

July 27, 2017

Mr. James Bennett

EPA- Proposed Injection Well in Plum Borough, PA

1650 Arch Street

Philadelphia, PA 19103-2029

Dear Mr. Bennett,

This letter is concerning the Fracking Wasterwater Disposal Injection Well that is proposed in Plum Borough, PA. I did attend the most recent public meeting but did not speak. Afterwards I had several thoughts that I wished that I had shared. So here they are.

I am not originally from this area. Previously I resided in central PA until 1970. My hometown had a paper mill which created much air and water pollution. Rivers were not safe. My home was heated with coal. This also caused terrible breathing problems. The town's trash was dumped alongside the river which added to the pollution problems. So I am very familiar with environmental issues that have negative effects on people.

I believe that there was not enough notification of the meeting. You stated that it was published in the Tribune Review in June, 2017. Most of the people in Plum do not receive this publication. The Pittsburgh Post Gazette is the preferred newspaper. Perhaps more research needed to be done on how to notify residents. More people would have attended. Or was that not wanted?

Since 1970 I have lived in the Plum area. I have driven on Old Leechburg Road several times each day on my way to teach at the local elementary school. The proposed location of the well is located on a very steep hill. During the winter I have spent many hours sitting on that hill due to weather/road conditions. It is sometimes very slippery and often icy. The road has had several major accidents at the bottom of the hill. Many were due to trucks brakes failing or not be able to stop at the intersection. Right now there is a telephone pole that is broken in half and hanging very close to the road. It has been that way for several weeks. There are several dips in this road caused by the road settling. Hopefully you are able to ride on this road to see for yourself how narrow it is and its poor condition before you allow major heavy truck traffic to use it. Will there be any funds to cover damage to the roads? That is a major concern to me.

Also people sometimes get the misconception that Plum is a very rural area. The borough is 29 square miles. The area of the well looks rural but within 10 miles of it is a different story. Ten miles from the Plum well site are the cities of Murrysville, Monroeville, Penn Hills, Lower Burrell, Upper Burrell, New Kensington, Arnold, Oakmont, Springdale, and Washington Township. The population of these towns is well over 100,000. We are only 18.9 miles from Pittsburgh. Also in this 10 mile area are at least 2 hospitals, several large housing developments, several senior citizens housing complexes, at least 10 schools (elementary, junior highs, high

schools and colleges), shopping malls, Oakmont Country Club and Golf Course and Allegheny County Recreational facilities. It is not a rural area at all. Was there any consideration of the size of the population nearby? I do not believe there was. I would gladly take you on a tour to see exactly what I have described. Other well sites appear to be in a more rural setting than this one. If there was any seismic activity, it could have a devastating effect to the area.

At the meeting, it was announced that Penneco has had multiple violations on record over the years. There seems to be a pattern of violations then paying penalties but then continues to repeat this pattern. Will there be any oversight of this well?

Another important point that several people mentioned is the abundance of coal mines in this area. Local miners will tell you that the maps of the mines are not the most accurate. They mined the coal wherever they found it and was not always coordinated on maps. My concern is the possibility of seepage from this Class II well into the surrounding coal mines. Thus this would make it possible for the company to continuously dump the wastewater since it would seem to have no limit. Also at the bottom of the hill is Puckety Creek which flows into the Allegheny River. The Allegheny River flows into the Ohio River. These rivers are the sources of drinking water for thousands of Allegheny County residents. Are there any limits to how much wastewater can be injected? Or is it considered unlimited capacity?

I felt that I should speak out for my family, grandchildren who live in this area, other Plum residents, and those in living in nearby communities. We the people of Pennsylvania are constitutionally guaranteed clean water and air. Perhaps do more research on this location so a responsible decision can be made for us. We are expecting one.

Thank you,



Sandra Appleman

709 Glengarry Court

Plum Borough, PA 15239

412-793-8574

Sandra Appleman  
709 Gungary Court  
Plum Borough, PA  
15239



PITTSBURGH PA 150  
27 JUL 2022 06:21

Mrs. James Bennett  
EPA Building  
1650 Arch Street  
Philadelphia, PA

WP22

19103 - 2029

19103-2029 0001 3 WP22  
mail code





**Personal statement for EPA hearing related to Penneco Environmental Solutions, LLC Draft Permit No. PAS2D701BALL**

26 July 2017  
Plum Community Center  
499 Center New Texas Rd.  
Plum, PA 15239

While I share many of my neighbors concerns for the air and water pollution as well as seismic activity, I will reserve those issues for individuals more well-versed in the subjects than I. Tonight I would like to address the fact that putting this proposed injection well into Plum Borough will directly negatively affect the quality of life for my family and me.

My Husband and I chose to move to Southwestern Pennsylvania when we found out we were expecting our first child. After years of living in Chicago and Las Vegas, we were craving a quieter, friendlier community to raise our family. We chose to move to Westmoreland County as it was relatively free of fracking development compared to other areas surrounding Pittsburgh. We valued the quiet, the winding roads, and beautiful views while still having access to a vibrant city center.


We dreamed of buying a house in a rural area for years and we found our perfect home for our newly-expanded family in Upper Burrell Township. We live on Upper Drennen Road, which is just up the hill from this proposed well.

Near daily my son and I drive down Upper Drennen to Greensburg Road to get to various businesses, parks, and libraries. We travel Greensburg and Old Leechburg roads regularly to take advantage of the opportunities and commerce in this community. Driving around in this area has become a real source of joy in my life. The roads aren't crowded, it is quiet, relatively safe, drivers are cautious and very courteous.

For those of us who experience our daily lives here, this proposed well will have a tremendous impact on our quality of life. Increased construction traffic, truck traffic to the well, flaggers, road closures, and noise pollution are all seemingly minor things that will slowly erode the ambience and experience of living here.

I want to raise my family in this community. We chose this community specifically because we were trying to escape the day-to-day perils and pitfalls of industry and development. Putting in an injection well will deny us that dream and opportunity.

I am not naive to the realities of fracking. I understand the need and demand for places to dispose of wastewater from unconventional drilling. However, the need for a place to put a well should not supersede the needs, dreams, and desires of those of us who choose to live here, love here, and raise our families here. This proposed well will change the ambience and face of our communities forever. Please do not allow this well to come into our community and rob so many of us of the peaceful environment we dreamed of and pursued. Thank you for your time and consideration.

  
Cari Armstrong  
260 Upper Drennen Rd.  
New Kensington, PA 15068  
cari.armstrong@gmail.com

August 3, 2017

Dear Sir,

I am writing to express my strong opposition to the proposed project on Old Leechburg Rd. in Plum Borough. I am 90 years old and my family has lived in Plum for HUNDREDS of years. I do not want waste from another area being dumped in our Boro. We have old coal mines that are very near the surface all over Plum Boro. That area had to tolerate a mine restoration project that took 20 years! Constant truck traffic and noise was very unpleasant, but at least it was because of mining that took place in Plum. There is no reason that we should have to accept this.

The EPA should be protecting us and our environment. The hazards of possible earthquakes, pollution of water, and sink holes should be enough reason to stop this project. You should not approve something that has such potential to RUIN people's lives. Other than the company that wants to do this, who else benefits? Certainly not my community!

Please, I beg you, make the right decision and protect Plum citizens against potential life threatening conditions!

*Mildred Black*

Mildred Black

*No address.*

**Personal statement for EPA hearing related to Penneco Environmental Solutions, LLC Draft Permit No. PAS2D701BALL**

26 July 2017

Plum Community Center  
499 Center New Texas Rd.  
Plum, PA 15239

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Cari Armstrong  
260 Upper Drennen Rd.  
New Kensington, PA 15068  
cari.r.armstrong@gmail.com



Environmental Protection Agency Region III  
c/o James C. Bennett Jr. Branch Chief  
Water Protection Division  
1650 Arch St. (3WP 22)  
Philadelphia PA 19103

Dear Mr. Bennett,

I attended the meeting at the Plum Borough Building regarding the proposed injection well permit number PAS2D701BALL. I was proud to stand with the hundreds of people who showed up to oppose this well. I have lived in this area all of my life and I am not a young person. We are so heavily undermined by the coal activities of the past that we can not afford to put hundreds of thousands of people in jeopardy of losing everything they have including their lives due to this type of industrial application.

The January/February 2016 edition of Popular Science published an excellent article called Earthquake Nation. "Oklahoma, which historically has had few earthquakes of magnitude 3.0 or higher, started rumbling regularly in 2009. Oklahoma Geological Survey recorded 35 such quakes in 2012, 109 in 2013, and 584 in 2014. (The prior annual average was fewer than two.) By late October, the 2015 figure had already exceeded 700. Scientists have figured out the reason: the oil-and-gas industry's practice of injecting wastewater deep underground."

Our own Pa. DEP found a link between fracking and earthquakes in Lawrence County PA in February of 2017.

There is a great possibility that this highly contaminated water will enter these coal mines and flow who knows where. We are all at risk of this type of pollutions entering our drinking water. The Beaver Run Reservoir is too close. Our great waters of the 3 rivers are too close.

