John E. McNerney
2460 Old State Rd.
Venus, PA 16364-2912

814 354-2459

The Administrator

U.S. Environmental Protection Agency

1200 Pennsylvania Avenue Northwest

Washington, D.C 20004

October 19, 2012

Re: Appeal of Stonehaven Energy Mgt. LLC

Permit # PAS2D010BVEN

Yes I was a speaker at the June 12, 2012 meeting at the Seneca Volunteer Fire Department, Seneca, Pa.

Information pertaining to my appeal contained within.

Copies sent to:

EPA Region III – Att: Karen Johnson 1650 Arch Street, Philadelphia, PA.

US Dept. of Justice – Att: David J. Hickton

Commonwealth of PA – Att: Thomas Corbett, Governor

J E M

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October 19, 2012

My appeal pertaining to the purposed underground injection control permit

for "Stonehaven Energy Management LLC" on what is known as the

Latshaw Property –Permit #PAS2D010BVEN. Our property also in Venango County, PA approximately six miles as the crow flies from the Stonehaven proposal has many Speechley Gas Wells formerly owned by National Fuel Gas sold or gifted to S.G. Thompson, an individual of RD #4, Centerville, PA. The date of June 01, 1983 containing two hundred seventeen wells. Some of these wells surrounding our property have NEVER been gauged or pumped since Thompson took over in 1983.

Due to NO maintenance on these wells, illegal plugging of these wells, illegal disposal of brine we now have NO potable water! This is due to the pollution of LEAD, iron, brine, magnesium, calcium, manganese, crude oil.

Ground water test coming up thru the basement floor. The last test I took was March 19, 2010 3.4000 for LEAD pressure tank 0.3700 for LEAD.

We have been trying to get Thompson Oil & Gas into court since 1995.

We have not only lost the items listed above we have lost many of our Constitutional Rights in Venango County, PA. We have lost our rights to a fair trial – not as dependents but as the plantif so far – that being Case # 1198-1995.

Second case a complaint filed August 27, 2009 with the Venango County, PA District Attorney.

I firmly believe there is a conspiracy in Venango County, PA that along with organized crime. We do not have the benefit of the Sheriff to investigate crime. The PA State Police, Franklin, PA Barricks does NOT investigate timber theft in Venango County, PA (over $20,000.00 worth) by order of Senior Judge H. William White. If they were to investigate they would find

In the Venango County Courthouse fraudlient deed filed by the attorney for E.C.S. Partnership who is also responsible for encroachment of property and timber theft. That deed in question did not arrive in the Venango County index for seventy four days AFTER it was time stamped by the then Register and Recorder, Sue Buchan.

J &M

A surveyor hired by the McNerney's and paid in full of over $2600.00 did NOT finish the job. A hearing was held by the McNerney's in Magistrate Doug Dinbergs Office – who settled in favor of the surveyor. If that surveyor would have finished the survey it would have proved we were also encroached on the south of the parcel in question by National Fuel Gas!

If the source of pollution were cleaned up like the gas wells were plugged properly, which they are NOT, the gas wells that are on production were maintained properly which they are NOT, the strip mine east of our property cleaned up I also believe the shale pit east of our property has some problems.

In other words, I believe if the above mentioned was done in a proper manner it would still take hundreds of years for nature to replenish its self.

We have lost our health, potable water, theft of oil and gas, encroachment of property and theft of timber!

Due to the fact the Sheriff can NOT investigate crime in Venango County, PA – the Venango County, PA Commissioners do NOT investigate some crime, the Judge can tell the PA State Police when to investigate crime and when not to investigate crime to protect the courts from prosecution – this would also include magistrate offices.

The reason for this information is that I firmly believe any Civil matters pertaining to the problems we are having – there is no way we could be assured of a fair trial.

Many offices in the Venango County, PA District Attorney and the Assistant Venango County PA District Attorney!

With what the conspirators are doing in Venango County, PA it looks like a "take over" of law enforcement and justice.

Would not this be a coup d' etat?

J. McM

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Why I believe there is potential for a catastrophy being caused by the underground conjection control: Permit #PAS2D010BVEN

#1 A water well being drilled along the south side of SR157 just a short distance from the injection well site.

This water well was NOT down to the Mountain Sand when a gush of water from the well with such force that it flooded the ditches along SR 157 and flowed across it. This water when it first appeared looked like it would be used for a source of potable water but after a period of time it turned to water that could NOT possibly be used.

There was talk of casing it off and going to the Mountain Sand, but they decided against it.

This contaminated water had to be coming from the coal mine. The water well was than plugged. This purposed water well would be close to the Horsecreek head waters. Horsecreek empties into the Allegheny River just above where Oil City, PA gets their water.

Oil City does not get their water from the Allegheny River but they do have several water wells beside the river. These wells are fed by a water course directly under the Allegheny River.

Cranberry Coal Mines

The coal mines are both drift mines and surface mines. Part of the surface mining was used as a sanitary land fill. Quite some time ago there was talk of extending that landfill. The people were up in arms. An article written by E.L. Vandermark went into detail as to how and an accident at that site could cause extensive damage to Oil City, PA water shed.

The idea to extend that landfill was turned down! The coal mines that we are talking about cover a vast area. A railroad was built from Oil City, PA to Cranberry, PA to haul the coal down to the main line. Most Venango County, PA history books refer to this as the Cranberry Railroad and talks about a wreck the railroad had.

I do not know what kind of roof support the Cranberry mines used whether they be post and beam, plaster or by leaving a wall of coal to support the roof. There has been evidence of mine subsidence in the area. If this vast amount of contaminated water were to be somehow released it would flow

J E M

into Horsecreek. This would surely cause problems for Oil City, PA and any community's down river from Horsecreek.

#2 In the matter with earthquakes in the area and what damage they can do to water lines, gas lines, etc.

See four pages enclosed by Judy Etzel, also "Ohio Earthquakes caused by Drilling Wastewater Well". This is just a few of the pages I have pertaining to earthquakes and faults.

#3 Is the migration of fluid using the gas well as a conduct to it's water course. See information enclosed.

The migration has happened on our property on more than one occasion.

#4 The Speechley wells on the Latshaw are within close proximity. Some of the wells or/are United National Gas wells. It is possible these wells were transferred from United National Gas to S.B. Thompson in 1983.

If Thompson repaired or plugged in a manner that he did on our property it could be a real source of trouble.

See information enclosed pertaining to wells on our property. Well #721, #726, #2514, #4221, #4274 and #202.

Gas Well #721

This well was one of the wells that served as a conduit for mine drainage to enter the water course. Shortly after Thompson took over he put a bridge in this well at 1600 feet while trying to put it back into production. He later pulled the rods and tubing and let it set for twenty seven years. This well is in close proximity to a strip mine.

Gas Well #2514

In the same time frame as Gas Well #721 Thompson put a bridge in Well #2514 at 360 feet. He removed all casing and filled the bore with what looked like plain dirt. I complained to D.E.P. about the well NOT being plugged properly and the drainage from the strip mine that passes exactly 30 feet from the well head and the drainage contained high levels of LEAD.

D.E.P. did not inform the contractor S&T Service of Pleasantville, PA about the LEAD. S&T did in fact dam up mine drainage and used it by recirculating down the well thru an inch and a half pipe inside a four inch

J &m

pipe to bring the dirt up and out of the bore so that the bridge could be removed and the well plugged in a proper manor. This process caused our well water and ground water to go to extremely high readings.

Gas Well #726

Thompson made some kind of repair to this well. After the repairs our submersible pump was plugged off with silt that contained magnesium 5.20 ppm (parts per millimeter), sodium 4.51 ppm, calcium 3.25 ppm, manganese 2.39 ppm, iron (fes) 0.15 this in turn burnt up the water pump.

Gas Well #4221

While on a field trip with Bruce Miller, well scout for National Fuel Gas we discovered crude oil leaking from the plugged gas well #4221 or from a water well just beside it. We could not tell where it was coming from. This was turned over to D.E.P. by Bruce and myself. This was investigated by Gary Clark of D.E.P. but he did not investigate it for weeks after it happened. In Gary's report he said there was NO evidence of crude leaking at Well #4221. I returned to the site to investigate Gary's findings. There had been at least three inches of top soil removed from the site. I say three inches because on the first visit with Bruce the casing was level with the surface. On my last visit the casing extended three inches above the surface.

Gas Well #4274

This well is where the crude migrated from to Gas Well #4221. Thompson made some repairs to Well #4274 this is when our pond turned red and killed All of our fish. Anytime Thompson was working on Gas Wells that were higher than our pond, our pond turned RED. This happened at least four times. This is why I said if Thompson did any repairs or plugging near the Latshaw injection field there could be a problem.

