

DEP Permit # E15-862
DEP Permit HDD Reference # PA-CH-0290.0000-RD
DEP HDD # S3-0421
Township – West Goshen & West Whiteland
County - Chester
HDD Site Name – Phoenixville Pike Road

1st Public Comment Period

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1. Comment

Pursuant to the Corrected Stipulated Order entered on EHB Docket No. 2017-009-L on August 10, 2017 (“Order”), and on behalf of Clean Air Council, Mountain Watershed Association, Inc., and the Delaware Riverkeeper Network (“Appellants”),

please accept these comments on Sunoco Pipeline L.P.'s ("Sunoco") re-evaluation report ("Report") for the horizontal directional drilling ("HDD") indicated by drawing number PA-CH-0290.0000-RD (the "Site").

1. Sunoco has not adequately addressed the risk of or impacts associated with groundwater discharge.

Tens of thousands of gallons of groundwater were discharged during the drilling for 16-inch line at the Site and Sunoco acknowledges that its drilling of the 20-inch line is also likely to result in groundwater discharge. Despite this known risk, Sunoco has not provided any analysis of how groundwater discharge at the Site has already impacted or could impact the water table. Instead, Sunoco seems to merely rely on its assertion that there were not well complaints during the drilling of the 16-inch line. The Department should ensure that Sunoco incorporates into the Report a full analysis of how Sunoco's construction has impacted groundwater at the site and how its proposal for the 20-inch line might impact groundwater going forward. This analysis should include a discussion of the how Sunoco's drawdown of the water table might affect water supplies. There are two private wells in close proximity to the proposed alignment and Sunoco admits that "the elevations of the open rock groundwater production zones for these wells are likely to occur at the elevation of certain sections of the HDD proposed profile." HDD Hydrogeologic Report, at p.15. Sunoco should also provide a site-specific plan for preventing or minimizing groundwater discharge and for managing any groundwater discharge that does occur. Sunoco's mismanagement of groundwater at other sites has resulted in wells running dry and sometimes becoming contaminated and residents' yards being flooded.

2. Sunoco has not adequately assessed the petroleum odor at the Site.

Sunoco's soil sampling revealed a petroleum odor but Sunoco has failed to provide any explanation of its source or associated risks. According to the Report, after identifying a petroleum odor in soil sampling, inspectors did not find a petroleum odor while drilling for the 16-inch line. Having reportedly not encountered a petroleum odor while drilling, Sunoco seems to have entirely dismissed the issue. More information is needed. At a minimum, Sunoco should investigate any history of spills at the site and include in the Report information about the nature and quantity of any pollution event. Even if petroleum-contamination was not encountered during the drilling of the 16-inch line, there is a risk that drilling of the 20-inch line, which follows a different path, could mobilize these contaminants. The risk of mobilizing contaminants is particularly concerning given the admitted likelihood of groundwater discharge.

3. Sunoco has not addressed the extent and cause of the loss of circulation that occurred during the drilling of the 16-inch line.

Drilling for the 16-inch line resulted in inadvertent returns and a loss of circulation incident. While the Report discusses the inadvertent returns, it does not provide

detail regarding the LOC. The discussion of inadvertent returns is incomplete without these details. A high- volume LOC would present reason for concern and could indicate an increased risk of inadvertent returns. Currently, the Report dismisses the risk of IRs and asserts the relatively small IRs that occurred during the drilling of the 16-inch were not tied to a geologic anomaly. A high-volume LOC could change that analysis and the associated risk of IRs. The Department should require Sunoco to provide this missing information and take any steps necessary to minimize risks of future IRs or LOC.

Thank you for considering these comments. Please keep Appellants apprised of any next steps. (1-5)

Letter – [Clean Air Council – 12-31-19 – Phoenixville Pike Crossing](#)

2. Comment

I am very concerned about the most recent proposal for the pipeline drilling. First of all, the time available for comment was too short December 17 - 31. The holiday weeks. Second, the report says the procedures will "minimize the risk of IR" (IR stands for "Inadvertent returns", in other words a glossing-over term for mud or whatever spilling out where it shouldn't. In other words, Sunoco recognizes there is that risk. They don't say they will eliminate the risk. Therefore, Sunoco must have much more complete plans in place to prevent spillage into storm sewers, wetlands, private property, etc., and a process ready to immediately clean up any that do occur. Thank you for working further on this. (6)

3. Comment

I live next door to one of the HDD entry sites in Delco. Since July 5, 2017, I've dealt with errors in land surveys, well contamination - well flow is down 72%, erosion, extreme stormwater events, debris in mass took 5 days to cleanup. My driveway is caved in, in November, I had a 5-foot void under the asphalt where Mariner 2 open trench phase ended. Sunoco is well aware of the issue and took weeks to do a 'quick fix'. Now it's only a 2.5-foot void. The HDD phase started 6 months later & I'm not sure which is worst case scenario. My land now clearly shows depressions, but they claim, 'it's not them'. All of this is rough enough but there there is a complete lack of respect for the land and the landowners. For this HDD Site - a PROPER geophysical analysis needs to be done. The data I received is skewed and in error. Monitoring needs to be done on a regular basis & self-reporting simply does not work.

I thought if you paid off your home - you owned it free and clear; however, we no longer have any control of the land we work so hard to payoff. (7)

4. Comment

There are so many issues with Sunoco/ET and the Mariner East project that one does not know where to start. I understand that comments from the public from December 17-31 will be reviewed; however, this is unrealistic. This is a time for family and friends to be reunited and vacations out of state are enjoyed. Please extend the deadline. Why the rush?

Sunoco/ET has been very careless drilling for this pipeline. It is not satisfactory that their report concerning HDD under Boot Road Chester County was signed by a biologist. A licensed geologist engineer should provide his/her own report. How can anything else be acceptable? Since there had previously been a frack out, what assurance do we have that this won't happen again? My concern is that wetlands and storm drains will be polluted by the drilling mud, as well as the safety of those living/visiting the apartment building and of those travelling in the vicinity of the Boot Road - Route 202 high traffic corridor once the pipeline is in effect.