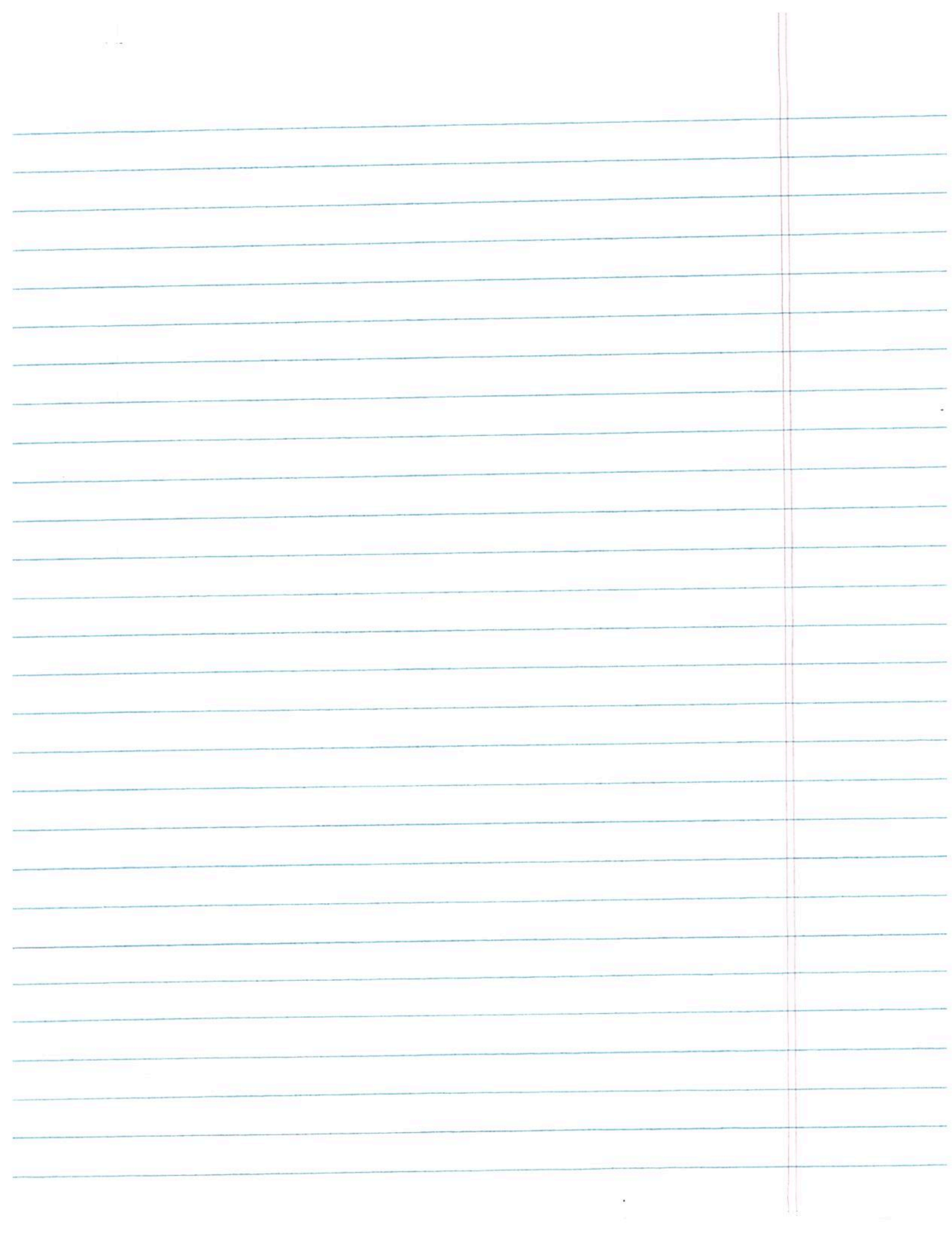
I ask that you do your due diligence and deny this permit.

Sincerely,

A handwritten signature in blue ink that reads "Patricia Emich". The signature is written in a cursive, flowing style.

Patricia Emich  
227 Sunrise Dr.  
Irwin PA 15642  
patg11@verizon.net





R. Neffshade  
9020 Saltsburg Rd.  
Pittsburgh, PA 15231

07-28-2017

Dear Mr. Bennett,

I am writing to you to speak out in opposition to the wastewater injection permit in my home, Plum Borough. As a parent of a young child, the likely effects that injecting contaminated water into our ground will have is nothing short of terrifying. The EPA will be putting the health of my community's most vulnerable residents, children, the elderly, and the infirm, at great risk. There is only benefit to Penneco in threatening our borough, with no gains for us. Neither I nor those who love this area will stand idle if the EPA allows Penneco to turn Plum into another sacrifice zone. Potable water is a human right and is not to be tampered with.

With Conviction,

Rachel Neffshade

2024 Old Leechburg Rd.  
New Kensington, PA 15068

August 5, 2017

James Bennett  
1650 Arch St.  
Philadelphia, PA 19103

Mr. Bennett,

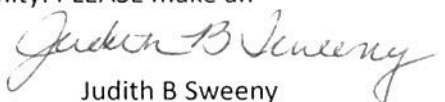
I am writing to express my opposition to the proposed use of the former oil well on Old Leechburg Rd. in Plum Boro.

Environmentally, it is impossible to justify putting this in our community. On no level is it an enhancement of our community. From burning coal mines underneath Plum, to compromising our water supply, to possibly creating a situation of sink holes and seismic activity this should not even be considered let alone approved.

It may be easy to sit in Philadelphia and think this is as good a spot as anywhere else. I disagree. This is not waste that Plum Boro created or benefitted from. The area residents chose their locations based on many factors including quality of life. When I bought my 75 year old house 25 years ago, I did not purchase it as a "starter house". While it is small by many standards, it is a house that I knew would be affordable for me and one that I planned to remain in. My husband and I chose a location that had enough property that we could enjoy nature, that he could hunt on, that we could take walks in our woods, that we could enjoy the wildlife, and that we could sit out at night and enjoy the quiet and look at stars. I cannot explain the myriad of things that we have taught our daughter about nature.

What right does a company have to come in and take this away from me? How can EPA consider they are protecting citizens by considering this proposal? This is all I have. I cannot afford to move to a new location. This is not what I signed up for when I bought my house, or all of the years of paying taxes! Do I not deserve the quality of life that I have worked and chosen to have in my life? If I wanted lights pollution, noise etc. I would have chosen to live elsewhere.

PLEASE protect my environment. You can make the right decision for the community. PLEASE make an ethical decision!

  
Judith B Sweeney



July 12, 2017

Grant Scavello  
Ground Water & Enforcement Branch (3WP22)  
U.S. Environmental Protection Agency  
1650 Arch Street Philadelphia, PA 19103  
(215)-814-5498

Dear Mr. Scavello,

I have recently become aware of a proposed Class II-D salt water disposal (SWD) well at the Sedat #3A well in Plum Borough, Pennsylvania. I urge your office to deny a permit for this activity, as Plum Borough is not an appropriate location for the injection of produced fluids. The region's poorly conducted legacy of coal mining activity has left an unstable subterranean environment, which would amplify normal risks of induced seismicity and fluid migration that commonly accompany oil and gas waste disposal via Class II-D wells. As Plum Borough is one of Pittsburgh's most populous suburbs, any such incident could have dramatic and catastrophic consequences.

One of the primary concerns with SWD wells is induced seismicity. Allegheny County is not thought to be seismically active, but many areas around the country that were not known for earthquakes have seen significant increases associated with SWD wells, including Oklahoma, Kansas, and Ohio. Even very small earthquakes in Plum Borough have the potential of serious consequences, largely due to the legacy of coal mining in the area. Almost all of the borough has been undermined

([http://www.dep.state.pa.us/MSIHomeowners/Municipality\\_Mine\\_Maps/Allegheny\\_County/plum\\_boro.pdf](http://www.dep.state.pa.us/MSIHomeowners/Municipality_Mine_Maps/Allegheny_County/plum_boro.pdf)) over the past century, including the proposed Sedat #3A well. There have been issues with subsidence, and numerous mine fires, some of which have been burning for decades (<http://powersource.post-gazette.com/local/east/2017/04/07/Plum-underground-mine-fire-being-extinguished/stories/201703310144>). Very small earthquakes could seriously impact structural integrity of these abandoned mines, leading to increased subsidence and additional air and fuel for existing fires.

Fluid migration is also an issue in the region. Many of the geological strata in the region are highly eroded sandstones, shales, and limestones, and subterranean fluid migration is already a problem from coal mines in the form of abandoned mine drainage (AMD), as well as oil and gas wells that have been drilled in the area. While much of Plum Borough is on a municipal water system, many residents located between subdivisions rely on ground water for their domestic supply, including for drinking water. Additionally, AMD contamination finds its way to the rivers and streams at numerous places throughout the borough, and introducing high pressure SWD wells to the region would likely exacerbate the problem.

While I understand that oil and gas development generates huge quantities of liquid waste that must be disposed of somewhere, I urge you to consider that Plum Borough is a poor candidate for a SWD well, as the area is already geologically unstable due to its history of coal mining, magnifying the risks that commonly accompany such wells. Please deny the permit for the Sedat #3A Class II-D injection well.

Thank you,

Matthew Kelso  
500 Milltown Rd  
Plum, PA 15068

2024 Old Leechburg Rd.  
New Kensington, PA 15068

August 1, 2017

James Bennett

EPA

1650 Arch St.

Philadelphia, PA 19103

Dear Sir,

I am writing to voice my extreme opposition to the planned project on Old Leechburg Rd. in Plum Boro.

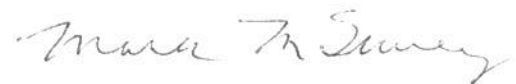
Besides the obvious environmental reasons why this project is dangerous, (leakage, noise, seismic concerns, pollution etc.), there are ethical reasons as well. While legally you may be able to approve this, ethically it is a shame! Your agency is to PROTECT the environment!

On Old Leechburg Rd there is a scattering of houses. Why do you suppose that is true? It is because the homeowners value living in a rural setting. We chose to live there so that we could enjoy the country life. We have ponds we can fish from, woods that we can hunt in, and porches we can sit on and listen to the sounds of nature. We like to look into the sky and see stars without too much light pollution.