Gas Well #202

The Plugging of Gas Well #202

I was lead to believe that the source of our water well and ground water problems plus the deposit coming up thru our basement floor was caused by Gas Well #202. This was NOT to be! The plugging of Gas Well #202 was done in a irresponsible illegal way right before the eyes of no less than six D.E.P. inspectors or geologists. The plugging permit filled out by S.B.

J E M

Thompson Oil and Gas producer is false. It talks about how much casing was removed. In fact it was eaten away years before. It also talks about how much three inch pipe was removed. The figures on the Plugging Permit is wrong! I have the correct figures and evidence to prove it. FACT the three inch was driven down the bore of the well until it would NOT go any further. Then they brought a shooter in to shoot the four inch off. The shot was lowered to the bottom of the three inch and raised back up to 875 feet from the surface. Only the first joint was removed after the shot. There is NO reason that the three inch could not have been shot off at the packer so that a plug could be set to insure migration of gas. I have evidence pertaining to this.

Information in Packet A pertains to the Stonehaven project.

Information in Packet B pertains to why I am against the Stonehaven project.

J & M

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Responsiveness Summary to Public Comment for The Issuance of an Underground Injection Control (UIC) Permit for Stonehaven Energy Management, LLC

On May 1, 2012, the U.S. Environmental Protection Agency (EPA) Region III issued a public notice requesting comment and the opportunity for a public hearing for the proposed issuance of an Underground Injection Control (UIC) permit, PAS2D010BVEN, for Stonehaven Energy Management, LLC (Stonehaven). EPA received numerous requests to hold this hearing and the hearing was held on June 12, 2012 at the Seneca Volunteer Fire Department in Seneca, Pennsylvania. Over 100 people attended this public hearing and EPA received oral comments from 12 people in attendance at the hearing. At the conclusion of the public hearing, EPA extended the public comment period until June 19, 2012, and invited any additional written comments.

The responsiveness summary which follows provides responses to questions and issues raised from people who either sent written public comment to the attention of EPA Region III, or who provided comment at the hearing. EPA wishes to thank the public for their informative and thoughtful comments and to thank the people from the Seneca Volunteer Fire Department that assisted EPA in hosting the public hearing.

1) What does EPA's UIC program have jurisdiction and authority to regulate?

Some people raised concerns over which the EPA UIC program does not have the regulatory jurisdiction to address in the UIC permitting process. Some of these concerns included the potential for increased truck traffic, the potential for damage to the roads, increased noise, diminishment of property values, wildlife protection and surface water spill prevention plans. When making the decision whether to issue a UIC permit for Stonehaven, EPA's jurisdiction rests solely in determining whether the proposed injection operation will safely protect underground sources of drinking water (USDWs) (i.e., aquifer systems containing less than 10,000 milligrams per liter total dissolved solids). Although these other concerns may be relevant, they cannot be addressed within a UIC permit. The public would need to seek assistance through local Township or County ordinances for traffic, road and noise concerns and state or other federal agencies for concerns regarding wildlife protection and surface water spill prevention.

It is relevant to note that every UIC permit that EPA Region III issues contains several permit conditions that require the permittee to meet all other local, state or federal laws that are in place. Part I. A. of the proposed permit contains a clause that states, "Issuance of this permit does not convey property rights or mineral rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, an invasion of other property rights or any infringement of State or local law or regulations." In addition, Part I. D. 12 of the proposed permit indicates, "Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established

pursuant to any applicable state law or regulation." Therefore, EPA's UIC permit is only one of several authorizations that a permittee may be required to obtain before it is allowed to commence operation.

2) EPA should require the operator to find another location for disposal.

Similar to the response above, EPA does not have the jurisdiction to direct an operator to a particular geographic location within a state. The location chosen by an operator is based on many factors: economics, property ownership, geologic suitability, etc.. It is EPA's responsibility to review each UIC permit application it receives and make a determination as to whether USDWs will be protected from the proposed operation, not to identify suitable injection sites. Likewise, EPA cannot deny a permit because of residents' opposition to the location.

3) Construction of the injection well should require cementing of the long string casing above the Venango Sands or to the surface.

Section 147.1955(b)(5) of the UIC regulations requires the long string casing in an injection well to isolate the injection zone by placing a sufficient volume of cement behind the long string casing to fill the annular space to a point 50 feet above the injection zone. The long string casing annular space is the outermost annular space within the injection well (i.e., the space between the casing and the wellbore). Stonehaven has proposed cementing the long string casing to 100 feet above the injection zone, which exceeds the UIC regulatory requirement.

It is important to also mention that the injection well's injection tubing/casing annulus (i.e., the innermost annulus within the injection well) will be monitored continuously during the injection operation. A positive pressure will be placed on this annulus and if the tubing or packer in the well were to leak, it would be this casing/tubing annulus that would detect a pressure change and result in the injection well to stop operating.

4) The monitoring wells Stonehaven has proposed to utilize to monitor the injection operation should completely isolate the Speechley formation (the injection zone) and a ring of monitoring wells should be required around the facility.

EPA does not believe that a ring of monitoring wells, circumscribing the facility, will be any more protective than the monitoring Stonehaven has proposed. Stonehaven has proposed using three production wells that have been drilled into the Speechley formation as monitoring wells. These wells will be used to monitor the fluid level in the Speechley formation during the injection operation. Monitoring the fluid level in these locations will provide sufficient information on the pressure response from the injection operation and ensure that fluids in the Speechley formation do not migrate upwards into USDWs.

The proposed monitoring wells, as currently constructed (Latshaw #12, Latshaw #15 and Latshaw #25), do not currently isolate the Speechley formation. The wells have open-hole intervals which extend upwards to the Venango Sands, so each proposed monitoring well could be influenced by fluid contribution from other formations above the Speechley. EPA will therefore require that each monitoring well completely isolate the Speechley formation from the rest of the wellbore by placing a monitoring string on a packer set immediately above the Speechley formation. (See Part II. C.2. of the permit.) Also, please refer to comment #7 for additional information regarding fluid level monitoring.

5) Is this proposed injection activity in an earthquake prone area?

EPA has no evidence the location proposed for this injection operation is located in a seismically active area. Evidence indicates that there are no deep-seated transmissive faults that intersect the proposed injection zone or that could be influenced by the proposed injection operation in the future. It is important to keep in mind that the reservoir proposed for injection, the Speechley Formation, produced, and continues to produce oil and natural gas. During production, oil and natural gas have been removed from the pore space within this reservoir, depleting the formation of much of the oil and natural gas it contained as well as reducing the formation's reservoir pressure. Earthquakes can occur when a geologic formation becomes under-pressurized (i.e., through geologic formation collapse causing the structure of the formation to shift) or when it becomes over-pressurized. Although the Speechley Formation in this location is presently under-pressurized from decades of oil and natural gas production, there has been no evidence of earthquakes due to the removal of the oil and natural gas. In addition, the proposed injection operation will not over-pressurize the formation. Because of the removal of the oil and natural gas, pore space has been created to accept the injection of fluid. The permit is also conditioned to prevent the over-pressurization, or fracturing, of the formation through the maximum injection pressure limitation set by this permit.

6) Are the fluids being injected toxic, hazardous and/or radioactive?

Individual constituents within the fluid produced from an oil or gas production reservoir can be determined to be toxic, hazardous or radioactive. However, these fluids, when produced in association with oil and gas production, are exempt from hazardous waste regulation and are not classified as hazardous under the Resource Conservation and Recovery Act. Therefore, the UIC program does not regulate fluids produced in association with oil and gas production activities as hazardous waste. Disposal of these fluids is permissible down a Class II brine disposal injection well. Commenters raised the issue that the disposal of these fluids underground is not safe. However, other commenters also mentioned that the injection of these fluids deep underground is safer than allowing them to be discharged into a stream or a river or allowing them to overflow or seep into the ground from above-ground containment pits. One of the major functions of the UIC regulations is to provide a regulated alternative whereby oil and gas related fluids may be safely managed.

7) Abandoned wells may pose a risk to drinking water supplies.

It is a fact that abandoned wells can pose a risk to USDWs by providing a conduit for the migration of fluid out of an injection zone. There are several requirements that the UIC regulations, as well as a UIC permit, impose on an operator to ensure that abandoned wells will not pose a risk to USDWs. The operator is required to conduct a thorough evaluation within a specified area around his proposed operation to determine whether any abandoned wells exist within that area which could pose a threat to USDWs. This area is termed the area of review. The area of review can be a fixed radius of not less than one-quarter mile around an injection well or injection wells (i.e., for an area permit) or may be a calculated "zone of endangering influence." The zone of endangering influence calculation is based on geologic parameters found in the injection zone, such as permeability, porosity, etc. and proposed operational conditions, such as injection volumes, rates, length of injection, etc.. The operator must review all information of public record or information that they have knowledge of to determine whether any abandoned wells or other potential conduits exist within the area of review or zone of endangering influence, that penetrate the proposed injection zone, in this case, the Speechley

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Formation. If abandoned wells are found to exist, then corrective action, in the form of plugging and abandonment of those wells, must be taken or the applicant can propose that certain wells be used for monitoring.