I implore you to do everything possible to assure that Sunoco/ET's actions are above board, that all concerns are appropriately addressed and that licensed professionals in the geology field have made proper studies and reports. Taking Sunoco/ET's word for anything cannot be acceptable. Their interests are in financially motivated. The pipeline has been carelessly and hastily put into motion without any regard for the community, the environment, nor does it benefit anyone but themselves and their stockholders. All to make plastics overseas; how can this possibly qualify as a public utility?

Those in power know that the younger generation is environmentally conscious. The use of single use plastics is soon to decrease drastically. Plant-based and recycled plastic are now viable and preferable options. That is why there has been this rush to complete this project at all costs. The fines are marginal compared the amount of money to be made only while the production of plastics is viable.

Thank you for your time and consideration. (8)

5. Comment

I am concerned about Sunoco's planned HDD drilling in this area. The comment period during and between 3 major holidays, is inappropriate but typical. I am concerned damage to Boot Rd. as happened previously and frack-out dangers. Sunoco must be required to specify how it will prevent spillage into storm drains and wetlands and how it will prevent damage to the roadway. The endpoints near a firehouse and apartments are inappropriate because of increased danger of leakage at endpoints. I am also concerned about the "loss of circulation" problem. Such a drilling method is inappropriate in these geological formations. How will Sunoco protect the aquifer? Also, this report should come from a licensed engineer, the report has not come from such an authority.

Thank You. (9)

6. Comment

I write to provide my public comments on the proposed HDD permit for drilling on Boot/Ship Roads. There are many concerns that should be strongly considered when making your final decision. This company has a terrible record of living up to the promises they make, such as how long the project will last and how disruptive it will be. They minimize the "accidents" they create and the potential damage to our roads

and aquifers and community is already evident. They don't even report the accidents until members of the community call it to their attention. The ET official who has signed off on this project is not an engineering professional. He is not equipped to make this recommendation, and at the very least you should require that an independent engineering firm evaluate the recommendations and the prior experiences associated with this type of drilling in this type of geography. I heard him speak at a town meeting and I was personally dismayed that he would be the lead person on this project. ET/Sunoco has been very dismissive of the concerns of our community and I urge you to do the proper due diligence before approving this permit. Thank you. (10)

7. Comment

I am deeply concerned about the public comment period for the construction of this part of the Mariner East Pipeline System in Chester County.

A 15-day public comment period which includes Hanukah, Christmas and New Year's Eve holidays does not suggest an honest desire for comments.

There are serious safety and environmental issues to be reviewed, including road damage and the creation of mud flooding into wetlands and storm drains.

The public, whose lives and property are at risk, deserves a reasonable comment period to express their concerns. (11)

8. Comment

I hate to interrupt your holiday, but this is important. The DEP has decided to call for public comments on the construction of a segment of the Dragonpipe (Mariner East pipeline system) in Chester County, and the deadline is December 31. This blog post will provide information about the plan, suggest some things about it that need to be improved, and give you instructions for sending in your comments.

The plan. Sunoco wants to use horizontal directional drilling (HDD) to put a stretch of 20-inch pipe under Boot Road, starting next to the Goshen firehouse at Route 202 and extending to the Corner Park Apartments, where Ship Road splits off from Boot Road, a distance of almost a mile.

My concerns are as follows:

Dying from explosion and massive fireball. Sunoco's lawyer stated (during Cumberland County Court Hearing) that pipelines must be located 1,000 feet from any residence, school, building, etc, to protect Citizens from death, injuries of any type. There are thousands of people located within this 1,000-foot potential explosion area. In ground pipelines are supposed to be 10 feet apart, they are not. Steel pipe are inferior junk from Europe not USA made!!! This is premeditated murder if Sunoco is allowed to continue this hazardous plan. We live in fear every day. Stop

these crazy killers who are only in this for the money. None of them live in Chester Co.

Our Civil Rights are being violated every day they are in Chester County. Fair Housing gives us the Right to live in our homes in a peaceful manner, without fear of losing everything we have worked for. Destruction of our lives and homes is unconscionable since none of us will have the finances to rebuild. My understanding is insurance companies may not honor our policies if it means their bankruptcy. Numerous residents have Mobility Problems. We are told to run!

The PUC knows we have no viable plan to escape from a disaster. In addition, there are no alarms or odor to warn us of impending doom. PUC, Gov. Wolf (in sheeps clothing) continues to ignore Sunoco problem, turning their backs, stating to all "they have ability to stop Sunoco, but will not do so." What about our human rights? Stop, stop the bombing now!!!! Of course, you have chosen a time when government officials are on vacation. How convenient! (12)

9. Comment

Sunoco has already proven their inability to do things correctly and efficiently and according to some type of plan that is credible. Multiple IRR's along with sinkholes have created great concerns for not only our environment but for our citizen here in East and West Goshen. Please hold them accountable for providing some type of credible plan that the citizens can have input on and that the DEP can review. Additionally, the comment period was ridiculously last minute and inappropriate. It must be extended so that citizens can comment. (13)

10. Comment

I am writing to say I am concerned about HDD plans being arranged along the Boot Rd corridor. Quite frankly, I have sent many letters of concern over the past three years and nothing seems to get an answer. I watched the mayhem along Boot Rd last summer with frac-outs and muddy water running down the road. We were told the water caused no problems and did not enter the system. Who knows? We were also told that the road was totally fine. I doubted it then and I doubt it now. The road literally subsided in front of a resident's home and had to be dug up and repaved.