We have invested our money and time to own and maintain our properties. Why do you have the right to force something into our neighborhood that we do not want? We will not benefit from this proposal. We will be stuck with the ramifications: noise, excessive traffic, light pollution, not to mention the effects that it will have on our water, the coal mines that are under our houses. Where will the EPA be when I have house or health damage due to this project?

I implore you, please do NOT approve this project. I live less than a mile down the hill from this site, would you want to live there?

Sincerely,

A handwritten signature in cursive script, appearing to read "Mark M. Sweeny".

Mark M. Sweeny

R. Neffshade  
9020 Saltsburg Rd.  
Pittsburgh, PA 15239

07-28-2017

Dear Mr. Bennett,

I am writing to you to speak out in opposition to the wastewater injection permit in my home, Plum Borough. As a parent of a young child, the likely effects that injecting contaminated water into our ground will have is nothing short of terrifying. The EPA will be putting the health of my community's most vulnerable residents, children, the elderly, and the infirm, at great risk. There is only benefit to Penneco in threatening our borough, with no gains for us. Neither I nor those who love this area will stand idle if the EPA allows Penneco to turn Plum into another sacrifice zone. Potable water is a human right and is not to be tampered with.

With Conviction,

Rachel Neffshade





Rachael Neffshade  
9020 S. Highburg Rd.  
Pittsboro, PA 15239-2050

Source Water Protection  
SWP20 21 22

James Bennett  
1650 Arch St.  
Philadelphia, PA 19103-2029

WP22

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Dear Mr. Bennett,

I am a resident of Plum Borough in Pittsburgh, Pennsylvania.

I am writing to voice my opposition to Penneco Environmental Solutions' plan to dispose of fracking water and other fluids from oil and gas drilling operations at a site off of Old Leechburg Road near the border with Murrysville and Upper Burrell.

We are a suburb and a well of this nature does not fit with the future development of our community. We also do not trust Penneco to safely manage a well of this kind in our community.

Our mayor is also opposed to Penneco's plan and we hope the EPA will honor the will of the residents of Plum and not allow for the needs of a company to come before our safety.

Thank you for considering this request.

Sincerely,

Rachael Fouch-Podrat  
89 Rustic Ridge Drive  
Pittsburgh, PA 15239

mon 104. penn

The proposed injection well is not  
just a Plum Borough issue. This could  
well affect all neighboring communities.  
It will contaminate our drinking  
water & seep into the Allegheny  
River. Potentially it could contaminate  
the drinking water of 80,000  
people & causing seismic shifts  
in the earth. We cannot allow  
this to happen. Please.

SALAMANDRA  
Crotch n°34  
2012  
huile sur toile / oil on canvas, 81 x 65 cm / 32 x 26 in.  
de la série / from the series: "Crotches" (2000-2016)  
<http://lissalamandra.com>

Sincerely  
Liam J. Dunne



Office of Drinking Water

AUG 07 2013

Source Water Protection  
3WP20, 21, 22

Environmental Protection  
Agency Region III  
Water Protection Division  
1650 Arch St (3WP22)  
Phila, PA 19103  
Conception graphique : Anamorphose





Ms Diane Barr Quinlin  
468 Woodland Rd  
Pittsburgh PA 15237-3774



Dear Mr. Bennett,

This proposed injection well is not just a Plum Boro issue. This well could effect all neighboring communities. If it leaks, as statistically speaking it most likely will, it will contaminate our drinking water and seep into the Allegheny River. It could potentially poison the drinking water of 80,000 people. It also has the possibility of causing seismic shifts in the earth especially considering that Plum Borough is built mostly over mines. This will cause earthquake effects that could be reached for miles from this area. There are many other reasons why this is just a terrible idea; traffic, noise, air pollution from the trucks, and the possibility of vehicular accidents caused by the trucks carrying chemical water. Wastewater should absolutely not be disposed of in any residential neighborhoods. Not only do these wells lower our home values, they can make our children and grandchildren sick. We simply cannot allow this to happen. The damage would be irreversible.

Sincerely,

*Karen Rasmussen*  
KAREN RASMUSSEN  
19103-208759  
PROACTIVE Pittsburgh Women

PITTSBURGH, PA 150  
Ms. Karen Rasmussen  
133 Point Vue Dr.  
ALTO PITTSBURGH PA 15237

Office of Drinking Water &

Source Water Protection  
3WP20, 21, 22



Environmental Protection Agency Region III  
c/o James C. Bennett, Jr., Borough of  
Water Protection Division  
1650 Arch St (3rd Fl.)  
Philadelphia PA 19103





733 Glengarry Court  
Pittsburgh, PA 15239  
July 31, 2017

EPA Region III  
c/o James C. Bennett  
Water Protection Division  
1650 Arch Street  
Philadelphia, PA 19103

Dear Mr. James Bennett,

I am against waste water being injected into a well in the Plum area.

My personal concerns are related to health and for the wild life in my area.

As far as health, my primary concern is for my community's drinking water. I understand that this waste water can contaminate a local creek and also contaminate the Allegheny River. I am a RN and I care about the health of my community.

I also love all animals. I love the deer, ground hogs, bunnies, turkey, etc. that live in my community. I hate the



thought of all the trucks and this  
horrible waste water being brought  
into my hometown.

Of course, I also do not like the  
thoughts of how all of this will  
affect all the mines in this area.

I worry about the structural integrity  
of my home and my neighbor's homes

Please do not dismiss my letter or

my concerns. I know that many of  
my neighbors feel similar to me.

We want our homes to be safe and

our area to be a healthy place to

live. I'm sure that you feel the same

way about your home and neighborhood

Please do not permit the waste water  
injection to occur in my hometown  
of Plum, PA.

Sincerely,

Gene Foreman

William & April Roemer  
733 Glengarry Court  
Pittsburgh, PA 15239

Office of Drinking Water &  
Source Water Protection  
SWP20, 21, 22

EPA  
Region III

C/o James C. Bennett Jr., Branch Chief  
Water Protection Division  
1650 Arch Street. (3WP22)  
Philadelphia PA 19103



01 JUL 2017 09:21



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## Amended<sup>1</sup> Public Comment on EPA Draft Permit PAS2D701BALL

On 06/22/2017, EPA published a Public Notice of intent<sup>2</sup> to issue Permit # PAS2D701BALL (“Permit”)<sup>3</sup> to Penneco, LLC, for conversion of the well Sedat 3A, API Number 003-21223, (“Well”) to an injection well for disposal of Oil & Gas wastewater, as supported by a Statement of Basis (“Basis”)<sup>4</sup>. I object to the issuance of this permit, and in response to EPA’s request for public comment, wish to make the following public comments.

### 1. Basis (p. 1) shows no evidence that the integrity of Well’s plug-back to 1,940 feet has been evaluated against injection pressure.

Basis makes the following statement regarding the history of Sedat 3A:

The well was hydraulically fractured at three depths and produced natural gas until 2015 when it was taken out of service due to low production. The well was plugged back to a depth of 1,940 feet, directly below the Murrys ville Sandstone injection zone, *in accordance with Pennsylvania DEP regulations*. (p. 1, emphasis added).

Evidently EPA is accepting Penneco’s word concerning the plug-back to 1,940 feet, and has not sought to verify whether Penneco made any application to DEP for the plug-back. In fact, the Authorization Search facility of DEP<sup>5</sup> for applications under API 003-21223 yields only the original application for a Drill & Operate Well Permit received by DEP on 09/19/1988 and issued on 9/19/1988<sup>6</sup>. DEP’s Oil & Gas Mapping web site shows the following status information for this well<sup>7</sup>:

WELL\_STATUS: Active  
WELL\_STATUS\_CODE: 7

So even the statement “it was taken out of service due to low production” ***DOES NOT AGREE WITH DEP RECORDS***.

Scrutiny of all DEP inspection reports for Sedat 3A<sup>8</sup> yields only the following references to plugging or cement:

