/21/21
33. Lu R Myes 435 QUARRY AVE PUBOIS PA 15801 9-27-2011
34. / Inn C. Huller 1173 TL DUBOIS PA 15801 9/27/11

NAME (print) **ADDRESS SIGNATURE** DATE SWASSON AYE Treasure Lake Somme Walch 473 RATILISUAKERD BROCKEUTS, Sher-De-Cin-RD DuBois, 15861 RUMD 6473 Home Camp Rd Dubois Brockway Klingens with DuBois, PAISEOI Beechert, Klingensite CE3 WIMPIND SYKESURIEP. 9/29/11 481 STRESNILE SCHOOL Rd Reynolder Ne B8SI ark Delaney 554 Spatford Rd DuBois PHIS801 Jan 147 SANdstone Dr. Jallo Creek, FA 57. Hary Linda Perrin

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	BARRACLOUGH		
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61. Kim Neber	Unit Brocke	vay Konthes	10-1-11
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	NAME (print)	ADDRESS	SIGNATURE	DATE
	1. RANDE 11 TPOWERS	1235 HighLand ST	FAN Un Beis Pa Rocky	MPR
	2. Valerie J. Powers	5 1235 Highland ST.	EXT DeBois Par Valle	US Fowx
	3. Marianne At		1 1	at 9-26-1
9/27/11	4. WILLIAM SWA	15WORT 149 K	BAKERKO. DU	BOIS Pa. 15801
. 911	5. Sandia Sunto	unth 149	Bala Rosa &	u Beis fg. 15801
	6. Will / Sus	156 B	KER ROSO DUSSI.	s, Pr 15801
	7. RACHEL (1AIRNS-177	BAKER KD.	Du Bois PA. 1580.
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	5. Isida Ilel	6)1063 CKah	make Em XI. L	is Bas, fa 1580)
	10. hw kun	a 114 PhiH R	PuBois PA 15	801
	Tim Spencer			

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NAME (print)	ADDRESS	SIGNATURE	DATE
1. Kim STROKA 1	032 SYOSVIUE SCHOO	LRD. Thumbell Stupe	~10AIII
2. Janet Guthon	1260 Sunny Acres	In Punxsy Janot an	thony 10-6-11
3. Eve	clim Frauls	515 South Main St Du	Bois 10-6-11
4. Wei Koma	1		
5. Caux Brown	18 (214 Mala) 80	Can Dan Budie	10-0107
6. Koith 12000	159 Potter	Ene Dulpais Pa 10	-6-11
7. Itale holes		re Toubors Pa 10)-(q-11
8. Chris SzymoniA	& TREASURE	LAKO DUBOIS PA. MILL	Imminust 10-6-11
9. Marci Burrey		+ DiBois/A Mari &	trey 10/10/11
10. Oatte Doller	Patty 1 Dewar	Patter Dellen	10/11/11
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ı	NAME (print)	AD	DRESS	SIGNATU	RE	DATE	
			1359 HIGHLA			rigge	9-28-11
12.	BRAD Dun	lap.	1399 OKlahona S	alon Rd .	Berd Killy		9-28-11
			3447				9-28-11
14.	Janiel (Cutter	1382 High	rland St	·ex [†]		9-28-11
15.	Susan L.	Trelease	Nasoni 5671	tungry Ho	low Rd Du Boi	s, PA	9/28/11
16.	M.Ke Kerr	Boyald	74 Steepy Ho	1100 Rd. Rg	wolds wille PA		1-26-11
			ella 74 6				J. 85.
18.	Tina Le	e 215	E. Washing	ton Ane	· DuBoi	s 9/2	28/11
19.	DAN Du.	77R7 157	1 OKLASALOR A	. Da Rus la	Soul X	Mz 9/	28/4
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A. D.		ens 22	9 CAIN RD	Kuen	E Stevens		-28-11
	Sue nel		2 Shaft Rd	1. Dubol & Luc	Melen	9-28	T-11
	Join Nei		#a ShAFT		. ,	9-8	78-11
24.	Nancy B	ittner 3	305 Highlan				1
25.	Bie Silen	ILLE 37	4 LINES Ka	. Dut	Bois la Ba	Smille	9/28/14
26.	Dalene 11	Norshall	1070 Highla	nd + Bit,	DuBois PAI	5801 9	128/11
27	KimNoc	US DUB	are of body	King	mis 10	Corpi	
28	Bill Zuc	coloHo	Road Publi	5 bully	10	1-11	
29	Marc	afr	539 Smith	Rd Dul	Bus Pa	10-1-1	
30	Tabitha Liv	nes 38		NBOIS PA	Thisothan	Tinos	10-1-11
31	GREGG A.	LINES SR.	389 LINESI	Rd, Dubors	PA ffre	egll Jin	es 18-1-11
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	NAME (print) ADDRESS	SIGN	ATURE	DATE
(ve	11. John	JH ash 549	Highland stext Do	Boos	10-11-11
	12. Thead	on Homer 58	O ODONNELL Rd	REY PA	10-12-11
	13. Karen	Horner 5800	3: Dunnell Rd. Ro	ynoldsville	Pa. 10-12-11
	14. Oll	Holler 300 H	GOOW VIEW FARM	IRO Rey to	4 10-12-11
	15. Jm Sz	WANT 98 SLEEPY	House A Rexis	Pa	10-R-11
	16. Margo	net armella 6	21 Green Hen	De Duy	Bash 10-12-11
	17. Sood (C	eryme 1090 THUNDERD	120 RD DuBois		10-13-11
	18. Rhonda	Corner 1090 Thu	molerbiral Rd. BuBoi	· S	
	19. Kasyn	J. Cex 249	Tuniate St., DuBo	is , PA	10-14-11
	20. Harold	Treathous 7940S	Julgar Pd Plexison	Lsville Pa	10-15-11
	21 Elizabeth	Greathans 7240 Si	ulgat Rd Rexpole	IsvIle Sa	10-15-11
	22. The BO	1 1 1	Di Aldru Rd Peyr		10-15-11
	23. 102	2 192 Sa	Iada Rd DuBo	IS, PA	11/2/11
(24. Toda	L. Kunen 192	Saleda Rd DuBois	s, PA	11/2/11
	25. Dulo 100	Enders to Cardin	wal D-DoBors FR	315801 11	1-9-11
	26. Har &	Dech 3105.10	Main St. DuBois	PA 15801	11/12/1.
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NAME (print)	ADDRESS	SIGNATURE	DATE
1. Ken thuse	Rockfon	the flew	2/23/11
2. Ted wells	High land St. ex	+ Sedellas	9-29-11
3. Tara Siple	Highland St Ext	Tara Sipe	9-29-11
4. Epne Mooree		Em Moory	
5. MIKE WAIK	PuBas PA.	Mulered My	MUL 9-29-11
6. Alan Hom	Rockton Pa	alethor	9-29-11,
7. Greg Clark	Luthersburg	De Clay	9-29-11
8. Joe Britton	DuBos	MajeBS	9-29-11
9. BOB Lee	DUB015	RolateLee	9/30/H
10. Lon Chang	Durgos	RON CHEWDING	04/30/0