This is a futile effort for me to write this letter. It won't make a difference, but I feel I must speak out and hope for the best. For what it is worth, the residents do not trust Energy Transfer and I feel like we are living with a ticking time bomb. I have spent countless hours on the phone trying to comfort residents who are afraid that their property value is going south. Some people have suffered great emotional cost, but no one will ever know about it. I am lucky, I don't see the mess from my home, but what affects my community has an effect on all of us. It's the saddest thing and no one in power cares. So, my personal opinion is that the ground is unstable, lots of Karst and this area was never suited for this preposterous project. I wish there was a way to convince someone to stop this madness before something catastrophic

happens. However, I've learned that money talks here in Pennsylvania and the voices of the constituents have been silenced. (14)

11. Comment

I have just learned about Sunoco's plans for HDD for the stretch of the 20" pipe (ME 2) along Boot Road from the Goshen Firehouse to the Conner Park Apartments crossing under Route 202 and I have serious concerns which I will discuss below.

1. The timing of the public comment period could not be worse. It is far too short, and it covers the end of the year holidays of Hanukah, Christmas and New Year's Eve when many people are away or involved with many family activities. To be relevant and allow for adequate comments from the public it should be extended well into January.
2. I am aware of several inadvertent returns due to HDD along Boot Road near Wilson Drive including drilling mud entering storm drains. How will Sunoco prevent this from happening on this section of Boot Road?
3. The end points of this section of HDD adjacent to the firehouse and close to the apartment complex were very poorly chosen since they are at greatest risk of escape of the NGLs in the gaseous state.
4. During the construction of the 16" pipe there was a significant loss of drilling mud resulting in the inability of the drill to turn. We do not know where this mud went but it could have contaminated sources of drinking water. More than likely this is due to the geology of the area with frequent fissures and could well recur with the resumption of HDD. How will this be prevented?
5. The Geotechnical Evaluation commissioned by Sunoco is signed by a Certified Wildlife Biologist and not by a licensed engineer which should be required.

There are just too many concerns and too short a public comment period for this segment of HDD which potentially could lead to serious damage to our environment and drinking water. (15)

12. Comment

This request for comments required between Christmas, Hanukkah and New Year's is disgraceful! People are very busy with family affairs at this time of year. It seems that comments are really not wanted. The Penna DEP has made December 31, the deadline for submittal of public comments pertaining to the installation of a new 20" Diam. Pipeline under Boot Road from the East Goshen Firehouse near route 202 and extending to Corner Park Apartments where Ship Road splits from Boot Rd. (Length 1 Mi.) The comments are required because Sunoco had inadvertent return of drilling mud (frack-out) during HDD installation of a companion 16" pipeline previously. The drilling mud oozed out of cracks in the Paving of Boot Road. Did the mud contaminate storm drains, wetlands, aquifers, drinking water wells? Portions of Boot Road sunk and had to be repaved (one section probably 150 feet). Why would the End points be the East Goshen Firehouse and the Corner Park Apartments? When operational Sunoco is endangering our Firehouse, Equipment, and Personnel and at the

other end an Apartment Building and its Residents. Oh, and my house and family which is about 300 ft from the Fire House.

Is the author of the Sunoco report a licensed Civil Engineer? Is it true that the report is signed by Larry Gremminger CWB (Certified Wildlife Biologist), who is putting all these lives at risk!

Energy Transfer/Sunoco Pipeline has been transporting Compressed Explosive Gases (Ethane, Propane, and Butane) for 4 years under Very High Pressure (in some locations in a 90-year-old buried Rusting pipe). Two of these Liquefied Gases are the same ones that exploded and destroyed The Philadelphia Refinery. The largest oil refinery on the East Coast. It sent shrapnel as large as a car Across the Delaware River when it blew up and burned for days. Sunoco has not provided First Responders a response plan for a leak other than to say to swiftly walk away, into the wind, for about 3 miles. Do not cause a spark that could ignite the gas (no phone, doorbell, light switch, cell phone, Motor etc.). This gas has no "odorant" because it will be used to make plastic plates in Europe. Will the Catholic Protection on this steel pipe protect the pipe from rusting even if it is gouged by rocks or Debris as it is being pulled through the earth during HDD installation? This pipeline is within 20 feet From St Peter& Paul Elementary School where my Grandchildren attend. My wife and I live in Hershey's Mill a Senior Community. We are 76 years old. We have neighbors in their 90's, some bedridden, some in wheelchairs. Approximately 3000 residents in our community and additionally 1000 residents in the Skilled care and nursing home "Wellington". Good Luck with any evacuation! I cannot believe that our Government is so corrupt to allow this to happen! (16)

13. Comment

The ME2 pipeline is a disaster in my local community (East Goshen) Property values have plummeted - in fact, I can't tell you by how much because homes are being taken off the market rather than sell below what we could have gotten 2-3 years ago.

The contractor is not to be trusted - I have seen mud all over the road - flowing right into storm sewers - which in East Goshen flows untreated directly into streams - which means it is eventually in the water table. Even in benzonite is not a carcinogen as defined - it does not belong in our water and Sunoco has no right to put it there.

The noise is deafening - the lights are blindingly bright for drivers. Michels as a contractor has been given to much freedom without oversight. they have unqualified people making statements and making decisions. there should be onsite professional engineers providing oversight. They fill sinkholes before they call the township. their deceit is obvious and continuing.

The times there have been accidents - the communication and the transparency has been disgraceful.

I am asking DEP to do their job and stop this nonsense. Your job is to protect the environment - not protect Sunoco's poorly managed investment. (17)

14. Comment

Sunoco is proposing using HDD to put a stretch of 20-inch pipe under Boot Road, starting next to the Goshen firehouse on Route 202 and extending to the Corner Park Apartments, where Ship Road splits off from Boot Road, a distance of almost a mile.

With this email I would like to let the DEP and our legislators know why I am worried about this work.

1. Timing of public comment period. Extension of comment period required.

I find the timing of the comment period (December 17-31) totally inappropriate. This period includes Hanukkah, Christmas and New Year's Eve. Most of us are excessively busy over this period (more so than normal) and I would therefore like to insist that this comment period be extended in order to allow more public the time to comment.