- 1 This document amends and supersedes my written public comment sent by E-mail and presented in person at the Plum Borough Public Hearing on this matter, July 26, 2017.
- 2 [https://www.epa.gov/sites/production/files/2017-06/documents/finaloptimizedforweb.administrative\\_record\\_-\\_penneco\\_sedat\\_3a.pdf](https://www.epa.gov/sites/production/files/2017-06/documents/finaloptimizedforweb.administrative_record_-_penneco_sedat_3a.pdf)
- 3 <https://www.epa.gov/sites/production/files/2017-06/documents/finaloptimizedforweb.pennecodraftpermit06.22.17.pdf>
- 4 <https://www.epa.gov/sites/production/files/2017-06/documents/finaloptimizedforweb.pennecosobmasterpas2d701ball.pdf>
- 5 [http://www.ahs.dep.pa.gov/eFACTSWeb/criteria\\_auth.aspx](http://www.ahs.dep.pa.gov/eFACTSWeb/criteria_auth.aspx)
- 6 [http://www.ahs.dep.pa.gov/eFACTSWeb/searchResults\\_singleAuth.aspx?AuthID=52215](http://www.ahs.dep.pa.gov/eFACTSWeb/searchResults_singleAuth.aspx?AuthID=52215)
- 7 [http://www.depgis.state.pa.us/arcgis/rest/services/OilGas/OilGasAllStrayGas/MapServer/3/query?where=PERMIT\\_NUMBER+%3D+%27003-21223%27&text=&objectIds=&time=&geometry=&geometryType=esriGeometryEnvelope&inSR=&spatialRel=esriSpatialRelIntersects&relationParam=&outFields=OBJECTID%2CPERMIT\\_NUMBER%2CWELL\\_NAME%2COPERATOR%2COPERATOR\\_NUMBER%2CWELL\\_TYPE%2CWELL\\_TYPE\\_CODE%2CWELL\\_STATUS\\_CODE%2CPERMIT\\_DATE%2CPERMIT\\_DATE\\_EXPIRES%2CSPUD\\_DATE%2CCONSERVATION\\_IND%2CCOUNTY%2CCOUNTY\\_ID%2CMUNICIPALITY%2CMUNICIPALITY\\_TYPE%2CMUNICIPALITY\\_CODE%2CLATITUDE%2CLONGITUDE%2CPRMRY\\_FID%2CUNCONVENTIONAL\\_IND%2CSURFACE\\_ELEVATION%2CWELL\\_CONFIG\\_CODE%2CCOAL\\_IND%2CWELL\\_PAD\\_NAME%2CSHAPE%2CDATE\\_PLUGGED%2CWELL\\_PAD\\_ID%2CUIC\\_ID%2CUIC\\_TYPE\\_DESCRIPTION%2CSTORAGE\\_FIELD\\_NAME%2CSITE\\_ID%2CSITE\\_NAME&returnGeometry=true&returnTrueCurves=false&maxAllowableOffset=&geometryPrecision=&outSR=&returnIdsOnly=false&returnCountOnly=false&orderByFields=&groupByFieldsForStatistics=&outStatistics=&returnZ=false&returnM=false&gdbVersion=&returnDistinctValues=false&resultOffset=&resultRecordCount=&f=html](http://www.depgis.state.pa.us/arcgis/rest/services/OilGas/OilGasAllStrayGas/MapServer/3/query?where=PERMIT_NUMBER+%3D+%27003-21223%27&text=&objectIds=&time=&geometry=&geometryType=esriGeometryEnvelope&inSR=&spatialRel=esriSpatialRelIntersects&relationParam=&outFields=OBJECTID%2CPERMIT_NUMBER%2CWELL_NAME%2COPERATOR%2COPERATOR_NUMBER%2CWELL_TYPE%2CWELL_TYPE_CODE%2CWELL_STATUS_CODE%2CPERMIT_DATE%2CPERMIT_DATE_EXPIRES%2CSPUD_DATE%2CCONSERVATION_IND%2CCOUNTY%2CCOUNTY_ID%2CMUNICIPALITY%2CMUNICIPALITY_TYPE%2CMUNICIPALITY_CODE%2CLATITUDE%2CLONGITUDE%2CPRMRY_FID%2CUNCONVENTIONAL_IND%2CSURFACE_ELEVATION%2CWELL_CONFIG_CODE%2CCOAL_IND%2CWELL_PAD_NAME%2CSHAPE%2CDATE_PLUGGED%2CWELL_PAD_ID%2CUIC_ID%2CUIC_TYPE_DESCRIPTION%2CSTORAGE_FIELD_NAME%2CSITE_ID%2CSITE_NAME&returnGeometry=true&returnTrueCurves=false&maxAllowableOffset=&geometryPrecision=&outSR=&returnIdsOnly=false&returnCountOnly=false&orderByFields=&groupByFieldsForStatistics=&outStatistics=&returnZ=false&returnM=false&gdbVersion=&returnDistinctValues=false&resultOffset=&resultRecordCount=&f=html)
- 8 [http://www.depgis.state.pa.us/arcgis/rest/services/OilGas/OilGasAllStrayGas/MapServer/38/query?where=PERMIT\\_NUMBER+%3D+%27003-21223%27&text=&objectIds=&time=&geometry=&geometryType=esriGeometryPoint&inSR=&spatialRel=esriSpatialRelIntersects&relationParam=&outFields=INSP\\_PRMRY\\_FAC\\_ID%2CSITE\\_ID%2COWNER\\_CLNT\\_ID%2CINSPECTION\\_COMMENT%2CINSPECTION\\_DATE%2CINSPECTION\\_ID%2CINSPECTION\\_RESULT\\_DESCRIPTION%2CINSPECTION\\_TYPE\\_DESCRIPTION%2CVIOLATION\\_COUNT%2COPERATOR\\_RESPONSE\\_COUNT%2CINSPECTION\\_REPORT\\_COUNT%2CWELL\\_NAME](http://www.depgis.state.pa.us/arcgis/rest/services/OilGas/OilGasAllStrayGas/MapServer/38/query?where=PERMIT_NUMBER+%3D+%27003-21223%27&text=&objectIds=&time=&geometry=&geometryType=esriGeometryPoint&inSR=&spatialRel=esriSpatialRelIntersects&relationParam=&outFields=INSP_PRMRY_FAC_ID%2CSITE_ID%2COWNER_CLNT_ID%2CINSPECTION_COMMENT%2CINSPECTION_DATE%2CINSPECTION_ID%2CINSPECTION_RESULT_DESCRIPTION%2CINSPECTION_TYPE_DESCRIPTION%2CVIOLATION_COUNT%2COPERATOR_RESPONSE_COUNT%2CINSPECTION_REPORT_COUNT%2CWELL_NAME)

INSP\_PRMRY\_FAC\_ID: 7741  
SITE\_ID: 5993  
OWNER\_CLNT\_ID: 7674  
INSPECTION\_COMMENT: A SERVICE RIG IS SET UP. PENNEECO IS PLUGGING BACK TO DO TESTING IN THE MURRYSVILLE FORMATION. THE WELL WAS PRODUCING FROM THE SPEECHLY.  
INSPECTION\_DATE: 2015-07-20  
INSPECTION\_ID: 2391244  
INSPECTION\_RESULT\_DESCRIPTION: No Violations Noted  
INSPECTION\_TYPE\_DESCRIPTION: Plugging(Includes Plugged/Mined Through)  
VIOLATION\_COUNT: null  
OPERATOR\_RESPONSE\_COUNT: null  
INSPECTION\_REPORT\_COUNT: null  
WELL\_NAME: SEDAT 3A  
PERMIT\_NUMBER: 003-21223

INSP\_PRMRY\_FAC\_ID: 7741  
SITE\_ID: 5993  
OWNER\_CLNT\_ID: 7674  
INSPECTION\_COMMENT: A SERVICE RIG IS UP AND OVER THIS WELL. THERE ARE NO PERSONEL AT THE SITE. PENNECO IS PLANNING TESTING OF THE MURRYSVILLE FORMATION.  
INSPECTION\_DATE: 2015-07-29  
INSPECTION\_ID: 2396484  
INSPECTION\_RESULT\_DESCRIPTION: No Violations Noted  
INSPECTION\_TYPE\_DESCRIPTION: Routine/Complete Inspection  
VIOLATION\_COUNT: null  
OPERATOR\_RESPONSE\_COUNT: null  
INSPECTION\_REPORT\_COUNT: null  
WELL\_NAME: SEDAT 3A  
PERMIT\_NUMBER: 003-21223

The well clearly received a plugging inspection on 7/20/2015 but there is no indication of inspection against injection pressure. The inspection report includes the comment: “PENNEECO [sic] IS PLUGGING BACK TO DO TESTING IN THE MURRYSVILLE FORMATION” with no indication whatever of what kind of testing; one can infer that DEP must have assumed Penneco was testing for production from the Murrysville Formation. If Penneco is asserting that the 7/20/2015 inspection inspected the plug-back to 1,940 against injection pressure, the record does not support this.

**2. There are 2 additional wells just outside the 0.25 mile buffer around Sedat 3A which were apparently not evaluated, and are close enough to the proposed Area of Review (“AOR”) to make the definition of the AOR as published arbitrary and unreasonable.**

Appendix 1 shows a section of the USGS New Kensington East 1:24000 Topographic Map overlaid with Oil & Gas wells (data from the DEP Oil & Gas mapping web site) and a buffer (shown in orange) with radius 0.25 miles around the location of Sedat 3A<sup>9</sup>. The map demonstrates that there are two wells just outside the 0.25 mile

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%2CPERMIT\_NUMBER&returnGeometry=true&returnTrueCurves=false&maxAllowableOffset=&geometryPrecision=&outSR=epsg

%3A4326&returnIdsOnly=false&returnCountOnly=false&orderByFields=&groupByFieldsForStatistics=&outStatistics=&returnZ=false&returnM=false&gdbVersion=&returnDistinctValues=false&resultOffset=&resultRecordCount=&f=html

9 Appendix 1 uses DEP’s GIS locations for the wells, including Sedat 3A. EPA’s published latitude and longitude for application PAS2D701BALL evidently use latitude and longitude rounded to one decimal point of seconds, resulting in a slight discrepancy from DEP records. This mismatch evinces a disregard for detail on EPA’s part which is unfortunate.

buffer:

003-21438      CONSOLIDATION COAL CO 8  
003-21238      SMOLENSKI 1

The well CONSOLIDATION COAL CO 8 in particular is only 0.26 miles from Sedat 3A. A difference of 0.01 miles is geologically insignificant. Accordingly, to exclude these two wells from the AOR makes clear that the AOR has been drawn *arbitrarily and unreasonably*. On what basis has EPA concluded that an 0.01 mile distance outside the 0.25 mile buffer is enough to preclude belonging to the “zone of endangering influence”? EPA must deny this application as drafted and demand that Penneco reapply under an amended AOR whose definition is geologically reasonable and takes into account all nearby potential impacts.