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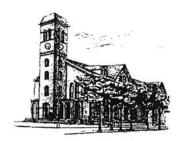
NAME (print)	ADDRESS	SIGNATURE	DATE 9.29-11
11. Fack C	runias /	Wand St-	Tellesus
12. fan Ennyhtte		<i>U</i>	130/11
13. Flew It	one Remoldsum	evestrouse	9/30/2011
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15. Patti Shaff	er lithers	bugta Ya	the Marker"
16. Denielle Stroe	DReynolds	ville (Blaniette ?	strous 2-3041
17. Willist. STRO	Use Wi	Wied Shows	
18. Maynal Strouse	- Reynoldsville	norma / Atro	Das 9-30-11
19. Delones m. Dotel	rushernot si	y Dolores M. Des	Talice 9-30-11
20. Mat Watson	PuBois	Wat Mich	93011
21. amanda Stolle	n werk Ou	Bois prandatal	nwk 930-11
22. CAMS walbur	'n Eut	Hers burs Whit	Male 10/1/11
			Rd. DuBris Po. 10/1/01
24. Dawn Watto	179 MCCAU	they drive Brocks	Day PA 10/1/14
25. Eugen M Pin	1 5550 Bur	BXNDA Perfile	170 15849 10/1/4
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28. SAMONI (vo)	Luthor	sporg for	10-4-11
29 Cody Cryt	Ser Highland St	ext- Cinay	sylve 10.4-11
30. Daniel Go	the Highle	ind St Danie	1) Gylack 19-1-11
31. Son forms	2707 Cars	in Hilled-Apta	Bista 10/05/11
32. KAndy Johnsto	~ 635 NOR	JUST Rockto	out He
33. pour Menuller	M 3906 1	WEST LIBERTY &	Pap DuBois 10/00/
34. Nicole M Clark	/ 1030 Evergreen 7 Luthersburg, T	Mederil AC	Clark 10/8/1"