2. The DEP must require Sunoco to specify how it will prevent spillage into the storm sewers and wetlands and how it will prevent damage to the roadway.

During the fall, there were multiple instances of problems along the adjoining stretch of Boot Road due to the HDD work in the Wilson Drive area. Parts of the roadway have sunk and there have been frack-outs with drilling mud emerging in the street (as I witnessed here on Valley Road on June 20, 2019) and, in some cases, flowing into the storm drains. Will the same thing happen with this stretch of Boot Road?

The report contains a section called "Adjacent Features Analysis" but it is limited to considering possible effects on wells along the segment. There is nothing about the causes of the previous Boot Road problems and how something similar will be prevented.

The report acknowledges that frack-outs may occur again with this HDD as they did with the 16-inch HDD along the same route but it downplays them. "Based on the information reviewed by the Geotechnical Evaluation Leader, Professional Geologists, Professional Engineers and HDD specialists" it concludes "the HDD Reevaluation Team's opinion is that the proposed HDD design and implementation of the management measures contained within the re-evaluation report will minimize the risk of IR's".

And while the report acknowledges the likelihood of groundwater flowback, causing groundwater to emerge from one end or the other of the HDD, it does not consider the potential for a serious problem that could cause flows into storm drains, or into the wetland near the northwest end of the HDD. How will Sunoco prevent this?

3. Sunoco must justify its choice of these locations for its HDD endpoints.

One end of the HDD is adjacent to the Goshen firehouse. The other is within 50 feet of the Corner Park Apartments. Once the pipeline is operational the endpoints of an HDD are locations of increased risk of a release of highly-volatile explosive gas. It is obviously unwise to have these next to a firehouse and an apartment building.

4. The DEP must require Sunoco to specify how it will prevent a "loss of circulation" (LOC) problem. This happened before. What guarantee is there that it will not happen again?

As a private well owner (150 ft from the HDD on Valley Road) I know only too well how this has negatively impacted us. Our only source of water was contaminated with bentonite and other contaminants (some described as "undetermined" in Sunoco's water test results) including E Coil and fecal coliform. This was July 2019 and, as I write this today, December 30, we are still living off bottled water supplied by Sunoco. We have a fracture line coming directly from the HDD (150ft away) to our property. Straight to our well and our house. This was known by Sunoco prior to their HDD drilling.

So, what about the loss of circulation problem? When the 16-inch pipeline was installed, there was a location (about 300 feet from the northeast end of the HDD) where there was a "loss of circulation" of the drilling mud. This means that the drill hit a void in the rock into which drilling mud flowed uncontrollably, causing the drill bit to stop turning. Eventually, it was necessary to resume drilling from the opposite end of the HDD. Where did the mud go? Is it polluting an aquifer? Will the same problem happen again with this HDD? The report is totally silent on these issues.

It seems likely that this problem will recur. If you look at the geotechnical studies in the report, you can see that there is a built-in geological reason to expect problems. On page 21 there is a map of the geological formations in the area, and the boundary between the "Peter's Creek Tectonite (Octoraro Formation)" and the Glenarm Wissahickon Formation" occurs at approximately the location of the LOC. Fractures and voids commonly occur at points where different formations meet.

The "Multichannel Analysis of Surface Waves' (MASW) chart of the HDD path (p. 104) shows an obvious gap in the rock at about 300 feet from the northwest end. There is a subtler, but still evident, gap between areas of hardest rock at about 300 feet in the "Seismic Refraction Tomography" image of the HDD path (p. 102). These are all clues suggesting an underground fissure that will have to be dealt with. How does Sunoco plan to deal with this problem?

5. The DEP must require Sunoco to provide a report from a licensed engineer, not a wildlife biologist (Larry Gremminger).

Our family, our home, our well and our health has suffered as a result of a lack of foreseeable consequences by Sunoco. In our HDD re-evaluation report for our section of Valley Road in Middletown Township the fracture line running from the HDD straight to our property and our well was totally obvious. No precautions were taken to prevent damage to our well (which now has to be abandoned) or to our health.

The question we should be asking here is whether the author of these HDD reports is qualified. The report was signed (and apparently written) by Larry Gremminger. His title is "Vice President - Environmental Geotechnical Evaluation Leader". His only credential is "CWB" (Certified Wildlife Biologist). This is an engineering report which should have been written by a qualified and licensed engineer not a wildlife biologist.

I urge the DEP to take my concerns extremely seriously and act on them with the power and responsibility bestowed upon this regulatory agency. Sunoco's plan has the potential to damage the environment and put people's lives at risk. The DEP must insist that Sunoco is required to do better than this. I can testify as to what has happened to us, our home, our family and the six sinkholes near to our home (4 of them a quarter of a mile away at Sleighton Park, Middletown Township). There has been a lack of foresight and due diligence. Our family and home has been negatively impacted and damaged and my family has been put at risk. This cannot continue.
(18)

15. Comment

I was shocked when to hear that the comment period would be during the holidays at such an inconvenient time for the residents greatly affected by this dangerous pipeline project. However, this entire project has been consistently haphazard, inconsiderate and poorly managed by Energy Transfer Partners (ETP or Sunoco). Plus, the lack of transparency and honesty by ETP should yield more time for this new HDD to be reviewed adequately so that the residents are properly protected versus the interests of this for profit supposed public utility.

Residents continue to absorb the considerable risks associated with environmental destruction, infrastructure disturbance and unknown damage along with the contact risk of rupture or leak and often never notified by ETP.

Enough is enough or is it just ok that their report states there is still a chance for IR just that they have minimized the. Umber of IRs. So how many are they estimating with their experts and what differences are minimizing the risk?? No that is not acceptable enough water sources, aquifers and personal wells have already been destroyed we should want better and better yet deserve better. The HDD plan is too risky to this area and will cause more IR and further damage to our ecosystem and way of life.