In fact, EPA itself — under the prior administration — expressed in its Notice of Deficiency, July 8 2016 (“NOD 1”), its own discomfort at the 0.25 mile AOR, and requested from Penneco materials showing a radius of 0.5 miles from the well bore. NOD 1 states:

“Past practice has been to require applicants to include this information for ½ mile from the injection well. The definition of ¼ mile from the facility property boundary has been challenged and Region 3 has used ¼ past the area of review (1/2 mile total) in past permits.”

Appendix 1 shows the 0.5 mile radius area in purple. Basis is completely silent on the subject of analysis for 0.5 miles from the Sedat 3A well bore, does not mention that EPA asked Penneco for that analysis, and does not mention that EPA decided no further consideration of the 0.5 mile buffer was needed. The public has not been provided with an actual basis (in the loose sense of the term) for that decision. It is also important to note that the public was not properly provided with NOD 1 even as of the date of the Public Hearing on this matter, July 26, 2017. For this reason, EPA must *reopen* the Public Comment Period<sup>10</sup>.

**3. Basis AOR evaluation (p. 2) does not list identification (e.g. API Number) for the 5 wells within the proposed AOR that penetrate the injection zone.**

Basis (p. 2) states:

“After extensive research of company, local, county and state well records five wells were identified that penetrate the injection zone within the Area of Review. All such wells have been thoroughly evaluated to document proper well construction and/or plugging and abandonment.”

So why does not Basis list identifications for these 5 wells, so the public can verify whether this is correct? By not identifying the 5 wells, Basis has been offered for Public Comment prematurely.

Appendix 1 shows the following 5 wells (other than Sedat 3A) within the proposed AOR:

API	Well Name	SPUD Date
003-21287	HOWARD 1	1991-09-24
003-21210	SEDAT 1	1988-03-05
003-21644	SEDAT 4A	2004-06-18
003-22200	SEDAT 5H	2012-01-10
003-21222	SEDAT 2A	1989-01-12

**Table 1: Wells within 0.25 miles of Sedat 3A**

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<sup>10</sup> E.g. 40 CFR § 124.14.



Are these the same 5 wells as referred to in Basis? If not, EPA must explain! In any event, Basis is deficient for not publishing identification of the 5 wells.

#### **4. Evaluation of Endangerment within the proposed AOR as demonstrated by Basis is incomplete and inadequate.**

There are several grounds on which Basis fails to demonstrate evaluation of Endangerment within the proposed AOR. Consider the list of 5 wells above. The most recent SPUD date is 2012, and all but Sedat 5H were SPUD in 2004 or earlier. What was the cementing standard in place at the time these wells were SPUD? Basis shows no evidence that any cement logs for these wells were evaluated. As cited above, Basis notes: “All such wells have been thoroughly evaluated to document *proper* well construction and/or plugging and abandonment.” [Emphasis added.] What does the word “proper” mean here? The obvious inference is that “proper” means deemed proper *at the time* construction and/or plugging and abandonment took place. Sedat 2A was SPUD in 1989. What kind of cementing construction was “proper” in 1989? What tests were made in 1989 to show resistance to injection pressure outside the casing? The truth of the matter is that reasonable cementing standards for Oil & Gas wells were not promulgated in Pennsylvania until 2010<sup>11</sup>. That means of the 5 wells shown above, only Sedat 5H would have been constructed under cementing rules appropriate for protection against endangerment from an injection well. The 2010 cementing and casing rules — which applied to both conventional and unconventional wells — were adopted only after difficult experiences of methane migration (which was admitted by DEP as a genuine issue). By not clarifying whether “proper” means according to today’s understanding of proper cementing construction, Basis is in fact not a basis at all for determining protection against endangerment. EPA must require reevaluation of the construction of these wells for cementing issues, including actual documentation of pressure tests and cement bonding logs.

The case of Sedat 5H is particularly troubling. This well would have been subject to the 2010 cementing rules. There are no inspection reports for this well that show that the cementing was ever inspected. If DEP did not inspect cementing for Sedat 5H, how can EPA claim to have evaluated whether the cementing job for this well was “proper”?

Appendix 1 shows there are houses within the proposed AOR — a fact which is not mentioned in Basis. What is the water source for these houses? EPA is negligent in evaluating endangerment if it does not require pre-conversion water testing on all water wells to the same standard as required in Pennsylvania for drilling unconventional gas wells. Failing to evaluate the pre-conversion water quality for houses close to Sedat 3A is simply inexcusable.

Finally, evaluation of endangerment against earthquakes is such a large issue it will be dealt with below (point 8).

#### **5. Basis AOR evaluation (p. 2) shows no evidence of logs or other data by means of which the wells within the proposed AOR have been evaluated for construction integrity (e.g. pressure testing or cementing).**

An exhaustive search of DEP inspection reports<sup>12</sup> for the wells listed in Table 1 above shows no instance in which DEP inspected even one of the wells for pressure testing. The case of Sedat 5H is particularly troubling. This is evidently a horizontal<sup>13</sup> Oil and Gas well. Inspection reports note in comments that the well has been fracked, but there is no notation of pressure testing. The only indication that Sedat 5H was inspected for cementing is a single comment in Inspection ID 2054235 stating “US ENERGY RIG DRILLED A PILOT

11 See e.g. “PENNSYLVANIA Oil and Gas Casing and Cementing Standards, 25 Pa. Code Chapter 78 (relating to Oil and Gas Wells) See 40 Pa.B. 3845 (July 10, 2010) Environmental Quality Board Regulation #7-459 (Independent Regulatory Review Commission #2857) Comment/Response Document “ [http://files.dep.state.pa.us/PublicParticipation/Public%20Participation%20Center/PubPartCenterPortalFiles/Environmental%20Quality%20Board/2010/October\\_12\\_2010/Casing%20and%20Cementing/Comment\\_Response\\_for\\_Oil\\_and\\_Gas\\_comments\\_9\\_20\\_101.pdf](http://files.dep.state.pa.us/PublicParticipation/Public%20Participation%20Center/PubPartCenterPortalFiles/Environmental%20Quality%20Board/2010/October_12_2010/Casing%20and%20Cementing/Comment_Response_for_Oil_and_Gas_comments_9_20_101.pdf).

12 Inexplicably, DEP’s Oil & Gas Mapping web site shows no inspections whatsoever for Sedat 4A, 003-21644.

13 DEP records are ambiguous as to the configuration of this well. It is referred to in the inspection reports as a horizontal well, but the DEP Oil & Gas Mapping web site metadata for this well lists well configuration as “Deviated”.

HOLE TO 3450', AND THE CEMENTED BACK TO IT'S KOP." Sedat 5H was subject to the 2010 cementing rules. But there appears to have been no surface inspection of the cementing job. The DEP Oil and Gas Electronic Notifications Report<sup>14</sup> shows no electronic notifications having been sent for this well.

**6. Basis Confining Zones evaluation (p. 3) cites no permeability figures for putative confining zones and shows no evidence this was evaluated.**

Although EPA evaluated permeability for the injection zone in some detail, Basis provides no detail whatever regarding permeability of the putative confining zones. Do they in fact function as confining zones? What evidence do we have for this? The only thing provided by Basis on this point is Penneco's assertion that they are "confining". And it is worth noting, the Administrative Record Index on this case<sup>15</sup> ("Index") cites no reference whatsoever regarding the Riddlesburg Shale.

**7. Basis Confining Zones evaluation (p. 3) cites no methodology for analyzing whether there might be existing fractures in the putative confining zones that would allow transmitting contaminants, and shows no evidence this was evaluated.**

Basis states:

"According to the applicant, the driller's log shows that the upper confining zone, located immediately above the injection zone, is comprised of the low permeability Riddlesburg Shale. The Riddlesburg Shale layer, a dark gray to greenish and grayish black laminated shale and siltstone layer with occasional sandstone and limestone beds, is approximately 80-90 feet thick in the Sedat #3A AOR."

Basis simply infers that the Riddlesburg Shale will be effective as a confining layer, with no actual analysis cited except for "according to the applicant". Natural existing fractures are pervasive in many shale layers, and play an important role in the effectiveness of hydraulic fracturing. Basis is simply silent on the subject of fractures within the Riddlesburg Shale. Without analysis on this point, evidence that the Riddlesburg Shale will be an effective confining layer is incomplete and inadequate. (And as noted above, Index is totally without reference on this point.)

**8. Basis Geologic and Seismic Review (p. 4) is incomplete and inadequate and does not take account of recent history, including Marcellus and Utica Shales incidents of unanticipated faults and induced seismicity, and actual induced seismicity events in Ohio and Oklahoma.**

It is likely that there is no greater concern to the public at large from injection wells than the risk of earthquakes, and it would not be surprising if the preponderance of public comments on this case mention this as a top concern. It is clear that Basis did pay some attention to this issue, but unfortunately EPA seems not to be aware of some of the seismicity issues that are part of the historical record here in Western Pennsylvania.