NAME (print)	ADDRESS	DUBOISSIGNATU	PAF	DATE
35. Sue Barr	1268-TO	werla Sul	CMI	10-13-11
36. John Barr	1268 To	wer was Joh	n Darl	10-13-11
37. ASNICY BOD	r 1268-	TOWOR DAY OU	BOU CHIN	<u>47 Ban</u> 10-14-11
38 Sorgio Caltagarone	1268	Tower LN DuBOI	s Selgiola	togalane 10-14-11
39. Asnley Himes	154 H	unter Jane Dub	il ash	(4) Mmo 10-18-11
40. Af Bonamo	100 Geor	glad Care Pen	field The	1 Berano
19-5/1	1/11 0	· 11:11 6	DI DIR	. La
42. TRU CROW	1y 10040	ANARO JOH	Stouts.	17740 10-40-1
43. Norma Berge	315 Henle	och RO, Osof, en	Muraya	w 10-20-11
44. Josh Brubaker	2871	Schuekers Ordh	eurol Rol L	uthersburg At 10-20-11
45. David Wachob	26 Banco	sky RJ. Luthe	sbury PA.	15848 10-20-11 200
46. Rick Young 1221	tembral Dut	3015 The	1 C. An	ung 10/21/4
47. DENNIS PWILSO	NSR DU	BOIS S	alle	e 10/22/11
48. BRIANBUSH 1	23 arnol	d Ave DuBois	Subu	10/22/4
49. Bran Lock H	10169 The	debut Rd. Le	Letat 10-23	1-11
50. MARON March	332 T	ozier Ave, Dul	Dois lleva	MINGL
51. BRET THOMPSON	64 1	ROBURE CARE	DUBOIS PA	1580/
52. Bes Devick	374 6	wes In a	Bors la 1	58/
53. DANA STEECE	210	s Aproan Ro FA	ur Speck	15806
54. Travis Cribb	(Gne	mpran L	as C	
55. Eric Perks	اسا	uthersburg	like	Moun
56 Rus Hartman	Gramp	Tin Donn	Hoten	
57. man	Boshuth	ensburg PA	11-4-1	
58. Jim Dunwopty	Lyth	ersburs IRA	& Par	11-4-1

NAME (print)	ADDRESS	SIGNATURE	DATE
59. Rhonda Gallaler	Granpiun	Chanda Hal	Jahr 11-4-11
60. David Gallaher	Grampian	Occident	laly my
61. LARRY ChA	450	, /	man 11/6/11
62. Ryan Stoyek		Kyon Stoyes	12/4/11
63. JIII STOVEK I)Bors	Gill Hogek	12-4-11
64. Perry Stoy	ACCOUNT 1981		12/4/11
65. Jon Zimmen		, (1	12/14/11
66. LEE SAYER			m 12/16/1
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Just some of residents who sent Post cards to 13 individuals opposing Highland Street Extension Proposed Disposal Well BRENDA Hoples 382 Highland St. EXT. DuBois Po. 15801 H. Peoples 382 Highland St Ext DuBois A 15801 VALERIE POWERS 1235 Highland St. EXT DaBois PA 15801 BATT 1268 TOWER LAND DONBOIS Pa. 16801 Albert Marsh 1583 Highland STEXT. Pa. 15801 B. Marsh 1583 Highland St. ext DuBois to 15801 RONDA CRYLSER 1500 High land ST ext DouBois Pa. 15801 Ted Crysser 1500 High land ST let DuBois PA 16801
DARRYL Beatty 3447 Shamokin TRail DuBois Fa. 16801 Richard Atkinson 221 Deer Lane DuBois Pa 15801 DENNIS & TETTY MAISH 1379 Highland ST. EXT DOBONS Pa. 16801 DAN & Civily Crytser 1382 Highland ST-LKT DuBois Pa 1580 Marianne ATKINSON 221 Deer Lane DouBois Pa. 15801 LORELTA SLOTTERY 1079 Highland St. EXT 15801 DuBois JAMES MACK 74 SUNSET DR. DuBois Po. 15801 BANDRUT. POWERS 1235 Highland ST. EXT. DuBois PA. 15801 1268 TOWER LN. DecBois, PA 15801 SHE BAR 815 REYN-SYKES RD REYNOLDSVILLE, GA 15851 ROB GREEN 1070 HIGHLANDSTEXT, DUBOIS, PAIS801 DUANE MARSHALL 1070 HIGHLAND STEAT, DUBOIS, PA-15801 DARLEWE MARSHALL 1112 SMAIN ST, DUBOIS, PAIS801 RICHARD E. POWERS 1112 S MAINST PUBOIS PA 15801 JUNE POWERS 315 GEARHART LANE, DUBOIS, PAIS801 Travis) Ms. Jill Smith John Lee Nora Jenney 1222 Highland St 500, DUBOIS, PAISO/ 3043 Egypt Rd, Woodland, PA 16881 A. Graham (Andie) 213 South Ave, DuBois, PA 15801 Mrs. Mary Madere (+Henry) 747 Weaver St. Ext., Clearfield, PA 16830-3055 Mr. John Potts (Nancy 128 N. 6th St., Grangian, PA 16838 Andrea Keller 1124 Dorey St, Clearfield OA 16830 213 Olive Ave DuBois PA 15801 Terry O'Connor (Toni + Gany Antionette Vanderpool POBox 82, Mineral Springs, PA 1685-0082 Phyllis L. Beer check PO Box 788 Clearfield, PA 15767 Jenny Lisak RL Hertlein