Also, I would recommend that ETP have an independent assessment done by a licensed engineer not by one of their representatives or employees who reside in Texas. We should have an independent expert engineer familiar with the PA topography to conduct the report to what lasting impacts this type of project will have in the residents, environment and stability of infrastructure. We the people of PA deserve better an independent engineer report to ensure this is not too dangerous.

Boot road has had several issues over the past summer with the project by Wilson Drive with IRs instability issues often not initially addressed until diligent and concerned residents bring it to the attention of authorities. We need the PA DEP to do its job and protect the environment as one frack our has been enough and there have been way too many to count. With the rest of Boot Rd be compromised with instability and water issues if this is allowed? The residents deserve better and our infrastructure and roadways should not be destroyed or weakened by this project.

Also don't forget the Flare stick issue not adequately addressed by ETP past Summer and there was not an adequate plan for notification to residents nor an evacuation plan if this became more serious. This again is by Boot Rd firehouse.

Please review your department's mission statement below and let me know if the DEP is truly performing all the duties necessary to protect the residents of West and East Goshen from water and land pollution during this project? How is this project providing a cleaner environment for Pennsylvanians?

The Department of Environmental Protection's mission is to protect Pennsylvania's air, land and water from pollution and to provide for the health and safety of its citizens through a cleaner environment. We will work as partners with individuals, organizations, governments and businesses to prevent pollution and restore our natural resources.

I also don't believe that this company ETP should be allowed any adjustments to rush this project along when there is a current FBI investigation to whether the permits were not properly administered. It is time for our government officials and departments to adequately perform their job for their constituents. There are a multitude of issues with this report submitted by ETP and now is the time for the PA DEP to stand up for its residents and protect is left. Perhaps review why NY state has banned fracking perhaps they just care more about the precious and few resources left along with the resident's health. (19)

16. Comment

1. GENERAL COMMENT

The HDD Re-Evaluation Report submitted by Sunoco/Energy Transfer is signed by three individuals: Mr. Larry Gremminger, CWB; Mr. Richard T. Wardrop, P.G.; and Mr. Jeffrey A. Lowy, P.E. The report reflects that Mr. Gremminger, as the Geotechnical Evaluation Leader, has attributed his signature to the parts of the

report “Pertaining to Horizontal Directional Drilling Practices and Procedures; Conventional Construction Alternatives; and Environmental Effects.” Mr. Wardrop has affixed his signature and professional seal “Pertaining to the practice of geology.” And finally, Mr. Lowy has affixed his signature and professional seal “Pertaining to the pipeline stress and HDD geometry.”

While reviewing multiple other HDD Re-Evaluation Reports for sites such as Middletown/Valley Road (S3-0591); Strasburg Road/Bow Tree (S3-0520); Gradyville Road (S3-0580); Eldridge Drive/N Chester Road (S3-0500), it is apparent that information provided in the portion of the reports written by Mr. Gremminger is often insufficient, outdated, lacking in detail, and often requires the DEP to request further clarification or modification. In the reports for several sites (specifically Valley Road, Bow Tree, and Edgmont Gradyville), the DEP correctly rejected the insufficient bore samples submitted by Mr. Gremminger and requested more extensive testing to be completed over the entire drill profiles. In each case, Mr. Gremminger initially resisted the DEP’s requests that SPLP perform more extensive geological testing prior to drilling, only to later reverse course and agree, in writing, to the more extensive testing suite, then later fail to perform such testing, which was a clear condition of drilling re-start (see DEP approval letters, dated December 5, 2018). At Valley Road, where multiple sinkholes and subsidence has since occurred, only now is Mr. Gremminger’s team performing those tests, which should have been done over a year ago. I also include by reference the three-page November 7, 2019 Notice of Violation (<http://files.dep.state.pa.us/ProgramIntegration/PA%20Pipeline%20Portal/MarinerEastII/NOV/2019/November%207%2C%202019%20Chester%20County.pdf>) issued for Strasburg/Bow Tree HDD 520 which details violations of the Clean Streams Law, Dam Safety and Encroachments Act, and the Oil and Gas Act of 2012 and failures by the HDD Reevaluation Team, led by Mr. Gremminger, to inform the DEP of substantial changes in construction/installation methods and question why reports submitted by this individual continue to be accepted by the DEP.

Finally, while the DEP has made past and ongoing efforts to require that HDD Reevaluation Reports be signed and sealed by a PA licensed engineer and geologist, it is clear that Sunoco/ET continues to utilize the services of an unlicensed Certified Wildlife Biologist who appears to be operating in violation of the Wildlife Society Code of Ethics, specifically, §3.9 Standards for Professional Conduct:

Accept employment to perform professional services only in areas of their own competence, and consistent with the Code of Ethics. They shall seek to refer clients or employers to other natural resource professionals when the expertise of such professionals shall best serve the interests of the public, wildlife, and the client or employer;

§3.13 Standards for Professional Conduct:

Avoid performing professional services for any client or employer when such

service is judged to be contrary to the Code of Ethics or detrimental to the well-being of wildlife resources and their environments;

§3.14 Standards for Professional Conduct:

Advise against an action by a client or employer which violates any statute or regulation.

For all of the above noted reasons, and the history of NOV's issued for sites associated with Mr. Gremminger's past reports, I urge the DEP to act in the public's best interest and reject the report submitted for S3-0421 in its entirety and require a new report to be submitted by a Pennsylvania licensed engineer appropriately qualified to attest to the HDD practices and installation sections.

2. PIPE INFORMATION

Once again, as in previous submitted reports for other sites, Sunoco fails to include any substantial supporting data for a Pipe Stress Analysis. Buried pipelines are not only subject to significant stresses during the installation process but also subject to earth movement, particularly in areas where fracture and fault zones are present. As demonstrated by the explosion of Energy Transfer's Revolution Pipeline in Beaver County, PA, and detailed in the Advisory Bulletin issued by PHMSA on May 2, 2019, warning "operators of gas and hazardous liquid pipelines of the potential for damage to pipeline facilities caused by earth movement from both landslides and subsidence in variable, steep, and rugged terrain and for varied geological conditions. These conditions can pose a threat to the integrity of pipeline facilities if those threats are not identified and mitigated." Reference:

<https://www.federalregister.gov/documents/2019/05/02/2019-08984/pipeline-safety-potential-for-damage-to-pipeline-facilities-caused-by-earth-movement-and-other>).