While there is ample scientific agreement that injection into an active fault zone brings the risk of earthquakes — and actual such earthquakes have in fact happened — it was still surprising to many people that earthquakes associated with "ordinary fracking" occurred recently in Northwest Pennsylvania. I call to EPA's attention a document not listed in Index, "Review of Seismic Events in Lawrence County Pennsylvania", January 2017, Pennsylvania Department of Environmental Protection<sup>16</sup> ("Lawrence Review"). Please see also DEP's web page on this event, "Lawrence County Earthquake"<sup>17</sup>. DEP states: "A series of low-magnitude earthquakes that began on April 25 [2016] at 4:17 am in North Beaver, Union, and Mahoning Townships *showed a marked temporal/spatial relationship to hydraulic fracturing activities* at Hilcorp's North Beaver NC Development well

14 [http://www.depreportingservices.state.pa.us/ReportServer?/Oil\\_Gas/OG\\_Notifications](http://www.depreportingservices.state.pa.us/ReportServer?/Oil_Gas/OG_Notifications)

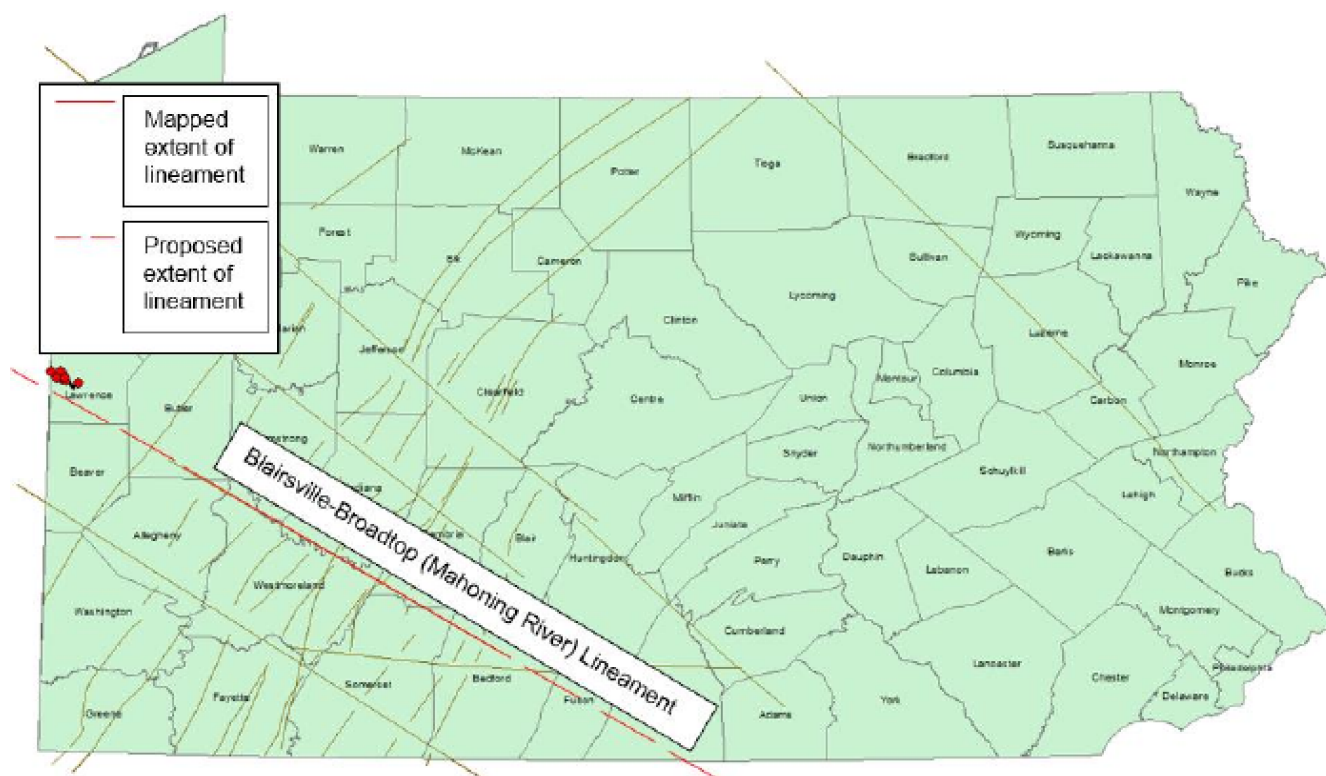
15 [https://www.epa.gov/sites/production/files/2017-06/documents/finaloptimizedforweb.administrative\\_record\\_-\\_penneco\\_sedat\\_3a.pdf](https://www.epa.gov/sites/production/files/2017-06/documents/finaloptimizedforweb.administrative_record_-_penneco_sedat_3a.pdf)

16 [http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-116109/8100-RE-DEP4711\\_new.pdf](http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-116109/8100-RE-DEP4711_new.pdf)

17 <http://www.dep.pa.gov/About/Regional/NorthwestRegion/Community-Information/Pages/Lawrence-County-Earthquake.aspx>

pad.” [Emphasis added.] Although the magnitude of the earthquakes in this case was quite small, it was serious enough for the operator, Hilcorp Energy, to cease hydraulic fracturing temporarily and for DEP to promulgate a plan of corrective action. This is a cautionary tale that even decades of seismic inactivity and lack of identified surface faults can still be prologue to induced seismicity from underground fluid injection.

Figure 1 is a reproduction of Figure 4 from Lawrence Review, showing a feature known as the Blairsville-Broadtop Lineament (also known as the Mahoning River Lineament). This feature has been associated with both the Lawrence County event on April 25 2016 and earthquakes in Ohio (see e.g. Lawrence Review, “Preliminary Report on Earthquakes in Youngstown Caused by an Injection Well” Ohio Department of Natural Resources, March 12, 2012<sup>18</sup>). The location of Sedat 3A is disturbingly close to the Blairsville-Broadtop Lineament (though not as close as the wells associated with the Lawrence County event. Basis shows no analysis of this association, and its implications for the risk of earthquakes from an injection well constructed from the existing well Sedat 3A. This clearly shows EPA’s analysis of earthquake risk in Basis is incomplete and inadequate.



**Figure 1: Bradford-Broadtop Lineament**

Another example of “geological surprise” in Western Pennsylvania comes from Fayette County, where DEP records show that in the first attempt to drill the horizontal in the well Kikta 4H, API 051-24471, operator Chevron Appalachia, LLC, *failed* due to an unanticipated fault. The comment for DEP Inspection Report<sup>19</sup> ID 2065722, 04/10/2012, states:

“HORIZONTAL MARCELLUS, PATTERSON 325 DRILLING ON FLUID ,CHEVRON DECIDED TO PLUG VERTICAL WELL BORE BACK TO 7100'. TWO ATTEMPTS TO DO HORIZONTAL PORTION HAS FAILED. **MAJOR FAULT ISSUES.**” [Emphasis added.]

Evidently, Chevron had no idea its horizontal was headed straight for a fault until they blundered into it. If a company with the size and Oil & Gas experience and resources of Chevron can be taken by surprise by an unanticipated fault in this manner, what chance does Penneco have of being reasonably certain an injection well

<sup>18</sup> <https://www.slideshare.net/MarcellusDN/preliminary-report-on-earthquakes-in-youngstown-caused-by-an-injection-well>

<sup>19</sup> [http://www.depreportingservices.state.pa.us/ReportServer/Pages/ReportViewer.aspx?/Oil\\_Gas/OG\\_Compliance](http://www.depreportingservices.state.pa.us/ReportServer/Pages/ReportViewer.aspx?/Oil_Gas/OG_Compliance)

at Sedat 3A won't interact with an unknown, unanticipated fault? What chance does EPA have of correctly evaluating this?

**9. Basis Geologic and Seismic Review (p. 4) shows no evidence of any evaluation of the presence in AOR of any intervening coal mines (including undocumented mines) that might interfere with the intended operation or integrity of Well or the effectiveness of AOR Confining Zones.**

Appendix 2 shows a map of the Mine Subsidence Insurance risk for the area around Sedat 3A<sup>20</sup>. The location of Sedat 3A is clearly notated as "Underground Mining Area – Insurance is recommended". However, Basis is completely silent on this subject. This is simply inexcusable! What would the implications be for an injection well if mine subsidence occurred? What are the implications for Confining Zones? It is nothing less than outrageous that this has not been analyzed. If there is any tangible risk whatever of mine subsidence, this should in and of itself ***completely disqualify*** this location from hosting an injection well. EPA should deny outright any application for a UIC disposal well in any Mine Subsidence Insurance risk area.

Appendix 3 shows a screen-shot detail from a scan of a map prepared by Fox & Fox, Inc. titled "Proposed Injection Well for Penneco Environmental Solutions, LLC". This map was included in the Penneco application materials made available to the public at the Plum Borough Community Library. Please note that the map clearly shows a coal mine underlying the surface covered by the AOR. This mine is designated on the map:

Operator: Villa Coal Co  
Operation: Renton Mine  
Permit No: 02841305  
Status: Abandoned

There is no mention of the Renton Mine in Basis, no mention of its depth or likelihood of triggering subsidence, or any analysis whatsoever of its potential interaction with the proposed injection well. Where are the air shafts that were constructed for this mine? Are any of them within the AOR?

Concerning the sufficiency of analysis on this subject, it must be noted that ***the designation on the map for the Renton Mine does not agree with DEP records***. Searching the DEP eFACTS system for permit number 02841305 reveals three applications, the most recent of which<sup>21</sup> shows:

Authorization ID: 286953  
Permit number: 02841305  
Site: RENTON DEEP MINE  
Client: VILLA COAL CO  
Authorization type: Underground Mining Permit  
Application type: New  
Authorization is for: FACILITY  
Date received: 01/12/1987  
Status: Issued on 1/12/1987

The linked Site record<sup>22</sup> for the above authorization shows (in part):

Site ID: 256408  
Site Name: RENTON DEEP MINE  
Address: PA  
Status: ***Active***

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<sup>20</sup> <http://www.depgis.state.pa.us/msiRisk/>

<sup>21</sup> [http://www.ahs.dep.pa.gov/eFACTSWeb/searchResults\\_singleAuth.aspx?AuthID=286953](http://www.ahs.dep.pa.gov/eFACTSWeb/searchResults_singleAuth.aspx?AuthID=286953)

<sup>22</sup> [http://www.ahs.dep.pa.gov/eFACTSWeb/searchResults\\_singleSite.aspx?SiteID=256408](http://www.ahs.dep.pa.gov/eFACTSWeb/searchResults_singleSite.aspx?SiteID=256408)



[Emphasis added.] So the designation of the Renton Deep Mine site as “Abandoned” does not agree with DEP records. In fact, the most recent inspection of this site is shown on the Site record as:

2615244      07/13/2017      Routine/Complete Inspection      No Violations Noted

Moreover, DEP Oil & Gas Mapping metadata for Sedat 3A shows the indicator for coal association reading “Coal”. This is DEP’s own indicator that special measures need be taken in permitting this well due to proximity with a coal mine. Numerous drilling logs submitted by Penneco are notated “Renton Field”, showing that Penneco is clearly aware of the association between its wells in the AOR and the Renton Deep Mine. A text search of Basis for the word “coal” shows no hits. For EPA to issue an injection well permit with no analysis whatever of coal issues is a very grave deficiency indeed. EPA must require an entire new submission considering all aspects of the risk coal mines, present and past and proposed, and must redraft Basis taking such risk into account. Suitability of this site due to the presence of coal issues is subject to grave doubt.