John A. Sobel Joan Robinson McMillen Mark B. McCracken County Commissioners



Kim C. Kesner County Solicitor Lisa McFadden Chief Clerk

Clearfield County

Commissioners 212 East Locust Street Clearfield PA 16830

October 24, 2011

Environmental Protection Agency
Attn: Karen Johnson - UIC Program Manager Chief
Ground Water & Enforcement Branch (3WP22)
US EPA Region 3
1650 Arch Street
Philadelphia PA 19103-2029

To Whom It May Concern:

Recently we have been made aware that Windfall Oil & Gas Inc., 63 Hill Street, PO Box 738, Falls Creek, PA 15840, is planning to submit an application with the U.S. EPA for a permit to construct and operate an injection well on a property in Brady Township, Clearfield County.

We, the Clearfield County Board of Commissioners, respectfully request that the EPA carefully review the application and be sure to perform all legally required environmental tests before granting the permit. Additionally, we would ask the EPA to take into consideration there are many residential properties near the well site that utilize private wells as their water source. Many of the citizens who live in these homes are very concerned that their water supplies could face irreparable damage if the injection well is permitted. Before the permit is issued, Windfall Oil & Gas along with the EPA must be able to provide assurances to nearby and adjoining property owners that their water supplies will be protected.

In conclusion, we would like to go record that we support the process of treating water utilized in the hydraulic fracing process over underground storage / disposal into injection wells. There are proven processes available that can treat the contaminated water and allow it to be reused rather than using additional clean water from natural water sources or municipal water supplies.

omille

Sincerely,

an Robinson McMillen

ohn A. Sobel

Mark B. McCracken
Clearfield County Commissioner

October 7, 2011

U.S. Environmental Protection Agency, Region III Safe Drinking Water Branch 841 Chestnut Building Philadelphia, PA 19107

To Whom It May Concern:

The Brady Township Board of Supervisors wish to voice and go on record with their concern over a deep injection well that is being proposed in our township. It is their understanding that the well could be used as a receptacle to store fluid from the Marcellus shale "fracking" process. It has been reported that the lease does neither limit nor define what may be pumped into this well and only states "fluids". Due to this ambiguity, the Supervisors have some valid, major concerns.

First, is the possible contamination to the water supply of the various residents in that area. It will not only affect those with private wells but those in the Brady Township Troutville Borough Water Association which is three (3) miles away from the proposed injection well. The Association provides water to about 775 customers. Based upon published news reports, there have been many instances of the water supply being contaminated as a result of the drilling Marcellus shale gas wells. Can anyone guarantee that the casings are not going to break, crack, or malfunction; thereby leaching this liquid into the ground?

Secondly, the board is also concerned that this will drastically decrease property values for those that live with in the proposed well area especially if no potable water is available or the threat of contamination exists.

Finally, heavy truck traffic will be created. We are concerned not only with the deterioration of the road but the hazard it will cause with the intersections of Route 219/322 and the Highland Street Extension. An elementary school is within 2.4 miles of the proposed well site and to the best of our knowledge a traffic study has not been done.

The board questions why this type of well was proposed in a residential area. Why not place one in a less populated locale? With the construction of the facility in Clearfield for the purpose of cleaning this type of water, why not wait a few months for its completion so that they water may be treated there?

We understand that there are six (6) such wells in the Commonwealth of Pennsylvania with one currently in Clearfield County. Our township has experienced numerous strip mines over the years to the extent that the water in our streams is red and unusable. We do not wish to see our county become a dumping ground or further destroy our water supply. If you don't know your history, you repeat your history. Please help us protect our precious water.

We would appreciate any help from you to stop the issuance of permits for this proposed well.