Stonehaven used a fixed radius of one-quarter mile for their area of review. EPA conducted a zone of endangering influence calculation which verified that the fixed radius of one-quarter mile for the area of review was acceptable. The only wells found that penetrate the Speechley Formation within the one-quarter mile area of review are the Latshaw #12 and the Latshaw #25 production wells. The Latshaw #15 production well is located approximately 300 feet outside the one-quarter mile area of review. All three of the Latshaw wells will be used as monitoring wells to monitor any changes in the fluid level in the Speechley formation associated with the proposed injection operation. EPA recently monitored the fluid level in the Latshaw #15 and Latshaw #25 production wells to gather background fluid level information. The fluid levels were approximately 1780 feet and 1845 feet below land surface, respectively. Since this fluid level is deep, approximately 680 feet below the deepest Venango Sand and approximately 1300 feet below the lowermost USDW, these wells will provide an excellent monitoring system to ensure that fluid levels will not migrate upward into USDWs. By monitoring fluid level, and making sure that it remains safely below the lowermost USDW, even if an abandoned well were to be discovered in the future (i.e., a well that might have been drilled in the past without having information of public record), the monitoring will detect and prevent fluid migration into the lowermost USDW.

During the public hearing, commenters indicated to EPA that they did not think that all abandoned wells near the proposed injection site had been documented. It is clear that in the past this area was heavily drilled for oil and gas production. Maps produced at the public hearing, dating back to 1944, showed evidence of significant drilling in the area. Commenters indicated that it's likely that many abandoned wells have been plowed over or that well casing was removed to assist in providing steel to the war effort during World War II. The applicant has put forth a good faith effort to provide abandoned well information of public record. EPA requested, during the public hearing, that if the public knew specifically about other abandoned wells in the area of review they provide that information to EPA so corrective action could be taken prior to injection. Attempts were made by both EPA and Stonehaven to field verify additional abandoned wells. No additional abandoned wells, in the Speechley formation or in the shallower Venango Sands, within the area of review, were identified by the public or during the field verification. However, as discussed above, the fluid level monitoring program required as a condition in the permit is designed to help ensure that fluids will not migrate into USDWs. If in the future an abandoned well is discovered within the area of review, the permit requires that immediate corrective action, in the form of plugging and abandonment, be taken on that well by the operator.

8) A cement bond log should be performed on the injection well.

The permittee will be installing 5 ½ inch surface casing to 450 feet, which will be cemented back to the surface. The permittee will also be installing 3 ½ inch long string casing (also referred to as production casing) to approximately 1923 feet, which will be cemented back to at least 100 feet above that depth. In both cases, a cement bond log will be run to verify cement bonding and isolation of the injection zone. Cementing records will also be submitted. In addition, prior to allowing injection to commence, an internal mechanical integrity pressure test will be performed to ensure that the well's casing, tubing and packer does not leak. Once injection is authorized, the well will be monitored continuously for injection pressure, annular pressure and injection volume.

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9) Stonehaven must demonstrate financial resources should a well failure occur.

Under the UIC regulations, owners and operators of injection wells are required to demonstrate financial responsibility in order to properly plug and abandon the injection well when the operation ceases and the well is no longer used for injection. Stonehaven has submitted a $10,000 letter of credit with a standby trust agreement for the plugging and abandonment of the Latshaw #9 injection well. This submission was reviewed and has been approved by EPA Region III.

Although a separate issue from the financial responsibility required as part of the UIC permit, EPA also has emergency authorities in place under the Safe Drinking Water Act (SDWA) if endangerment to USDWs should result from injection activities. Section 1431 under the SDWA allows EPA to take an action against a responsible party if the potential for endangerment exists. This action can include a requirement that the responsible party provide alternative drinking water to a citizen affected by the endangerment.

10) Wastewater entering the facility for injection should be more fully characterized.

EPA believes that the conditions in Part II, C.3. and C.4., within the permit, are sufficient to adequately characterize and monitor the wastewater for injection purposes. If this wastewater were to be disposed in a different manner (i.e., disposed directly into the environment by a stream discharge) then a more extensive characterization would be necessary. However, this wastewater will be injected well below land surface into an existing oil and gas bearing formation similar in nature to where the wastewater is generated. Stonehaven is operating this well as a private injection well, so only fluid produced during Stonehaven's production operations will be permitted to be injected down the Latshaw #9 injection well. EPA will periodically sample the injection fluid from Stonehaven's injection operation. If Stonehaven were to be found injecting fluids not authorized by the permit, they would be in violation of their permit and subject to enforcement action.

11) The UIC permit is issued for ten years. What happens after that, can the operator just walk away?

The UIC permit would be in effect for ten years from the date of issuance. After ten years, the operator may apply to EPA Region III for permit reissuance. EPA will make a determination as to whether the permit should be reissued at that time. If a determination is made to reissue the permit, EPA would public notice the permit reissuance and offer an opportunity for a public hearing. If the operator determines that they no longer wish to operate the injection well, the well must be plugged and abandoned in accordance with the UIC permit requirements and abide by all other closure requirements that have been imposed by local or state jurisdictions. The owner's financial responsibility is not released by EPA until the well is properly plugged and abandoned. As long as the well continues to operate, the monitoring and reporting requirements specified in the permit remain in-place.

12) The bottom-hole pressure during injection will be greater than the maximum injection pressure specified.

Yes, the bottom-hole pressure during operation will be greater than the maximum injection pressure. The maximum operating injection pressure specified in the permit has been calculated taking into account what the bottom-hole pressure will be. The bottom-hole pressure is the sum

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of the maximum operating pressure and the hydrostatic pressure. Both the maximum operating injection pressure and the bottom-hole pressure were developed to prevent the fracturing of the injection formation during operation.

13) There are endangered species and other wildlife that could be affected by the injection operation.

Four federally endangered fresh water mussel species have been identified and found to reside in the Allegheny River near Oil City, PA. These mussels are highly sensitive to high salinity water, particularly to elevated chloride concentrations. At its closest reach, the Allegheny River is located approximately four miles from the location of the injection well. The injection well is located in an area where oil and gas production has been occurring for the past 150 years. The fluid being injected will be disposed approximately 2000 feet below land surface and will have no impact on the river environment. If the fluid proposed to be injected down this injection well was disposed through the direct discharge to surface water, it would pose a greater threat to the fresh water mussels identified. Surface spills are regulated by the Pennsylvania Department of Environmental Protection. Stonehaven will need to comply with State spill prevention requirements at this injection well facility. In the case of any surface spill at the injection well facility, the spill prevention requirements are designed to prevent any fluid migration into any nearby surface water body, tributary, and especially to the Allegheny River located over four miles away.

Other commenters brought to EPA's attention the Eastern Massasauga Rattlesnake, which is listed as an endangered species by the Pennsylvania Fish and Boat Commission and as a candidate for listing under the federal Endangered Species Act. Populations of this snake are distributed throughout several counties in western Pennsylvania, including Venango County. As mentioned above, the area where the injection well is located has been, historically, a heavily drilled oil and gas production area for 150 years. The Latshaw #9 injection well was at one time an active production well. The well is simply being converted to an injection well, so the presence and operation of this well should not disrupt the habitat of the Eastern Massasauga Rattlesnake anymore than current oil and gas production taking place in the area. In addition, handling the produced fluid onsite will reduce truck traffic currently required to haul the produced fluid offsite to another disposal location.

14) Fluid injection into the Speechley formation could affect oil and gas production from Speechley wells owned by other property owners.

EPA does not anticipate that disposal into the Speechley formation will affect oil and gas production outside the area of review. The fluid level monitoring required by the permit will help to determine whether any fluid movement is occurring outside the area of review. Latshaw #15, one of the monitoring wells which will be utilized to monitor fluid level, is actually located approximately 300 feet outside the area of review. Since this monitoring well is the closest Speechley well to the disposal operation outside the area of review, it will help to determine whether other Speechley wells located outside the area of review will be affected by the disposal operation.

Federal Underground Injection Control Program
Permit Appeals Procedures

The provisions governing procedures for the appeal of an EPA permitting decision are

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defined at 40 CFR Part 124.19. The appeals process allows for a written petition of appeal from any person who commented on the draft permit, either in writing during the comment period or orally at the public hearing. Persons who have not previously been involved in the comment period are limited in their appeal rights to those points which have been changed between the draft and final permits. Appeals may be made by citizens, groups, organizations, governments and the permittee within this procedural framework.

A petition for appeal must be filed within thirty (30) days of the date of the accompanying announcement of EPA's permit decision. Such written requests are to be addressed to EPA at the address listed below with a copy sent to EPA Region III.

The Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue Northwest
Washington, DC 20004

The petition should specify the reasons supporting the appeal of the permit and a demonstration that the petitioner had raised the issue previously during the comment period or at the hearing. If the appeal is based on a change between the draft and final permit conditions, it should be so stated explicitly. The petitioner must also state whether, in his or her opinion, the permit decision or the permit's conditions appealed are objectionable because of:

1. Factual or legal error, or

2. The incorporation of a policy consideration which the Administrator should, at his or her discretion, review.

Within a reasonable time of receipt of the Appeals Petition, the Administrator will either grant or deny the appeal. Denials are considered final agency action, upon which the permit becomes effective, and the Agency will so notify the petitioner. The petitioner may, thereafter, challenge the permit decision in Federal District Court.

If a petition for appeal is granted, EPA must so notify the public in accordance with the notification requirements of 40 CFR 124.10. The public notice shall set forth a timetable by which the person(s) making an appeal and EPA, as the permitting authority, must submit written briefs and shall also specify that any interested party may submit an amicus brief within these deadlines.

When a petition for appeal is granted, the permit conditions appealed are not deemed to be in effect and if these permit conditions are essential to the operation, the activity may not commence. Individually contested permit conditions are also stayed (not in effect) but other permit conditions are still in effect if they are legally severable from the contested condition.

The EPA Administrator will decide the appeal on the basis of the written briefs and the total administrative record of the permit action. If the Administrator decides the appeal on its merits, he or she will direct the Region III office to implement his or her decision by permit issuance, modification or denial. The Administrator may order all or part of the permit decision back to the EPA Region III office for reconsideration. In either case, a final agency decision has occurred when the permit is issued, modified or denied and an Agency decision is announced. After this time, all administrative appeals have been exhausted, and any further challenges to the permit decision must be made to Federal District Court.

J E M

Page A

Date: Mon 14-Jun-1999
Publication: DK
Category: PG1
Author: JUDYE
Illustration: I

Quake was a shocker
in intensity, location
(this has a two-col graph with it, slugged ``Quake-1" and in holdpix
By JUDITH O. ETZEL
Staff writer

The ***earthquake*** which rattled the region 10 months ago was the strongest ever recorded in Pennsylvania.

It also was considered a rare ***earthquake*** because it occurred in an area that very seldom experiences tremors.

That's the conclusion of the Bureau of Topographic and Geologic Survey, the state agency which monitors and studies natural phenomena, including earthquakes.

A quarterly publication issued by the bureau outlines the preliminary results from an investigation into the quake.

The Sept. 25, ***1998***, tremor is known as the Pymatuning ***earthquake*** because the epicenter was located near the south end of Pymantuning Reservoir in Crawford County. The center was just outside Greenville.

The quake, which struck at 3:52 p.m., had a magnitude of 5.2 and an estimated depth of 3 miles. It was felt over an area of about 77,230 square miles.

Residents throughout northern Ohio, western Pennsylvania, western New York and southern Ontario keenly felt the earth shudder that afternoon. But, the tremors were also noticed as far west as Illinois, east to New Jersey and south to Virginia.

Until then, the most severe ***earthquake*** in this region was Jan. 31, 1986. That quake, which measured 5.0, was centered about 40 miles west/northwest of the Pymatuning shock.

The ***1998 earthquake*** has spawned at least 11 aftershocks. The first was a magnitude 2.0 on Oct. 9, two weeks after the main shock. The latest was in March 1999.

The state geologic report also contained the following information:

Until ***1998***, quakes of any appreciable magnitude had been recorded mainly in or near Lancaster County in southeastern Pennsylvania.

The maximum intensity of the Pymatuning ***earthquake*** was rated at a level 6 on a scale of one to 12, with 12 being the greatest intensity.

The rating of level 6 meant the quake was felt by all within the area. Other notes include that many residents were frightened and ran outdoors and numerous people reported ``walking unsteadily."

J & M

Page B

A considerable quantity of dishes and other glassware was broken close to the epicenter. In a few cases, windows were broken, furniture was overturned and chimneys damaged. Most of that occurred in Greenville and Jamestown, two communities within the hardest hit area.

However, damage was generally minimal with one exception: ***water wells***.

``The cost of most earthquakes is highly visible damage to buildings . . . but the cost of the Pymatuning hydrologic effects is a hidden result of this ***earthquake***," noted the bureau report.

More than 100 homeowners' ***water wells*** near the epicenter were damaged, and many soon went dry. Some residents reported the formation of ``new flowing artesian ***wells***, the formation of new springs, and changes in well-***water*** quality."

In effect, the quake caused new fractures and re-opened old cracks near underground ***water*** sources and the ***water***-table dropped.

Property owners were forced to abandon ***wells*** which went dry and have new ***water wells*** driven at their own expense. Only one person had ***earthquake*** insurance, noted the bureau, to pay for the work.

Other damage-related incidents soon surfaced. In Oil City, for example, a rash of ***water*** line breaks began soon after the quake.

One reason the ***earthquake*** was so noticeable to western Pennsylvania residents lies in the area's geology. Beneath the valleys are thick, unconsolidated glacial deposits, said the bureau, and that amplified ***earthquake earthquake***-generated ground motion.

The ***1998*** quake sparked serious study by state and federal agencies. Field parties from the Center for ***Earthquake*** Research and Information, the Lamont-Doherty Earth Observatory, and the U.S. Geological Survey arrived in the area. They brought with them a dozen portable seismographs to record aftershocks.

A web site was immediately established and the data collected in the ***earthquake*** study funneled to it. The bureau's aim was to tell people about the investigation results as well as solicit information about the ***earthquake*** from area residents who experienced it.

``The volume of e-mail observations far exceeded what had been collected previously for earthquakes occurring in the eastern U.S.," wrote the bureau.

The Pymatuning ***earthquake*** scale of 5.2 was relatively small when compared to other areas. California, reported the bureau, has several events of that size each year.

It was the unusual location in western Pennsylvania which prompted such considerable interest among residents as well as scientists, said a state geologist. The quake caught both groups by surprise.

``The Pymatuning ***earthquake*** jolted a community into an awareness of its relationship with the earth," reported the bureau.

J & M

Page C.

Date: Sat 26-Sep-1998
Publication: DK
Category: PG1
Author: JUDYE

Did anybody get the
number of that truck?
By The Derrick staff

Emergency agencies and newspaper offices were deluged with calls from residents curious about the Friday afternoon ***earthquake***.

Most accounts described the experience as less than a foot-tingling tremor and more like a feeling of a large object rushing by.

``It felt like I was in a car being passed by a semi that was going three or four times the speed I was," said Gary Dittman, administrator of the Venango County Area Agency on Aging.

Dittman, at work on the second floor of the county Exchange Building, said he saw water sloshing around in a plastic water pitcher in his office.

Other Exchange Building workers reported feeling the building shifting for several seconds. Some reported hearing windows rattle and seeing blinds moving. Those sitting down described the tremor as causing a ``gentle side-to-side motion."

One woman was on the phone with her husband when the quake hit. Her spouse, a resident of Keely Road, said, ``The whole house shook."

For some residents like George ***Scanlon*** of 199 Orchard St. in Franklin, the quake felt harder.

``I heard this rumbling noise and thought it must be a helluva big truck coming down 15th (Street). My chair shook like you can't believe it as this thing went sideways through my room," said ***Scanlon***.

At first, he was skeptical about the shaking being caused by an ***earthquake***.

``The first thing I thought was that carpenter ants must have finished chewing the beams downstairs. I'll tell you: it didn't last long but it shook like hell for a moment," said ***Scanlon***.

Chris Hulsizer of 409 W. Fourth St. in Oil City was talking on the telephone when she felt her house shake.

``I was sitting here talking on the phone and I'm yelling at my son. I thought he was jumping in the house again. My daughter came down and said her mirrors were shaking," said Hulsizer.

Employees on the third floor of the Venango County Courthouse felt the afternoon tremor and moved from their offices out in to the hallway.

``It was shaky. There was a lot of movement. The first thing I did was look around for a Ryder truck, then I knew what was happening. . . . Ithought, this building's going down . . . so I went to the center of the building," said Christine Ralston, central court administrator. Ralston said she was in the old courthouse

J.E.M

annex when an ***earthquake*** struck several years ago and remembered the file cabinets clanking.

Marie Veon, Venango County district attorney, was also on the third floor when the quake struck. She described the tremor as ``like waves hitting you."

Her assistant, Matthew DiGiacomo, said he had never experienced an ***earthquake***.

``I didn't know what the hell was going on. I was sitting down and I just thought my chair was uneven. Then somebody said, `did you feel that?' and I said, `I guess so'. . . . I blame Bill Clinton," said the attorney.