This particular site, as noted in the operator's own report, has numerous identified fracture areas and the drill profile has poor quality bedrock that is described as "highly weathered". Because a stress analysis is performed to ensure the safety and integrity of the pipe and its components, the report submitted by this operator is incomplete in that the discussion is simply limited to "the amount of curvature" the pipe may withstand during installation. Sunoco has failed to address any other types of stresses their pipe may be subject to in this geologically problematic location. The operator has also failed to provide any professional software-generated analysis of the fault-fracture area nor any information about mitigating adjustments to address pipe-soil interactions.

3. INADVERTENT RETURN DISCUSSION

It is notable that this section, in previously submitted reports, had been titled "Root Cause Analysis". The new section title suggests the Operator has abandoned the effort to submit proper root cause reports for the multiple IRs which continue to

occur at the drill sites. A Root Cause Analysis exercise is meant to be a proactive problem-solving method to identify problematic issues and implement corrective actions to prevent them from occurring in the future. In previous public comments, I have noted that the Operator's Root Cause Analysis efforts were grouped together when each IR should be separately addressed. The DEP should continue to press the Operator for proper Root Cause Analysis reporting rather than a mere discussion of the IR events.

4. GEOLOGIC ANALYSIS

As this section of the HDD Re-Evaluation Report pertains to Geology it should be included as part of the report submitted by GES, under their corporate logo, bearing the signature of the licensed geologist. Since it cannot be ascertained that this portion of the report was written and submitted by the Pennsylvania licensed geologist, Mr. Richard T. Wardrop, and in fact appears outside of the GES information, it should be disregarded.

Additionally, the report states that Fracture Trace Analysis identified one fracture trace at approximately Station 13+50 on the profile and a second one intersecting the alignment at the Boot Road/Rte 202 ramp interchange at approximately Station 38+15. A map of these fractures is shown as Figure 3 in the GES report. No discussion is offered in this section of the six additional fractures that are shown in close proximity to the HDD profile. The fracture trace analysis was based on a composite of interpretations for multiple 1937-1942 aerial photographs viewed with a Topcon MS-3 Stereo Scope. In the attached GES report it is noted that MASW and seismic refraction studies were done in early 2019. The MASW data, shown on page 104, indicated three potential fault-fracture zones (at approximately Stations 4+87, 7+00, and 16+00), which do not correspond to the aerial photography observations. In situations such as this, it is recommended that further fracture trace analysis testing is performed, so there at least three data sources, to achieve repeatability of results, rather than drilling based on inconsistent/incompatible results. As urged in previous public comments, I submit a report of Case Studies presented by SAIC on the reliability of single vs multiple sources in Fracture Trace Analysis. The findings show that "Analysis based on a single attribute, or a combination of attributes as a stand-alone criterion for assessment can be seriously misleading." Further the report goes on to demonstrate that:

- With fewer data sources for analysis there is less repeatability
- With one data source repeatability was ~20 percent (Case 1)
- With two data sources repeatability was ~45 percent (Case 3)
- With numerous data sources repeatability was ~80 percent (Case 2)

Source:

(https://mde.state.md.us/programs/water/water_supply/Source_Water_Assessment_Program/Documents/www.mde.state.md.us/assets/document/watersupply/2008symposiu)

m/M-0205-Weikel.pdf).

Hydrogeology, Groundwater, and Well Production Zones

As this section pertains to hydrogeology, ground water, and well production zones it should be included as part of the report submitted by GES, under their corporate logo, bearing the signature of the PA licensed geologist. Since it cannot be ascertained that this portion of the report was written and submitted by the Pennsylvania licensed geologist, Mr. Richard T. Wardrop, and in fact appears outside of the GES information, it should be disregarded.

Of note, however is the statement that “most groundwater flow in the area of the HDD alignment is towards East Branch Chester Creek to the southwest. Some shallow groundwater flow near the southeast entry/exit may be east towards a headwater drainage of Ridley Creek.” Since the geology is highly fractured, highly weathered, and the water level is close to the surface it is a logical conclusion that the probability is high that these Pennsylvania waters may be contaminated by industrial waste from SPLP’s drilling operations.

5. CONCLUSION

Having read a number of HDD Re-Evaluation Reports for this project, the overall conclusion I have after reading this specific report is how unsuitable and unstable this location is. In fact, this is the most disturbing report I have read to date. Whether one considers the highly fractured and weathered geology; the close proximity of nearby waterways; the lack of adequate pipe stress analysis performed, or the fact that there is no detailed discussion pertaining to the petroleum odors that were present when bore sampling was performed - all of these factors lead to a conclusion that this site is not suitable for installation of a large diameter pipeline that will transport highly volatile natural gas liquids under high pressures. The fact that petroleum odors were present during sampling would suggest that the soil in this area may be contaminated from a previous incident that occurred on nearby Ship Road where approximately 70,000 to 79,000 gallons of unrefined gasoline leaked out and SUN Pipeline Company had to take remedial action. The idea that now, drilling may occur in an area that could result in IRs or waterflow migrations that could affect Pennsylvania waterways and carry contaminated soils is alarming to say the least. While the bore reports briefly note that sampling activities were halted due to the presence of nearby residents the brief statement that “HDD inspectors did not detect any petroleum affected cuttings” does not indicate that any sort of substantial soil contaminant testing was performed and no discussion of mitigating action or plan modification is provided. In fact, there is no discussion at all about possible cause(s) of the petroleum odors, no independent investigation to determine the extent of the affected area, and there is no discussion about the possible effect of contaminated soils on the pipe itself - in fact, it appears that this aspect of the geology has been completely omitted.