Sincerely,

Darryl Beatty Chairman

DB/sd

cc. U.S. Environmental Protection Agency, Region III Dept. of Environmental Protection **Governor Corbett** Senator Don White Senator Joseph Scarnati Senator Robert Casey Jr. Senator Pat Toomey Representative Matt Gabler Representative Camille George Representative Glenn Thompson Representative Samuel Smith Clearfield County Commissioners Clearfield County Planning Sandy Township Board of Supervisors **DuBois City Council Bloom Township** Troutville Borough Clearfield County Foundation **DuBois Area School District** Esq. Carl Belin



21 November 2011

Environmental Protection Agency Attn: Ms. Karen Johnson, Chief Ground Water & Enforcement Branch US EPA Region #3 1650 Arch Street Philadelphia, PA 19103-2029

Dear Ms. Johnson:

The Board of Supervisors of the Township of Sandy, Clearfield County Pennsylvania has learned that Windfall Oil & Gas Inc., PO Box 738, Falls Creek, PA 15840 is considering making application to the US EPA for a permit to construct an injection well. This injection well is proposed to be constructed on the property of Frank & Susan Zelman, husband and wife, whose property is located at 1431 Highland St. ext., DuBois PA 15801. This property is further identified as map parcel #C5-000-110, Brady Township, Clearfield County.

When and if an application is submitted for an injection well on the above said property the Board of Supervisors respectfully request a thorough review commensurate with all applicable laws and regulations. There are a number of residential dwelling units using individual water wells in relative close proximity to the proposed site and we seek your consideration of these water sources when establishing separation distances and the well construction standards.

Our economy has been driven for over 100 years by the resource extraction industries of timber, coal, natural gas and of late our youth. We are also mindful of the importance these industries play in our local, regional and in fact the global economy and would ask that reasonable care be exercised in balancing the risks and rewards to our constituents.

Sincerely,

Board of Sandy Township Supervisors

Brady LaBorde, Chairman

Bul LaBal



CITY OF DUBOIS, PENNSYLVANIA

P.O. BOX 408

16 W. SCRIBNER AVE.

DUBOIS, PENNSYLVANIA 15801

TELEPHONE: (814) 371-2000

FAX: (814) 371-1290

November 23, 2011

Environmental Protection Agency
Attn: Karen Johnson - UIC Program Manager Chief
Ground Water & Enforcement Branch (3WP22)
US EPA Region 3
1650 Arch Street
Philadelphia, PA 19103-2029

RE: Proposed Disposal Injection Well Permit for Property located on Highland Street Extension

Dear Karen,

Per a letter from the Brady Township Supervisors dated October 7, 2011, in which they asked for the support of the DuBois Mayor and City Council in their bid to attempt to keep Windfall Oil & Gas, Inc. of Falls Creek, Pennsylvania from obtaining a permit to construct the proposed Disposal Injection Well.

As the proposed well would be very close to the DuBois line the issue is causing great anxiety to our residents and on their behalf we would like to express our concerns:

- The proposed well would be located in a residential district not designed to accommodate large amounts of truck traffic.
- 2. The proposed well would be located less than three miles from an elementary school. Should any of the trucks delivering "fluids" to the proposed well contain hazardous liquid the youngest of our community would be in great danger.
- 3. With the installation of the proposed well, property in the area would be harder to sell and less likely to be purchased as family residences.

It is our belief that recycling is always preferable to underground storage/disposal into injection wells; and we would hope before the EPA would issue a permit to Windfall Oil & Gas, Inc. that they would carefully review the application and ensure that all legalities are followed to certify the local residents environmental protection and well-being.

Please accept this letter as confirmation from the Mayor and City Council of the City of DuBois, Pennsylvania, that we do not support the construction of the proposed Disposal Injection Well on the property located on Highland Street Extension in Brady Township.

Page 2 Environmental Protection Agency Karen Johnson November 23, 2011

Should you have any questions or require further information, please feel free to contact the Municipal Building at 814-371-2000.

Sincerely,

Gary D. Gilbert

Randy Schmidt

Councilman

Mayor

im Augkenbaugh

Councilman

Edward Walsh

Councilman

Diane Bernardo

Diane Bernardo Councilwoman

John "Herm" Suplizio

City Manager

bjs

cc: Brady Township Supervisors

Clearfield County Commissioners

Mark Stephens, Pennsylvania Department of Environmental Protection

124 CANNON HOUSE OFFICE BUILDING WASHINGTON, DC 20515–3805 (202) 225–5121 (202) 225–5796 (FAX)



AGRICULTURE Chairman, Subcommittee on Conservation, Energy, and Forestry

EDUCATION & THE WORKFORCE

NATURAL RESOURCES

Congress of the United States House of Representatives

March 20, 2012

Duane & Darlene Marshall 1070 Highland Street Ext Du Bois, PA 15801-4536

Dear Mr. and Mrs. Marshall:

Thank you for contacting me with regard to discussions of the construction of an injection well in Brady Township, Clearfield County. I appreciate you taking the time to let me know your opinions on the matter and appreciate the opportunity to respond.