Just south of Franklin at the Venango County Fairgrounds, Dick Castonguay said he felt the ground shake.

``I thought I heard a rumble. It only lasted a matter of 10 seconds or so. I looked at the person across from me and said, `We just had an ***earthquake***'. He said I was crazy," said Castonguay.

In Mercer County, the 911 Center had numerous calls from people who reported ``a loud explosion type incident." Others said the shaking was accompanied by a sound like thunder.

``We had just come in to watch an update on the hurricane on TV and then I heard it and felt it and watched the plants tremble," said Chris Rybak of Oleopolis.

``We didn't know what to think but you knew right away it was an ***earthquake***. I looked right outside to see if there was a storm and it was beautiful. I can't describe the sound. There was just one."

J EM

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October 15, 2012

HUFF POST GREEN

Ohio Earthquakes Caused By Drilling Wastewater Well, Expert Says

By THOMAS J. SHEERAN 01/ 2/12 09:33 PM ET AP

CLEVELAND -- A northeast Ohio well used to dispose of wastewater from oil and gas drilling almost certainly caused a series of 11 minor quakes in the Youngstown area since last spring, a seismologist investigating the quakes said Monday.

Research is continuing on the now-shuttered injection well at Youngstown and seismic activity, but it might take a year for the wastewater-related rumblings in the earth to dissipate, said John Armbruster of Columbia University's Lamont-Doherty Earth Observatory in Palisades, N.Y.

Brine wastewater dumped in wells comes from drilling operations, including the so-called fracking process to extract gas from underground shale that has been a source of concern among environmental groups and some property owners. Injection wells have also been suspected in quakes in Ashtabula in far northeast Ohio, and in Arkansas, Colorado, and Oklahoma, Armbruster said.

Thousands of gallons of brine were injected daily into the Youngstown well that opened in 2010 until its owner, Northstar Disposal Services LLC, agreed Friday to stop injecting the waste into the earth as a precaution while authorities assessed any potential links to the quakes.

After the latest and largest quake Saturday at 4.0 magnitude, state officials announced their beliefs that injecting wastewater near a fault line had created enough pressure to cause seismic activity. They said four inactive wells within a five-mile radius of the Youngstown well would remain closed. But they also stressed that injection wells are different from drilling wells that employ fracking.

Armbruster said Monday he expects more quakes will occur despite the shutdown of the Youngstown well.

"The earthquakes will trickle on as a kind of a cascading process once you've caused them to occur," he said. "This one year of pumping is a pulse that has been pushed into the ground, and it's going to be spreading out for at least a year."

The quakes began last March with the most recent on Christmas Eve and New Year's Eve each occurring within 100 meters of the injection well. The Saturday quake in McDonald, outside of Youngstown, caused no serious injuries or property damage.

Youngstown Democrat Rep. Robert Hagan on Monday renewed his call for a moratorium on fracking and well injection disposal to allow a review of safety issues.

"If it's safe, I want to do it," he said in a telephone interview. "If it's not, I don't want to be part and parcel to destruction of the environment and the fake promise of jobs."

He said a moratorium "really is what we should be doing, mostly toward the injection wells, but we should be asking questions on drilling itself."

A spokesman for Gov. John Kasich, an outspoken supporter of the growing oil and natural gas industry in Ohio, said the shale industry shouldn't be punished for a fracking byproduct.

"That would be the equivalent of shutting down the auto industry because a scrap tire dump caught fire somewhere," said Kasich spokesman Rob Nichols.

He said 177 deep injection wells have operated without incident in Ohio for decades and the Youngstown well was closed within 24 hours of a study detailing how close a Christmas Eve quake was to the well.

The industry-supported Ohio Oil and Gas Association said the rash of quakes was "a rare and isolated event that should not cast doubt about the effectiveness" of injection wells.

Such wells "have been used safely and reliably as a disposal method for wastewater from oil and gas operations in the U.S. since the 1930s," the association's executive vice president, Thomas E. Stewart, said in a statement Monday.

Environmentalists are critical of the hydraulic fracturing process, called fracking, which utilizes chemical-laced water and sand to blast deep into the ground and free the shale gas. Critics fear the process itself or the drilling liquid, which can contain carcinogens, could contaminate water supplies, either below ground, by spills, or in disposed wastewater.

Permits allowing hydraulic fracturing in Ohio's portion of the Marcellus and the deeper Utica Shale formations rose from one in 2006 to at least 32 in 2011.

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BREAKING NEWS:
Two Americans win Nobel economics prize

4.0 earthquake strikes in northeast Ohio

Updated 12/31/2011 10:21 PM

Recommend 0 137 3

McDONALD, Ohio (AP) – Officials said Saturday they believe the latest earthquake activity in northeast Ohio is related to the injection of wastewater into the ground near a fault line, creating enough pressure to cause seismic activity.

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The brine wastewater comes from drilling operations that use the so-called fracking process to extract gas from underground shale. But Ohio Department of Natural Resources Director Jim Zehringer said during a news teleconference that fracking is not causing the quakes.

"The seismic events are not a direct result of fracking," he said.

Environmentalists and property owners who live near gas drilling wells have questioned the safety of fracking to the environment and public health. Federal regulators have declared the technology safe, however.

Zehringer said four injection wells within a five-mile radius of an already shuttered well in Youngstown will remain inactive while further scientific research is conducted.

A 4.0 magnitude quake Saturday afternoon in McDonald, outside of Youngstown, was the 11th in a series of minor earthquakes in area, many of which have struck near the Youngstown injection well. The quake caused no serious injuries or property damage, Zehringer said.

Thousands of gallons of brine were injected into the well daily until its owner, Northstar Disposal Services LLC, agreed Friday to stop injecting brine into the earth as a precaution while authorities assess any potential links to the quakes.

Michael Hansen of the Ohio Seismic Network said Saturday that more quakes are possible, most likely small ones, until the pressure at the fault line has been completely relieved.

The temblor Saturday appeared to be stronger than others, which generally had a magnitude of 2.7 or lower. Some residents reported feeling trembling farther south into Columbiana County and east into western Pennsylvania.

Area residents said a loud boom accompanied the shaking. It sent some stunned residents running for cover as bookshelves shook and pictures and lamps fell from tables.

A few miles from the epicenter, Charles Kihm said he was preparing food in his kitchen when he heard a noise and thought a vehicle had hit his Austintown home.

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Canada-centered earthquake felt in Western Pa.

March 29, 2012 2:24 am
By Sean D. Hamill and Dennis B. Roddy / Pittsburgh Post-Gazette

An earthquake centered in Canada could be felt by some people in the Pittsburgh area this afternoon.

Reports of buildings shaking came from Carlow University in Oakland and from the South Side, among other locations.

The U.S. Geological Survey reported the magnitude 5.5 quake was centered at the Ontario-Quebec border at 1:41 p.m. It was felt a few minutes later in Western Pennsylvania. Pittsburgh police said they have no reports of damage.

News reports said it also could be felt in New York City, New Jersey, Ohio, and Michigan.

Buildings shook in Toronto for almost a minute and several were evacuated.

Like most people who felt the slight tremor in the Pittsburgh area, Wendy Graves, an editor at Akoya, a communications consulting firm on the South Side, wasn't sure what it was right away, having never been through one before.

"I felt it shake my chair three times, with a few seconds in between each one," said Ms. Graves, 45, who was working at her job on the second floor of a building on East Carson Street when she felt it at about 1:44 p.m. "After the third one I said jokingly, 'Is that an earthquake?' "

Barbara Olson, a retired cruise consultant who lived in the Los Angeles area for nine years before moving to her present home in Sewickley in 1992, thought she recognized the swaying motion she felt as she worked on her home computer, but she didn't believe it.

"My first sensation told me, 'This is an earthquake,' " she said, but she and her husband, George, had moved to the Pittsburgh area expecting to escape them.

It wasn't until a neighbor called to see if she had felt it, too, that she believed it.

"It was a big relief because you think you're going crazy," Ms. Olson said with a laugh.

Once Kate Burroughs and her colleague at the Association of American Cancer Institutes, Sara Arvay, confirmed with each other that they were feeling their building on Fifth Avenue in

Oakland sway, they didn't check with anyone else; they exited from their fifth-floor office for 15 minutes until they were sure it was over.

"At first I thought, 'Huh, this is kind of weird. I'm trying to diet so maybe I'm a little light-headed,' " Ms. Burroughs, 54, said. "But I asked Sara and she felt it, too."

The earthquake originated in an area called the Ottawa River Valley, where huge plates that make up the continent sometimes slip.