**10. Permit Monitoring Requirements (Section II C, pp. 7-10) does not contain a requirement for monitoring of seismicity and contains no seismicity shutdown threshold.**

In response to the Lawrence County earthquake associated with Hilcorp Energy’s North Beaver NC Development well pad cited above, DEP recommended Hilcorp adopt a seismic monitoring program as follows<sup>23</sup>:

“For seismic events of 1.0 or greater magnitude occurring within 6 miles of the wellbore path, the company should notify DEP within 10 minutes via email and within one hour by telephone.

For any succession of three seismic events of 1.5 to 1.9 magnitude that occurs within a three-consecutive-day period and within a 3-mile radius of the wellbore path, Hilcorp should notify the DEP within 10 minutes via email and within one hour by telephone. Actions taken for this magnitude range of seismic events include suspension of stimulation operations, submittal of seismic data to DEP for review and a plan detailing modifications to stimulation operations.

Finally, for any seismic event of 2.0 or greater magnitude that occurs within a 3-mile distance of a wellbore path, Hilcorp should notify the DEP within 10 minutes via email and within one hour by telephone. Actions taken include cessation of stimulation operations, flowing back of the well, submittal of seismic data to DEP for review and a plan detailing any potential modification to stimulation operations.”

In light of the extensive history of association between injection wells and earthquakes, EPA should **require** (not just “recommend”) seismic monitoring for any injection well used for disposal of Oil & Gas wastewater.

**11. Permit Construction Requirements must require recementing to current standards of all wells with the expected area of migration of stored fluids, and pressure testing of these well casings to injection pressure.**

This issue was discussed above. There is an obvious risk of contaminants being transmitted outside the casing for any well that penetrates the injection zone. At a minimum, this risk must be mitigated by new construction for the existing wells. All casings must be retested in any case of mine subsidence, and if there is no methodology for doing this, the permit must be rejected outright.

**12. Permit Construction Requirements Logs and Tests (Section III A 3, p. 15) must require submission of surface casing cement logs in all cases, and not just when “cement returns are not achieved”.**

Let’s be clear: Failure of cement to return to the surface is not just a “defect” in cementing; rather when cement fails to return to the surface this represents **a total failure** of cementing. In a case such as this, where did the

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23 DEP web page “Lawrence County Earthquake”, *op cit* (footnote 17).

cement go? It must have gone into a cavity somewhere. Presence of such an underground cavity represents a grave failure of determination of the site as suitable for an injection well, and must result in the immediate revocation of the permit.

Even in cases much less severe than total cement failure, conversion of any well to an injection well must have cementing carefully monitored for any and all defects. A CBL ("Cement Bonding Log") can assist in determining if such defects exist. EPA must make submission of logs such as CBL *mandatory* in all cases, and must inspect such logs for any sign of defects.

**13. Permit Construction Requirements Logs and Tests (Section III A 3, p. 15) must make clear that all logs and tests are public records and not subject to claims of confidentiality (Section I 11 b, p. 6).**

There is simply no excuse for withholding from the public logs and tests that might reveal construction defects or other threats to the integrity of Well. Section I 11 b, p. 6, must be amended to include a section (3) stating that EPA will deny any and all claims of confidentiality for logs and tests submitted under Section III A 3, p. 15.

**14. Permit Construction Requirements (Section III A, pp. 14-16) must include a requirement for some form of containment against the threat of surface spills when trucks delivering material to be injected are connected and disconnected.**

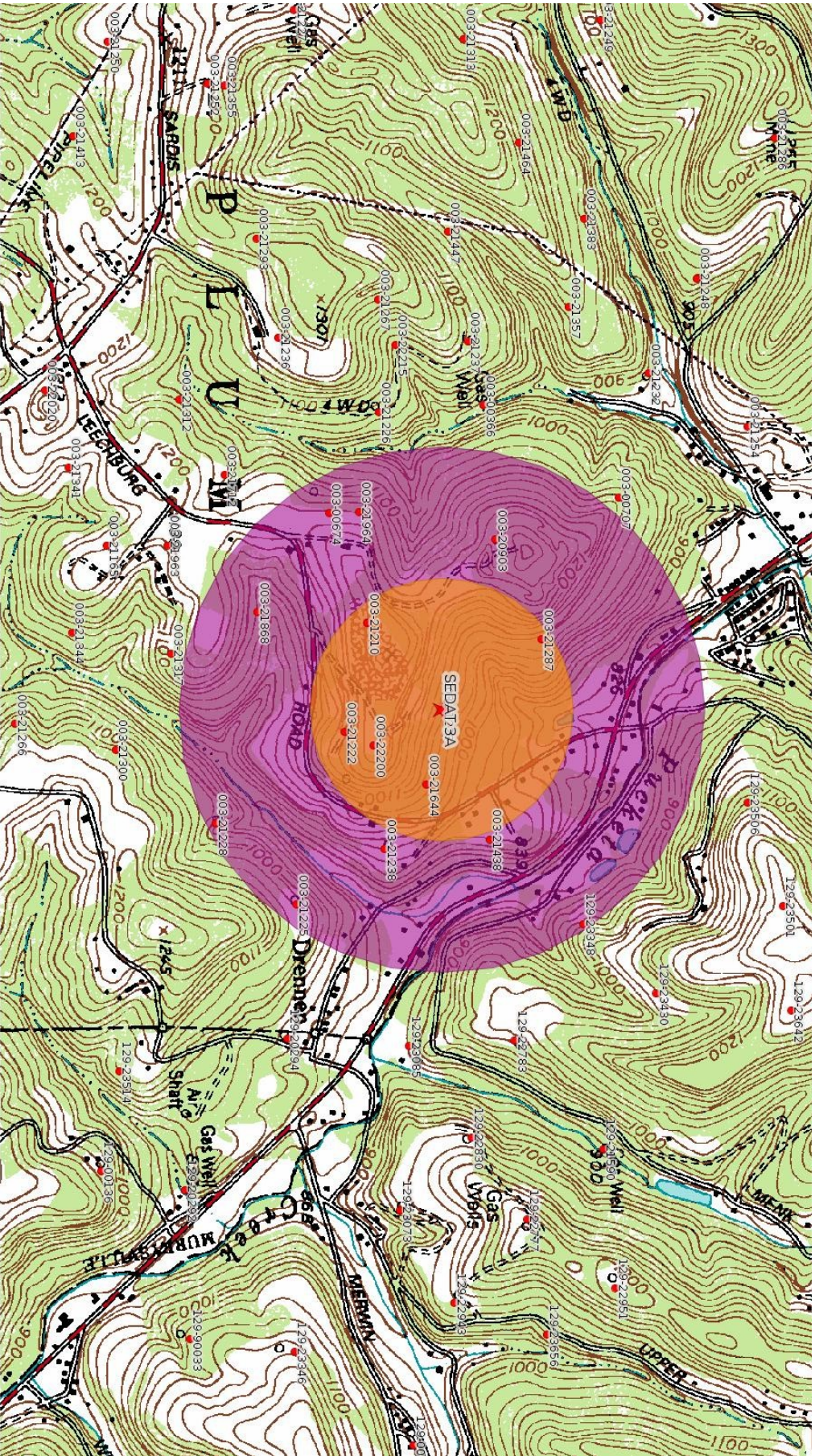
This point is so obvious that it should be embarrassing to an organization with "Environmental Protection" in its name that is it left for us citizens to point out. The material intended for disposal in Well is classified by DEP as "Residual Waste". It is worth noting that the use of the term "residual" rather than "hazardous" is not the result of any scientific finding concerning the lack of impact on health of exposure to such waste. Surface spills of such waste are a direct threat to the health and safety of any waters to which they may migrate. For EPA not to require maximum protection against such surface spills is outrageous and inexcusable. Containment of possible surface spills is a bare minimum of the level of protection that should be required. EPA must amend Permit Construction Requirements (Section III A, pp. 14-16) to include the strongest possible protections against the threat of surface spills.