Although there have been discussions of an injection well for the purpose of disposing of wastewater from Marcellus Shale natural gas drilling sites, the Environmental Protection Agency (EPA) has indicated that no applications for permitting have been received. The Pennsylvania Department of Environmental Protection (PA DEP) has received an indication that one company, Windfall Oil and Gas, intends to submit the pertinent applications.

The development of shale formations, particularly the Marcellus, has already created a significant number of jobs in Pennsylvania and continues to be a driving force behind the reduction of natural gas prices. This is good news for U.S. consumers, manufacturing, our economy and our environment. However, I do share your concerns that new development is done in a manner that takes into account safety for the workers, the surrounding communities and the environment. One of the simplest ways to encourage safety is to use commonsense when choosing locations for infrastructure to support the developing industry. I have been very vocal with the natural gas industry and the state and federal regulators in this approach.

After learning about the proposed injection well from residents of Brady Township, I took the initiative to facilitate a dialogue with the EPA and other locally elected officials. This included Clearfield County Commissioners McCracken and Sobel as well as Pennsylvania State Representative Matt Gabler. EPA discussed the permitting process and their involvement and while PA DEP does have some ancillary jurisdiction, EPA has primacy over the disposal of fluids into wastewater injection wells. EPA is also responsible for monitoring well pressure and technical specifications over the life of injection wells. As of January 12th, EPA indicated that no permits had been submitted for the proposed injection well.

Again, please be assured that my primary concerns are that production and waste disposal occurs safely throughout our communities. Should this issue move forward, I will continue to work in lock-step with the community, local elected officials, the PA DEP and EPA to ensure the most equitable resolution possible.

Duane & Darlene Marshall March 20, 2012

For more information on my policies and happenings around the 5th District, please visit my website at www.thompson.house.gov. There you can sign up to receive periodic updates via my e-newsletter, *The Thompson Times*.

Sincerely,

Glenn "GT" Thompson Member of Congress

GT/do

Duane & Darlene Marshall 1070 Highland Street Extension DuBois, PA 15801 (814) 583-7945 or (814) 583-7325 mrdewy@yahoo.com

July 23, 2012

Mr. S. Stephen Platt U.S. EPA, Region 3 Ground Water & Enforcement Branch (3WP22) 1650 Arch Street Philadelphia, PA 19103

Dear Mr. Platt:

The residents of the Highland Street Extension Development would like to express our thanks for this opportunity to meet with you and learn about the EPA's oversight dealing with Underground Sources of Drinking Water (USDWs) and the UIC permitting process for disposal injection wells. We realize that you have heard concerns from many of our local elected officials, municipalities and residents and have responded by holding this informational meeting.

Residents have compiled a list of questions focused on USDW concerns, which is attached. We hope that many of these concerns will be addressed today yet we realize it may not be possible so we provided them in writing. Many other local concerns will also need to be addressed in the future.

This cover letter also highlights the main question we hope you are able to answer:

- 1. Is the EPA the permitting authority for disposal injection wells? Based on the information we know Pennsylvania seems to allow the EPA to oversee disposal injection wells in Pennsylvania.
- 2. What is the Department of Environmental Protection's (DEP) role and authority for disposal injection wells? It seems they permit the drilling of a new well so they must have some oversight of disposal injection wells.
- 3. Does EPA supersede local land use ordinances? Brady Township relies on the Clearfield County Subdivision and Land Development Ordinance. Brady Township joined with five municipalities: The City of DuBois, Sandy Township, Huston Township and the Borough of Falls Creek to adopt the Northwest Clearfield County Regional Comprehensive Plan in 2009. Throughout the plan emphasis is put on the protection of existing residential areas and the need to discourage incompatible uses (see Brady Township Map). The plan designates the area as a "village". The plan anticipates future growth and describes an area of compatible uses to include residential, some commercial and retail. The focus for the village designation is development compatible with the Highland Street Development that is a residential area. Also the plan states Brady Township individual water system needs and no significant expansion of the service area is recommended.