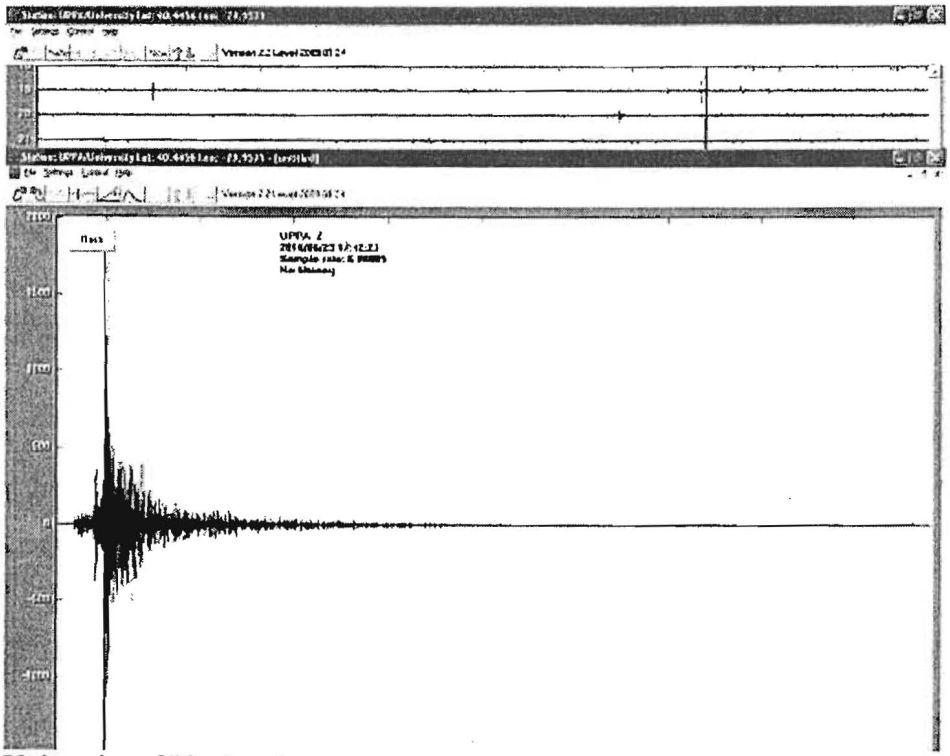
The quake likely was caused by a process called "post-glacial rebound," said Russel Pysklywec, a University of Toronto geologist who said he felt the quake and immediately knew what he was feeling.

"About 10,000 years ago there were glaciers covering us. That ice subsequently melted and the plates are now rebounding upward," Mr. Pysklywec said. "Normally those stresses are relaxed fairly quietly."

He placed the earthquake's depth at 19 kilometers and said the shaking in Western Pennsylvania was the shock rippling outward. By afternoon's end, he said, the quake would be measured on instruments in Australia, "like an ultrasound of the planet itself."

Little damage was reported in Canada, according to early reports, though the quake's reach served a reminder that even in the geologically placid northeast, the Earth still packs the occasional wallop.

"It's kind of a neat thing in some ways. It shows us how much energy there is in the planet," said Mr. Pysklywec.



University of Pittsburgh

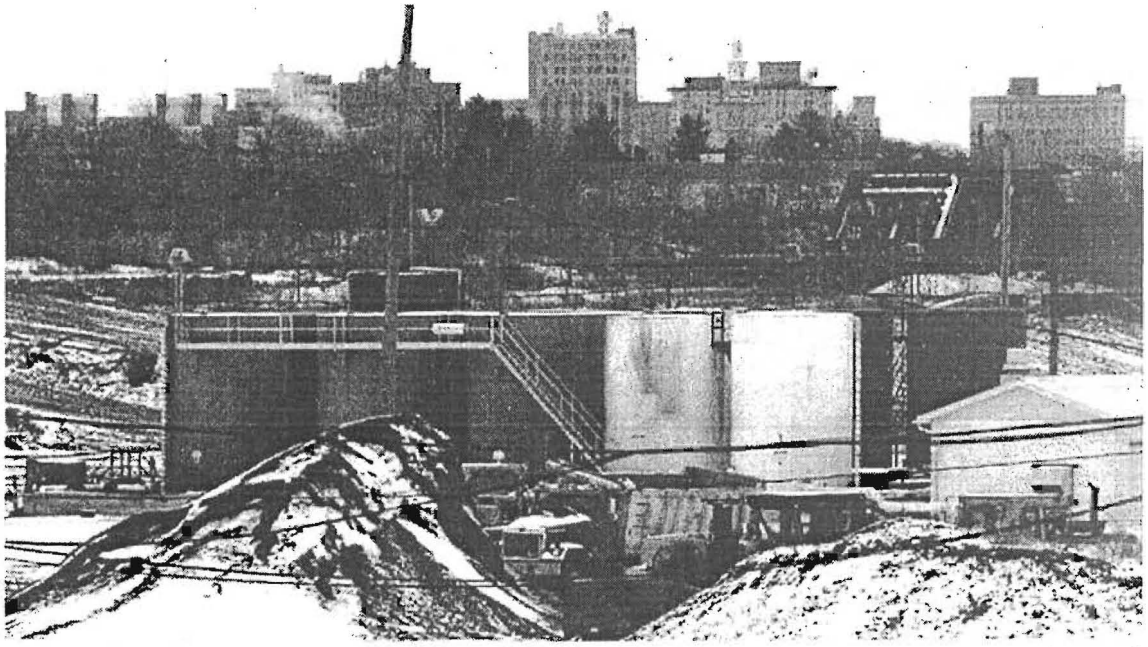
J E M

A screenshot showing the earthquake from Pitt's seismic station at Allegheny Observatory and maintained by the Department of Geology and Planetary Sciences in Pitt's School of Arts and Sciences.

More details in tomorrow's Pittsburgh Post-Gazette.

First Published June 23, 2010 2:25 pm

by CHRISTOPHER JOYCE



Amy Sancetta/AP

With the skyline of Youngstown, Ohio, in the distance, a brine injection well owned by Northstar Disposal Services LLC is seen in Youngstown on Jan. 4. The company has halted operations at the well, which disposes of brine used in gas and oil drilling, after a series of small earthquakes hit the Youngstown area.

January 5, 2012 text size A A A

Small earthquakes in Ohio and Arkansas associated with hydraulic fracturing for natural gas have taken many people by surprise. Gas industry executives say there's no hard evidence that their activities are causing these quakes. But some scientists say it's certainly possible; in fact, people have been causing quakes for years.

In the 1960s, geologists realized that gold mines in South Africa had created small earthquakes. Caverns dug into the earth thousands of feet below the surface collapsed. The "pancake" effect caused quakes — in one case a magnitude-5.2 temblor.

Since then, scientists have found that even pumping water away from underground mines (to keep them from flooding) changes the dynamics of stress in rock formations enough to trigger a quake.

Some rock is saturated with water — the water occupies pores between rock particles. This creates what's called "pore pressure" and keeps the formation in a sort of equilibrium. If you suck the water out, particles tend to collapse in on themselves: the rock compresses. Add water, and you push particles apart. So moving water around underground can affect the stresses on those formations.

Creating Quakes

Now let's say there's a fault in the earth. If the water content around the fault is changed, the fault might slip. If the water gets into the fault itself, it can lubricate the fault and trigger a quake.

Hydraulic fracturing pumps a lot of water underground, where it's used to crack the rock and liberate gas. This may cause tiny quakes, but fracking goes on for a day or two, and the quakes are small.

Related NPR Stories

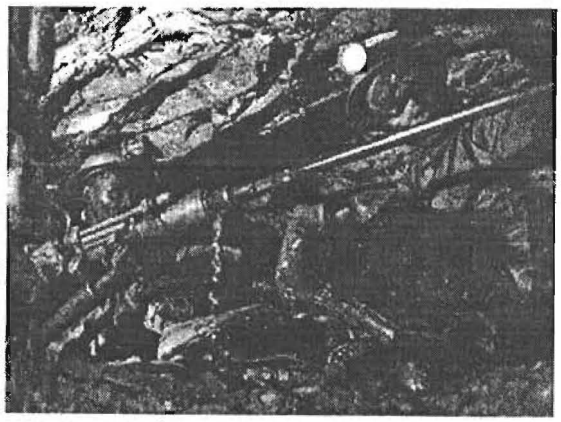
Fracking Byproducts May Be Linked To Ohio Quakes
Jan. 3, 2012

Recent quakes reported in Ohio and Arkansas are associated with wastewater wells, not fracking wells. The water first used in fracturing rock is retrieved and pumped into these waste wells, which take in lots of water. And at more than 9,000 feet deep, the water is under high pressure that can build up over months or years. It's this pressure that can actually create earthquakes.

In the 1960s, a wastewater well in Colorado at the Rocky Mountain Arsenal is believed to have been the trigger for a magnitude-4.8 quake.

A few geologists are familiar with these induced or triggered quakes. They're rare and usually small, but now fracking is creating thousands of wastewater wells, often in heavily populated areas that historically have not been seismically active. That means even small quakes get noticed.