For the above reasons I urge the DEP to deny further activity at this site. (20)

Letter – [C. Morley](#)

Attachment – [Sun letter – March 11, 1994](#)

17. Comment

First, I would like to express my extreme dismay at the dates you have picked for this comment period. As you know, at the end of the year there are many holidays - there is Christmas, there is Hanukkah, and there is New Year's Day, when everyone is spending time with their families and on vacation.

Why in the world did you pick this time period? Did you really not want people to be able to respond? That is unfortunately how it comes off.

Please, please extend the time frame for these comments, thank you very much.

Now, begin my comments:

Sunoco wants to use HDD (horizontal drilling) to put a segment of 20-inch pipe under Boot Road, starting next to the Goshen firehouse at Route 202 and going to Corner Park Apartments.

This is a very dangerous plan and should not be allowed. Here are some (not all) reasons why:

1. There already were two frack-outs when 16-inch pipe was installed in this area previously. Also, parts of the roadway have sunk, with drilling mud emerging into the street, because of previous HDD work.

Therefore, based on this history alone, the drilling should not be allowed, but at the very least:

1. The DEP must require Sunoco, in its plan, to detail how it will prevent spillage into the storm sewers and wetlands nearby, and how it will prevent damage to the roadway.

2. Sunoco must justify why it has chosen the HDD endpoints of a firehouse on one end, and apartment building on the other end. If there should be a leak or God forbid an explosion, many, many lives will be lost. This is outrageously senseless, reckless and absurd.

3. Sunoco's plan does not address the following question: When the 16-inch pipeline was installed before, there was a location where there was a "loss of circulation" (LOC) of the drilling mud. Where did that mud go? Did it cause pollution? What if this happens again? Sunoco's plan does talk about this issue, and it must.

4. Finally, I have learned that Sunoco plan was authored by someone who is a certified wildlife biologist, not an engineer. The plan should be thrown out since it is not acceptable; it was written by someone who does not have proper credentials. Would you accept the plan, for instance, if it were submitted by a hairdresser or public-school principal? I don't think so. So why is it OK from a biologist?

These are my comments above. I actually live in Delaware, but I care about the Sunoco pipeline and what happens with it, since I know many people who live right next to it, and I end up driving right by it, in my local travels. Thank you for considering my thoughts. (21)

18. Comment

I won't repeat the litany of problems regarding this debacle as the department will have heard them many times before. However, this poorly planned and executed pipeline spells disaster for the many residents of Pennsylvania in general and the highly populated Chester County in particular. The construction of Mariner 2 must cease for the health and safety of all living along its path. (22)

19. Comment

I am writing due to information I just received concerning the Mariner East pipeline section PA-CH-0290.0000-RD in Chester County, Pennsylvania where I live. There are no words adequate to communicate my disappointment and disgust with Sunoco/Energy Transfer and what has been allowed to happen here in my community negatively impacting many neighborhoods of friends, co-workers and fellow Pennsylvanian's.

My first concern is the timing and the short time period the DEP is allowing for public comments regarding the construction of this Mariner East pipeline segment. Why is the response time over the holidays of Christmas, Kwanzaa, Hanukkah and New Year's? The residents of Chester County have not forgotten the problems and damage many personally experienced as well as what the community suffered from the 16-inch pipeline installation along that route. It is crucial that the 2017 settlement, ensuing public comment solicitation, due to the 16-inch pipeline problems and resulting damage, be heard.

Due to timeline constraints, my review of Sunoco's/Energy Transfers report was rapid, however, in my quick review I am concerned their report is lacking in various areas regarding their 20-inch pipeline proposal. To recap, installation will be via horizontal directional drilling (HDD), of almost a mile stretch under Boot Road at the Goshen Firehouse at Route 202 extending to the Corner Park Apartments.

Some bullets that Sunoco/Energy Transfer should address with the DEP:

- Justify their location for their HDD endpoints? One is the Goshen firehouse and the other is at Corner Park Apartments. Why here? Considering once

operational, the endpoints of an HDD are locations of increased risk of a release of highly volatile explosive gas.

- There was a loss of circulation problem with the installation of the 16-inch pipeline. Where did all that mud go? Please have them explain. I do not see their report addressing this and it is concerning it will occur again. How will Sunoco ensure an aquifer is not being contaminated with the drilling mud?
- While their report acknowledges frack outs may (insert sarcasm) occur again, their acknowledgment is minimized which is unacceptable. In addition, their report lacks addressing the potential issue of groundwater flowback flowing into storm drains and wetlands at the northwest end of the HDD. Damage to our roadways?
- The report does not address the problems that occurred with the 16-inch pipeline installation and how these issues will be averted. It's important to have them elaborate how residents water supply and wells will be protected along the segment of installation? Not addressing problems of the past is pretending like they never happened but, they did and continue to do so. Did not happen.
- A Mr. Larry Gremminger appears on the report. He is a certified biologist?
(23)

20. Comment

Public comment for Phoenixville Pike Road, PADEP section 105 permit number E15-862 PA-CH-0290.0000-RD (SPLP HDD No. S3-0421).