- 4. Windfall Oil & Gas filed an EPA permit for a disposal injection well in Brady Township. When was the application sent back to Windfall and what deficiencies were identified? What is the expected time table for the applicant to respond? What is the time frame for submission of an application and will any extensions be granted? Will we be notified when the application is found to be administratively complete? Also, how long will the drinking water well tests taken by Windfall be allowed to be used? Is the technical information presented by the applicant checked by EPA experts before it is returned and administratively complete?
- 5. How close is a public water source allowed to be located to a disposal injection well? Please define what is considered a public water source.
- 6. What is the law for liability if drinking water wells become contaminated by a disposal injection well? How do you provide financial assurances to protect residents? How long will residents be provided water if water wells are contaminated? How many years are they responsible if they contaminate an aquifier, since we have read waste plumes out underground for miles (example Hammermill Papermill Company in 1968 had waste surface five miles away)?
- 7. Residents are aware that the deep mines located near our homes connect with mines under the City of DuBois and towards Sykesville. How will concerns be addressed if waste finds a way into these mines?
- 8. We believe that the EPA follows local ordinances requiring disposal injection wells to be located only in areas zoned industrial, near major transportation networks and at least 2,500 feet from the nearest USDW. Does the EPA allow disposal injection wells where local regulations restrict or prohibit? Especially since this is a residential development with at least twenty-six properties affected in the 1/4 mile radius and USDWs are located close along with springs and drinking water sources.
- 9. Who is keeping tabs on disposal injection well failures; issues impacting nearby USDWs; permits denied or revoked; fines? Who is ultimately responsible?

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Duane & Darlene Marshall

- 1 How will you protect all the water wells in the area from contamination. Example: Irvin Well was over pressurized and fined. How were area residents notified? How was the waste cleaned up? It appears this well has had violations before? It took a significant amount of time for violations to be found and this is not acceptable to water well owners in our area.
- 2 Why should the water well owners in the area be forced to pay to test their water and feel unsafe to drink it on a daily basis. Residents don't want to use alternative water supplies. When they purchased their homes it came with clean water and they want it to stay that way. Example: Irvin Well it was stated that, "if a well owner had their water tested regularly and now, finds an issue with the water, the EPA wants to know and EXCO could be forced to provide an alternative water supply. EPA suggests well owners have their water tested regularly to protect their rights."
- 3 Due to the problems we have already seen in Clearfield County with the Irvin Well and due to the residential location proposed in Brady Township we request a two mile radius of review. It is not far to sources of water for Brady Township wells and the City of DuBois water sources that serve many surrounding areas. The Highland Street Extension Development has many residents with water wells along with the surrounding area in a two mile radius. Old deep gas wells have been drilled in the area, abandoned gas wells are very close to the proposed site, abandoned mines that spread throughout the area are significantly close to the proposed site, springs, water wells and headwaters are located in close proximity to this proposed disposal injection well.
- 4 EPA safely protects the Underground sources of drinking water (USDWs) (aquifer systems containing less than 10,000 milligrams per liter total dissolved solids). So do you know where the aquifer below this proposed disposal injection well site actually goes so these water sources can be monitored, especially if it flows toward Brady Township or the City of Dubois since they serve many residents.
- 5 Has this area been identified as an earthquake prone area? Do any transmissive faults intersect the proposed injection zone (potential to over or under pressurize or fracture)?
- 6 What about the invasion of other owners property rights? Having homes lose value and loss of revenue for property taxes.
- 7 Is this waste radioactive? EPA has Class 2 Injection rules that aren't as strict as Class 1 Injection rules but they need to be for this site due to all the water wells and springs in the area along with abandoned gas wells or other potential conduits that exist within the area of review or zone of endangering influence that penetrate the proposed injection zone.
- 8 The area of review can be a fixed radius of no less than one-quarter mile around an injection well or may be calculated "zone of endangering influence" based on geological parameters found in the injection zone, such as permeability, porosity, etc and proposed operational conditions, such as injection volumes, rates, length of injection, etc. What geological parameters are being considered for this proposed disposal injection well? With other deep gas wells drilled into the same depth we believe the area of review must be two miles and many residents are very concerned about their water wells due to all these previously drilled deep gas wells.

- 9 Has the EPA required research on other deep abandoned gas wells in the zone of endangering influence area? Residents are aware of deep abandoned gas wells in close proximity to the proposed site.
- 10 Residents are aware the use of monitoring fluid level in the injection zone during injection operations is done to ensure pressure created by the injection operation will not cause migration of fluid up abandoned wells that could exist. Due to the example of the Irvin Well in Clearfield County being over pressurized they feel this monitoring process isn't sufficient to ensure their water remains uncontaminated.
- 11 Does the EPA have a survey of water wells in a one mile radius and a two mile radius?
- 12 What will prevent the over pressurizing of this injection well and not knowing about it for months? What will protect our drinking water if this happens like the Irvin Well.
- 13 Has the owner of the proposed disposal injection well demonstrated financial resources to bring city water to all residences with water wells? We want to know the entire cost up front and have a bond for it in place.
- 14 Please characterize the wastewater being disposed.
- 15 Please provide residents a list of all producing gas wells, abandoned gas wells, dry holes, surface bodies of water, springs, mines, other pertinent surface features, faults, roads, public sources of water, residences and water wells in a two mile radius.
- 16 Please provide a description of all known gas wells that penetrate formations affected by the increase in pressure.
- 17 Please explain all vertical limits and lateral limits of all underground sources of drinking water and their position in relation to the proposed disposal injection well and the direction of water movement (every USDWs that may be affected with name and depth).
- 18 Explain for residents the geological structure of the area.
- 19 Residents want to know the density and corrosiveness of injection fluids.
- 20 Provide a complete plan for well failure, a disaster preparedness plan for emergency personnel and a plan to prevent migration of fluids into any USDWs.
- 21 Please provide a comprehensive monitoring plan.
- 22 Explain a full plan for plugging and abandonment that demonstrates adequate protection of USDWs and covers costs of any failure over time after plugging.
- 23 Explain the necessary resources to abandon or plug (bond).