Shipping Wastewater Out Of State



Ron Stone/Getty Images

For decades, scientists have known that activities like mining, drilling and building dams can create earthquakes. As early as the 1960s, observers noted that deep-earth gold mining changed the stresses in rocks and caused earthquakes. Above, miners drill into the rock at the Sub Nigel East Gold Mine in Johannesburg in 1961, more than 6,000 feet below ground.

It can be hard, even then, to definitively nail down the source of a quake. And there are several ways big infrastructure projects can create them: People have created quakes when they excavate quarries — removing all that rock, or "overburden," changes the vertical stress on rock and the faults below. Likewise, dams increase the stress below when a lake is created. The Aswan Dam in Egypt and another in India are believed to have triggered quakes.

One way to avoid creating earthquakes is not to inject fracking wastewater into waste wells, but to recycle it instead. The state of Pennsylvania tried that, but they found that wastewater treatment plants couldn't get all of the toxic material out of fracking water, and the "cleaned up" water returned to rivers wasn't clean enough. So well operators in the state decided to ship wastewater to Ohio, where it has been going down into wells.

The U.S. Geological Survey is working on ways to head off quakes from wastewater wells. That would include performing seismic surveys before drilling the wells. Permeable rock like sandstone is better than hard, brittle basement rock that is riddled with faults. Operators might also limit the amount of water going into wells: USGS geologists have learned that the more water injected, the bigger an ensuing quake.

Earthquake Report

The best independent earthquake reporting site in the world

Unusual very shallow magnitude 4.0 earthquake in Ohio

Last update: January 2, 2012 at 12:23 pm by By Armand Vervaeck and James Daniell

238

32 1 341

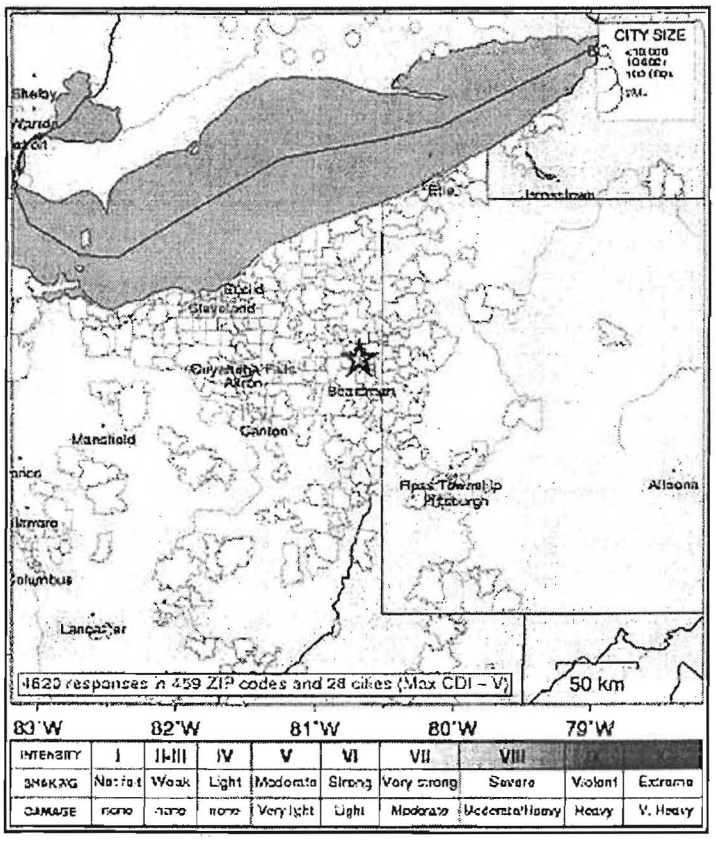
Earthquake overview : A single shallow earthquake alerted people in Ohio and even in the neighboring states. Some officials suspect "fracking" to be at the origin of this earthquake, others say that there is no proof that the earthquakes are caused by fracking but are caused near brine injection wells, not fracking.
"I have Felt it" Reports –> see below + Let us know "how you have felt this earthquake"
To read the full story as it happened, we advise our readers to start at the lower part of the page (earthquake data).

Update 02/01 – 12:19 UTC
An official in Ohio said on Sunday that the underground disposal of wastewater from natural-gas drilling operations would remain halted in the Youngstown area until scientists could analyze data from the most recent of a string of earthquakes there.

There are luckily no reports of serious damage.

Earthquake-Report received a big number of experience Felt It reports. We thank the many people sending us their testimonies. The Felt It reports can be found below.

NPR writes : Officials said Saturday they believe the latest earthquake activity in northeast Ohio is related to the injection of wastewater into the ground near a fault line, creating enough pressure to cause seismic activity. The brine wastewater comes from drilling operations that use the so-called fracking process to extract gas from underground shale.
Ohio Department of Natural Resources Director Jim Zehringer said during a news teleconference that fracking is not causing the quakes. "The seismic events are not a direct result of fracking," he said. **"Fracking" is common in this area of the state**, but this earthquake, and the others in the area over the past year have been near a "**brine injection well**", and not any fracking wells. **Officials do now believe that the earthquakes are related to the injection wells, but not fracking**.
Earthquake-report.com knows that fracking is a highly controversial issue. Both sides have a hard time to proof that they are right. The heated discussion is not only actual in Ohio, but also in a number of other US States.



Feli It map - image courtesy USGS

Earthquake-Report.com GOOGLE+ / ***Earthquake-Report.com FACEBOOK***

"I Have Felt It" reports as received by Earthquake-Report.com

Youngstown : About 3:10 pm est,our house rattled sharply for 5 seconds. Felt like either the furnace exploded or that the house was struck by a car. Our next door neighbors called within one minute to see if we felt it too.

Berea : About 3:07 pm I just felt a slight tremor less than 1 second

Randolph Twp : Slight rumbling, lamps, cabinets shaking, etc

Leetonia : We just felt our whole house shake and spoke to relatives/friends within the same town who also felt it. This is Leetonia, Ohio and Washingtonville, Ohio.

Monclova : weak shaking indicated

??? : Sitting at my pc and the whole house shook but no seen damage. Could hear creeking of the wood.

Tallmadge : I was sitting in my room, on my bed, on my second story of my house. I felt my bad rocking back and forth for at least 3-4 seconds. I then heard by Dad say, "Did you feel that?", from the room over.

Warren : it sounded like a big rumble of thunder and the whole building i work in shook

??? : We felt our house swaying like we were on a boat or something

Austintown : I was in the bottom apartment of my building, felt the whole foundatation shake, i made mention of it to my online friends and my friend in zainsville ohio 3 hours south of me felt it too, my families cell phones are not working at the moment but yet i have internet. This is very weird for my area and it has some of us shaken up.

Hamilton, Ontario, Canada : I was sitting on the couch and the entire couch starting swaying. I

J&M

thought it was my cats doing something but they were nowhere in sight. Also, my shelves started creaking. It was not strong enough to make the dishes rattle.
Salford, Ontario, Canada : light shaking indicated
Kitchener, Ontario, Canada : My mother in law and myself both felt like an undulation in different rooms upstairs that lasted only 1-2 seconds. My husband and father in law were downstairs and felt nothing. However I was chatting on line with my mother in Brantford, ON, Canada, and she felt shaking and went outside to see what was happening.
I would put the time somewhere around 3:05-3:10 pm.
Girard : very weak shaking indicated
???? : First earthquake very scary. Rattling windows. Vibration
Ohio : We felt our house swaying like we were on a boat or something
Salem : light shaking indicated
Eastern Ohio : Whole house started shaking slightly. not much but enough to get everyones attenntion. Neibor says he felt it too!
Ohio : at @ 3:10pm My office chair ,fan and jewelry displays began shaking as well as my home
Vermilion : light shaking indicated
Hermitage, PA : felt movement,house created,dog raised his head,very short around 3 o'clock.
Sharpsville, PA : Around 3:07pm local time slight shaking was felt
Mineral Ridge : It shoke the whole house and and opened our slidding glass door.
Erie, PA : Felt shaking while on the couch. Christmas ornaments shook and so did the water in my cup.
Detroit, MI : At 3:07 PM on 12-31-11, I felt a slight shaking. I was sitting very still and felt the shaking two times a few seconds apart.
Essex, Maryland :

Most important Earthquake Data:
Magnitude : 4.0
UTC Time : **Saturday, December 31, 2011 at 20:05:01 UTC**
Local time at epicenter : Saturday, December 31, 2011 at 03:05:01 PM at epicenter
Depth (Hypocenter) : 5 km
Geo-location(s) :
4 km (2 miles) NW (315°) from **Youngstown, OH**
4 km (3 miles) SSE (167°) from **Girard, OH**
6 km (3 miles) S (191°) from **Churchill, OH**
70 km (44 miles) E (85°) from **Akron, OH**
96 km (60 miles) NW (322°) from **Pittsburgh, PA**

Links to important maps
USGS Did You Feel It Map
Google satellite map showing the epicenter and the surrounding area
Historic earthquakes map
Seismic hazard map
Focal mechanism report
Human impact map

QuakeSOS+ and **QuakeSOS free** are **iPhone applications** developed by Armand

LETTERS

Who pays for injection well accidents?