James E. Rosenberg  
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555 Davidson Road  
Grindstone, PA 15442

## Appendix 1

USGS “geotiff” New Kensington East 1:24000 Topographic Map  
Overlaid with the 0.25 Mile Proposed AOR (Orange) and  
0.5 Mile Area Required in NOD 1 (Purple)  
and Nearby Oil & Gas Wells

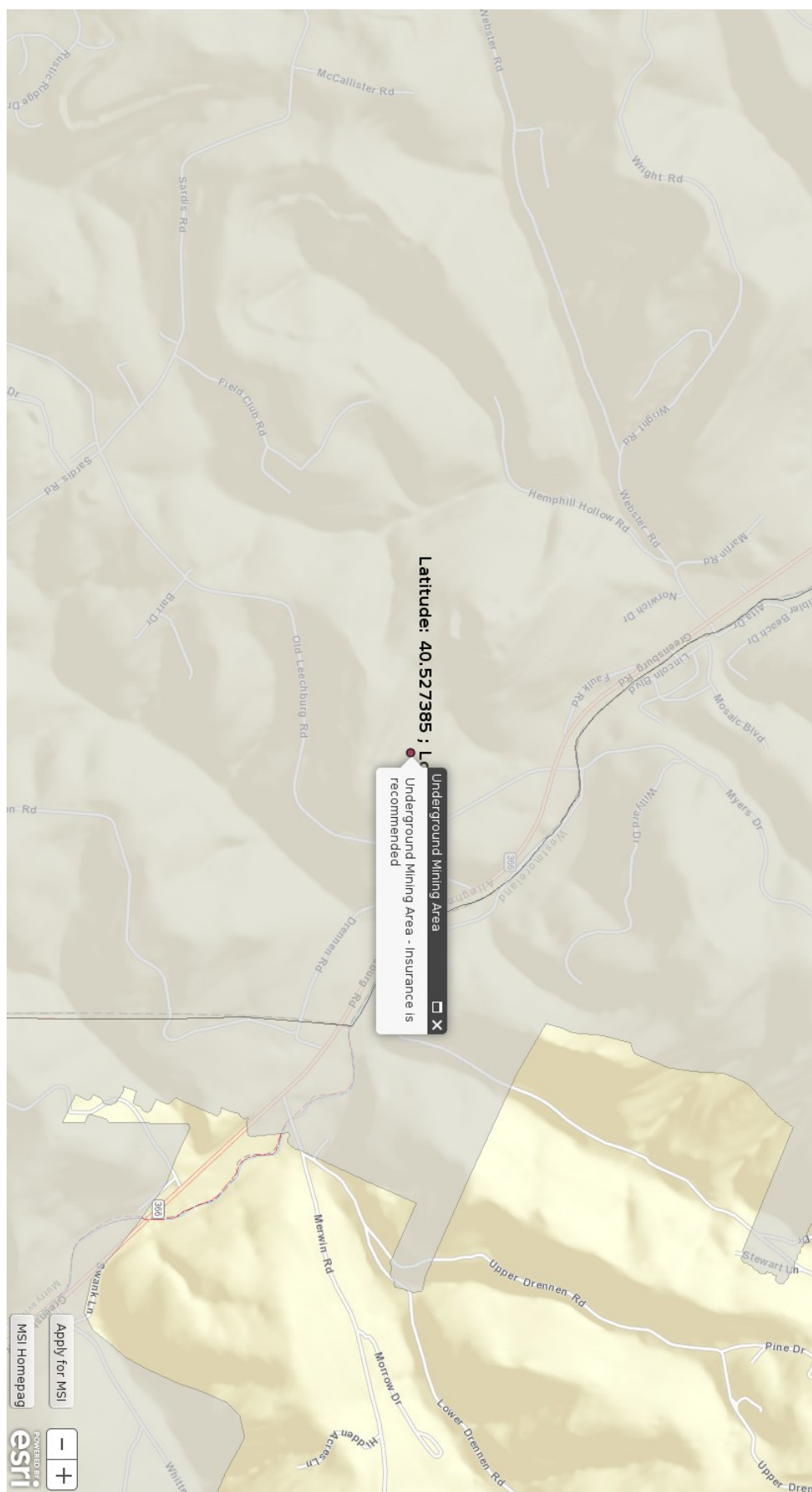






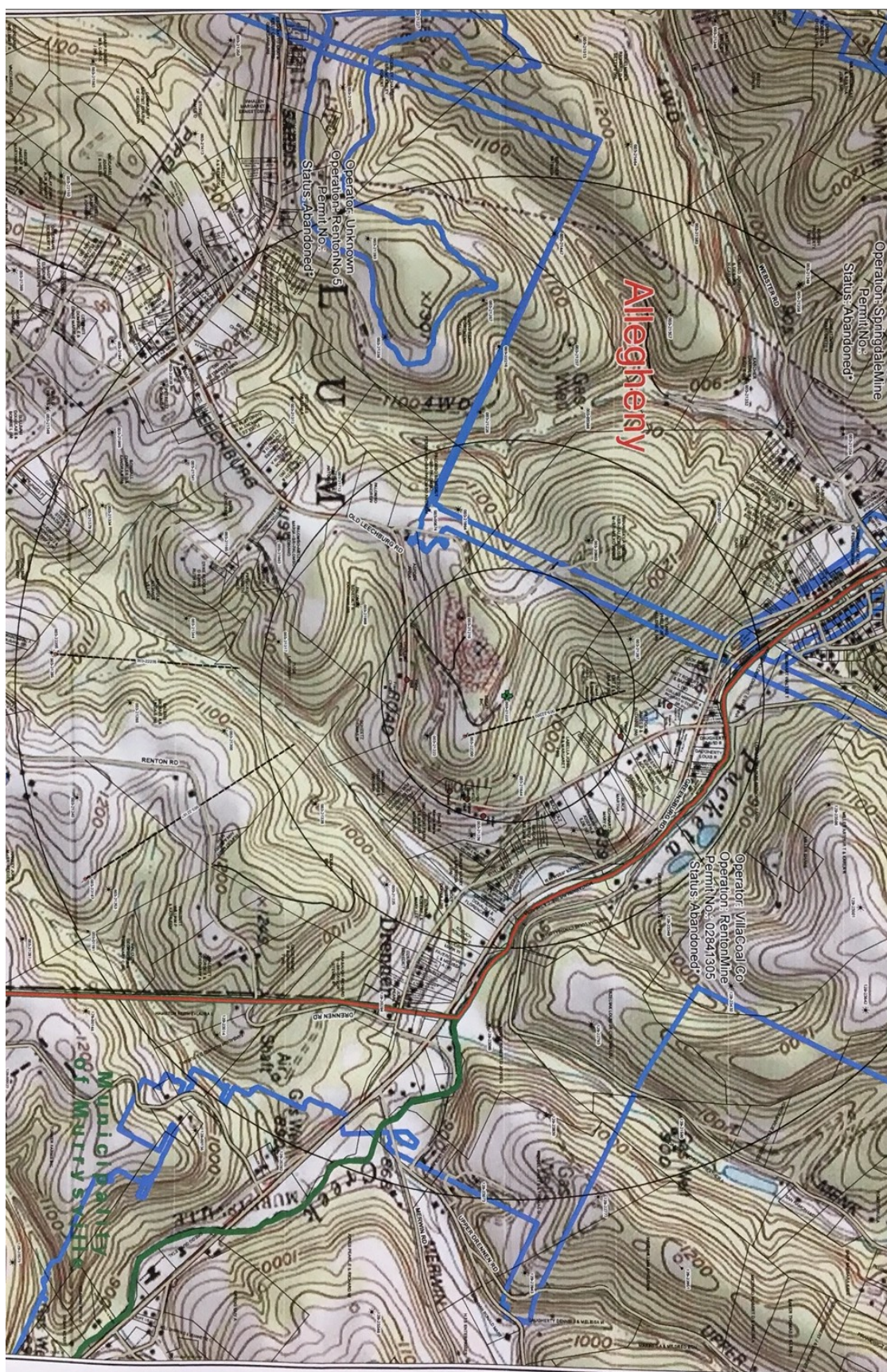
## Appendix 2

### DEP Mine Subsidence Insurance Risk Map for the Vicinity of Sedat 3A



Appendix 3  
Screen Shot from Penneco Application Materials Map  
Proposed Injection Well for Penneco Environmental Solutions, LLC  
Showing the Renton Deep Mine







July 31, 2017

Environmental Protection Agency Region III  
c/o James C. Bennett Jr., Branch Chief  
Water Protection Division  
1650 Arch Street (3WP22)  
Philadelphia, PA 19103  
E-Mail: bennett.james@epa.gov

Dear Mr. Bennett,

I am writing to you as a concerned citizen and parent of two school aged children. We reside in Plum Borough where you are considering a permit, applied for by Penneco Oil & Gas, to use an old gas well located off of Old Leechburg Road as an injection well. The draft permit will allow PENNECO to convert and operate one well for the injection of produced fluids from oil and gas operations into the ground at an interval depth of 1,896 – 1,936 feet. The permit will be valid for 10 years from the date of signing. I have serious concerns about the safety of this process and how it might adversely impact my community.

I attended the hearing after hearing about it from another concerned friend. I do not belong to an environmental group and do not consider myself an activist. I believe however in the most basic human right of safe, clean water and I feel that allowing this permit will jeopardize that right. After hearing all that was said at the hearing, I can see no benefit to Plum Borough to allow this risk to our health.

At the hearing I was sitting behind representatives of Penneco. I was aghast at the cavalier attitude that they conveyed throughout the meeting. I worry that they will not properly address citizen concerns and in fact will only do what is in the best interest of the company.

I hope that you will act in the best interest of the families of Plum Borough and deny this permit.

Respectfully,



Leigh Weiss

425 Vale Avenue

Plum, PA 15239

412-951-6106

Ms. Leigh Weiss  
425 V ale Ave  
Plum, PA 15239

Office of Drinking Water &

Source Water Protection  
3WP20. 21. 22

AUG 07 2017

Environmental Protection Agency Region III  
c/o James C. Bennett Jr., Branch Chief  
Water Protection Division  
1650 Arch Street (3WP22)  
Philadelphia, PA 19103

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