- 24 DEP states "disposal injection wells are unsafe due to abandoned, old, unplugged or uncharted wells." This proposed area (Highland Street Extension) should be deemed unsafe for disposal.
- 25 What is the erosion and sedimentation plan since many springs are closely located to this proposed site.
- 26 What is the plan to provide no significant fluid movement into USDWs, oil or gas zone, underground gas storage horizon through vertical channels adjacent to the injection well bore?
- 27- How will the depths of mines and potential for fluid migration be addressed?
- 28 How close will the EPA allow a public source of water to be located to a disposal injection well?
- 29 Who tracks disposal injection well failures, issues impacting USDWs, permit denials or revocations, fines? Who is ultimately responsible for risk assessment in local communities?
- 30 Who will be fully responsible for any costs if an accident or leak occurs?
- 31 In 2009, an EPA report showed 8 disposal injection wells in Pennsylvania and yet in 2010 another EPA report showed only 6 disposal injection wells. What was the discrepancy in reports? In 2006, EPA completed 12 inspections for disposal injection wells; 20 in 2007 and 6 in 2008. Why the decline in the number of inspections? What does an inspection include?
- 32 What is a mine void? This was cited in a 2009 report for a CNX disposal injection well in Greene County.
- 33 Is our area in a Class III mining area? What do these mining classes signify.
- 34 How many layers of protection have been proposed for this proposed disposal injection well?
- 35 How often will a Mechanical Integrity Test (MIT) be performed? We don't believe a five year period is sufficient with the high number of water wells in the area.
- 36 What about the EPA permitted Morris Run Borehole at the Old Blacksville No. 1 mine in Greene County as a disposal injection well?
- 37 Range Resources Cross #2 disposal injection well north of Waterford, PA in Erie County is being plugged. What really happened up there? It had five layers of steel casing, three layers of cement and was 8000' deep.
- 38 Due to the significant number of swamps in our area has any consideration been given to it being a wetlands?
- 39 Due to population density, the residential nature, village zoning of the area we request at least a two mile radius be considered for review defined as an "area of concern."

- 40 What is the probability of an earthquake from the disposal injection well activity?
- 41 If this disposal injection well is planned for fracking wastewater (production waste) some of it will be radioactive. What type of radioactive isotopes may be found in this water and what actions would be taken in the event of a spill, leak or violation of over pressurizing?
- 42 What other wells in the area may be influenced?
- 43 Bonding or performance guarantees by the company demonstrates their ability to abate a situation should something go wrong. What assurances will EPA provide in regard to our Highland Street Extension Development?
- 44 What can be done to protect the residents real estate interests, their right to quiet enjoyment of their property, and to ensure the value of their property investments?
- 45 Future and current Marcellus activity, fracturing and over pressurization may open a natural fracture joint into the disposal injection well zone, so how will this be avoided?
- 46 Will owners of the gas be limited in their potential development of the gas fields knowing that the disposal injection well is in the area?
- 47 Is pollution of an aquifer allowed if nobody is utilizing that aquifer?
- 48 Will background monitoring of all water wells, springs and public water sources include enough samples over a long period of time to demonstrate natural deviations or cyclic trends? Not just a single background sample that Windfall Oil & Gas can later just say that future samples don't show pollution just some deviations from the single background sample.
- 49 What about residents who are using geothermal energy in the area?
- 50 "We have long known that injecting fluids into Earth, for whatever reason, can trigger earthquakes. One famous series of quakes in the early to mid 1960s near Denver, Colorado, with many having magnitudes of between 3 and 4, was triggered when people tried to dispose of waste fluids by injecting them under pressure into deep rocks (Richard B. Alley in "Earth: the operator's manual" originally from "The Denver Earthquakes" in "Science")." Also, what about the first Pennsylvania disposal injection well that failed because fluid was found to be coming back to the surface?
- 51 It has been stated that Pennsylvania's geology is not conducive to disposal injection wells, so why are we discussing utilizing them more often in Pennsylvania?