Editor:

Yes, we are very pleased with the turnout at the Seneca fire hall pertaining to the Latshaw Injection Well. It looks like we are not alone in out fight for clean water. We must do everything that can be done legally to stop this path to the unknown.

There are too many unanswered, unforeseen paths this type of operation might take. The Speechley Wells at Powells Corners served as a conduit for lead to enter the water course. The brochure from the EPA does not mention lead. I asked John Peterson, when he was a congressman, to set up a meeting with the Department of Environmental Protection in Meadville so I could testify to how the lead was getting in the water course. This meeting never took place, much to my dismay. If they get this injection well in, it would be followed by many more injection wells. This must be stopped, especially in this area that is already peppered with abandoned gas wells, illegal gas and oil wells and yet to be discovered wells.

I would like to see a petition stating why we do not want injection wells in our area and signed by anyone who could be effected by the unforeseen accident.

Another item that bothers me pertaining to the Marcellus Shale operations is when we have more than one company or contractor drilling in connected locations and if an accident does occur pertaining to the ground water, how will you tell who caused it as the migration of the drilling fluids might not show up for years?

I would like to see it being mandatory that all companies operating in the same area share the financial burden of clean-ups, replacement of water supplies or whatever else is needed unless they have positive proofs which contractor or company caused the problem. Then of course that contractor or company would have to take full responsibility.

This was brought to my attention when viewing a site in Forest County, which is up the river from Oil City.

— John E. McNerney
Venus

DEP says program can help protect drinking water sources

Oil City to join water program

By JUDITH O. ETZEL
Staff writer

A century-old system that has delivered drinking water to thousands of Oil City residents is about to get a closer look.

Oil City's drinking water is drawn from two wells just north of the city and up along the Allegheny River in Cranberry Township.

The wellfield was drilled in the early 1890s and has been "reliably supplying water to Oil City since then," city manager Chris Sporer said. There are more wells at that location, she said, but they have not been needed.

"We are blessed with our water — it is pure coming out of the ground," said Tom Weiser, the city's water plant foreman, at a city council workshop on Monday.

And while that purity is a plus, the city could benefit by examining what potential contaminations in the watershed may threaten the city's water supply, Weiser said.

To identify those as well as delineate the boundaries of the city's wellfield, council has signed on to participate in a Pennsylvania Department of Environmental Protection (DEP) project known as the Source Water Protection Technical Assistance Program. The program, offered at no cost to a municipality, is being tapped by other area communities.

"This program can help protect your community's drinking water sources," said Jennifer Mongera of the DEP at Monday's session. "The safer we keep that water before it even gets to the plant is best for communities. It's easier and cheaper than cleaning up contaminated water."

Mongera said the DEP program provides free technical services to define wellfield areas, identifies potential sources of contamination such as road treatment runoff and septic systems, offers advice on how to secure water sources, defines what areas contribute to the city's wells and provides management options.

The management issues could range from public education as to the importance of drinking water safety to city ordinances that apply to drilling into the aquifer, Mongera added.

Weiser said the city owns nearly all the land within the water wells' drainage area but cautioned that "some water can come from other geologic areas" and incidents, such "as a tanker spilling oil" on a nearby road, can occur.

"And, there's a lot of (oil and gas) drilling going on in the area now ...and there are a lot of abandoned wells in the neighborhood," Weiser said. "This study would identify that."

A steering committee would be appointed to assist a DEP-hired company do the wellfield research.

"All of this is aimed at protecting water sources," Mongera said. "...This is really a chance to practice the 'ounce of prevention is world a pound of cure' saying."

Sporer told council the project offers the city "an opportunity to get the details and prevent any contaminants from entering our system."

In a unanimous decision, council voted to sign up for the DEP project, one that Mongera said would take about two years to complete.

Later, Sporer said Oil City's prime drinking water sources should be a major attraction that the city promotes.

"You hear about other communities that have no good water resources and here we have excess capacity. We can handle a lot of growth," Sporer said.

The seige may be over, but the impact isn't

Editor:

Emlenton finally has potable water. The siege which started on May 22 and ended on Jan. 28 — lasting 252 days — imposed any number of hardships on Emlenton families, businesses, churches, nursing homes, day care centers and restaurants.

Many were exposed to substantial health hazards if they inadvertently drank the water.

From day one, almost everyone incurred significant extra expense by having to purchase filters, drinking water and ice. Since washing up was tricky, many opted for incurring additional expense by using disposable plates, utensils and glasses.

Hygiene was made difficult. Dentist-recommended three-times-a-day brushing was a balancing act and murky water made bathing less attractive.

Those who wished to entertain for special events and holidays faced extraordinary problems and expense.

During this time, real-estate sales were marginalized and burdens may well have been put on some institutions and businesses involving increased work loads and higher operating costs.

Once notified of the water contamination, it appears as if many residents of Emlenton did everything that they could to bear up reasonably under adversity. Not unlike the proverbial "good patient," many strove to make as little trouble as possible, hoping that those who could fix the problem would be thankful for their forbearance and keep their well-being in mind. However, responsible research has frequently found that often the "good patient" finds himself marginalized.

Emlenton Water Co.'s infrastructure is old. How are we to be certain that the repairs that have been made are sustainable? What will we do if further problems surface? It is unthinkable that an entire community was without drinking water for three quarters of a year. Should a similar water crisis again strike the community, Emlenton residents might be wise to organize quickly and demand the help from our state and federal governments that our tax dollars should guarantee.

— Jae Ann Brown
Emlenton

Feb 12 2009

John E McFarnest

Mr. John McNerney
2460 Old State Rd.
Venus PA 16364

A

- My appeal raises many unanswered questions

01. Who is Stonehaven –how many names do they operate under?
Where is their main office?
How long have they been in business?
How many employees?

I have enclosed information pertaining to our property approximately six miles east of the Latshaw site. The Latshaw injection well has the potential to create a catastrophe.

02. In the case of a catastrophe what are Stonehaven's liabilities? The catastrophe I am talking about is the potential loss of potable water to the City of Oil City, PA and beyond.

03. Information in the permit forms is a little vague on the depth of wells already drilled by Stonehaven or ones that might be drilled by Stonehaven (formations) t.b.

04. Will Stonehaven be going to the Marcella shale and fracking?

05. What chemicals has Stonehaven used OR will they be using?

06. Are there any wells on the Latshaw or close proximity turned over to S.G. Thompson from National Fuel Gas in a 1983 agreement? See letter enclosed.

I would like to comment on the letter I received from the United States Environmental Protection Agency this was after the meeting at Seneca Volunteer Fire Department June 12, 2012. Yes I was one of the speakers.

The reasons for my appeal are as follows:

01. We live approximately six miles from the Latshaw and own over two hundred acres of surface rights and five hundred acres of oil and gas rights. The only activity as far as oil and gas on our property is strictly in the shallow sands at this time. We have not leased anything below the Tully at this time.

J E M

JOHN E. McNERNEY

B

The activity in the deeper formation is in its infancy there are many unanswered questions especially in our area that is heavily peppered with shallow gas and oil wells, strip mines, deep mines, abandoned gas lines, vertical rock formation, ground faults, heavy metals and now earthquakes.

02. Number five in your letter says there is NO evidence of seismically activity in our area. I disagree! Enclosed is evidence pertaining to resent earthquakes in our area and what damage they have done.
03. Number six of your letter talks about fluids being toxic, hazardous, etc. This brings up another question. Will the producing wells on the Latshaw be drilled into the Marcella? The reason I say Marcella is because the Tully formation takes a dip in that area or close to it.
04. Number seven of your letter talks about the migration of fluid using the gas wells as a conduit to the water course. Yes, I am very familiar with this migration. We HAD the best water until the transfer of 217 gas wells known as the Hampton Lease from National Fuel Gas to S.G. Thompson in 1983.

    What Thompson has done or not done has left us with NO source on our property of potable water! See letter enclosed.

    I believe some of these wells that were transferred from National Fuel Gas to Thompson are either on the Latshaw piece or close proximity. I have a list of the wells that were transferred.

05. Your letter number 09 talks about "Stonehaven" financial resources with a figure of $10,000.00 and a letter of credit. In an area like the Latshaw where a catastrophe could occur like Oil City, PA and its surrounding areas that are also on well water.

I believe this covers most of our area except Emlenton, PA their water intake is the Allegheny River.

John Edmond McNerney