The above stated HDD drill site is lacking the following items and therefore should not be approved. The HDD eval report is not signed off by a licensed geologist. Mr Larry Gremminger, CWB as the Geotechnical Evaluation Leader does not have a geology degree and has an unlicensed Certified Wildlife Biology degree. The HDD report lacks extensive geology study along with the other HDD sites that have been recently approved in the nearby area. While reviewing other HDD re- eval reports for sites in my home town such as Middletown/Valley and Edgmont/Gradyville, the HDD eval reports lacked the more extensive geological testing and as a result, Edgmont and Middletown Townships are now dealing with multiple, substantial sinkholes that have now opened up over “live” almost 90 year old pipelines carrying highly explosive NGL’s placing us all at risk of explosion, injury and death. Now, only at this time, after the fact, extensive geologist studies (which DEP originally requested in re-eval) are being carried out in the sinkhole ridden areas, that should have been completed prior to drilling to avoid possible catastrophe events. Let’s not make this mistake again. The HDD site has very similar geology to these other drill sites with the high fracture fault lines present, “highly weathered” bedrock, and water levels that are very high! This high-water level was also present at sites in Edgmont and Middletown and have resulted in multiple IR’s, spillage and contamination to private and public waterways. In a bore sample for this Phoenixville Pike road re-eval, petroleum odors were noted during sampling. There has been no follow up as to what this petroleum odor was or its origin. This petroleum odor needs to be further studied with more bore sampling and VOC testing, to determine cause/origin and if

this is from a previous pipeline spill. In Edgmont, HDD drilling has gone through a minimum of 3 prior pipeline spill areas, now spreading contamination throughout the private well and aquifer systems in my community. Many of my neighbors are now unable to drink, bathe in, or use their water due to contamination from HDD drilling. This cannot be allowed to occur here as well, further spreading VOCs/petrochemicals to our public waterways. Of other concern is the lack of adequate pipe stress analysis performed. This area has a large concentration of various other aging pipelines, that are active, “live”, carrying highly explosive NGL materials that will be under severe stress with the repeated construction vibrations, fracturing of bedrock, and erosion from the huge quantities of liquids /drilling fluids used to lubricate the HDD drills. For all of the above noted reasons, and the history of NOV’s issued for sites associated with Mr. Gremminger’s past reports, I urge the DEP to act in the public’s best interest and reject the report submitted for S3-0421 in its entirety and require a new report to be submitted by a Pennsylvania licensed engineer appropriately qualified to attest to the HDD practices and installation sections. (24)

21. Comment

I am respectfully submitting this comment regarding the work in my township ongoing in East Goshen, West Chester, PA. On Saturday, January 4, 2020 at approximately 3:10pm, there was an apparent “sonic boom” and very loud explosive, continual and disruptive sound located on Rt. 352 adjacent to Mary Dell and Bow Tree Developments.

I reside in Clocktower Woods. While I was not home at that time of day, I have read a thread of email comments on our Next Door township resident website and I am in shock at the descriptive of what neighbors were experiencing during this period of time; including being advised to shelter in place in their basements during what was apparently a Sunoco authorized but un-scheduled and un-notified release of gases from the pipeline that afternoon.

The EG Township posted a couple of vague Facebook updates following a high response of local law enforcement and safety authorities after receiving multiple calls from residents, but in my mind, this is well after the fact. Residents need to know what is going on in our township when it comes to this horrific pipeline project that we have been required to endure.

If a family was asked to shelter in place in their basement, this is not normal construction project behavior! Nobody would choose to live in proximity to such a dangerous event for obvious reasons. I have not been vocally active in this ongoing debacle to date but have strong emotional reaction to what has turned our gorgeous little community into a farce and a disaster and obvious a perceived if not real, and I assume one day real, health and safety risk!!!!

I want to cry reading the posts and the fear and concern and un-knowing of these residents in close proximity to this gas release. I just cannot imagine how they feel

waking up every morning not knowing what may happen in a given day; to their home, their family and their property.

Please know that I am filing this email as a strong protest to this project and lack of notification to the residents in advance of any gas release or any other event that might cause question, fear and probably at this point a Pavlovian response to any noise or event committed by Sunoco. My children are grown and don't live local to this disaster so if something should happen, they are safely away from the area but if they weren't, and were small and helpless, and depended on me for their full safety, I'd be a hellion to the Township for certain! So, an advance notification to those families in direct contact to this pipeline deserve the common courtesy of notification, even if it falls on a weekend and doesn't interfere with work schedules or traffic flow. (25)

22. Comment

I am writing to comment on the HDD plan for the Sunoco pipeline in East Goshen Township.

I live within 100 yards of one of the drill sites for this section of the pipeline, called the Carriage Drive section. I am very concerned about Sunoco's carelessness about informing it's "neighbors" about any potentially dangerous tasks that they do over there. They are supposed to inform the township and the county anytime they do hydrostatic testing, as an example. Just yesterday, our neighbors on 352 heard loud explosions coming from the pipeline, called 911, which sent out investigators, only to find out that they were doing "routine hydrostatic testing". The county emergency department didn't even know about this "routine" testing and used resources to investigate.

This pipeline is being built so very close to families and to people's houses and we feel like they are only concerned about getting the pipeline finished as quickly as possible without concern about the families that are right next it. (26)

23. Comment

Bottom line is that this pipeline "project" is a danger to all neighborhoods nearby. I personally live about 100 yards from it and it terrifies me to think of what will run thru it and the damage done to our environment because of the poor work done to install it. I have worked with propane much of my adult life (more years that you care to know) and I'm fully aware of the dangers it poses, much moreso when it is not odorized.

Please stop this immediately. None of us in this area want this and no one is listening to anyone by Sunoco. (27)

24. Comment

As an Educator of students near the pipeline and wife of a spouse who works within a dangerous proximity to the pipeline. I have signiant concerns regarding the lack of

transparency and advanced planning in the construction of pipelines in Chester County.

With recent events showcasing the various illegal behaviors surrounding construction of existing pipeline sites, the service to the public rather than the private sector is in high question.

In Education, if there is a posed threat- whether avoidable or unavoidable- the expectations are simple: transparency, preventative measures, and execution of precautionary action to protect those we serve. I do not believe the burden of responsibility should be any lower for those overseeing the safety of all those in our county.

How one could place a dangerous pipeline of high-pressure natural gas liquids, with no other released emergency action plan than to run on foot, is beyond my understanding as an educator, wife and resident and to continue without pausing to require these measures and educate the public is reprehensible. It took me 3 hours of searching online to even locate what the emergency procedure was- and it was only when I viewed a news story of a Chester County school running a drill - did I find out cars could not be safely used to evacuate.

Considering the minimum safe distance would require on foot evacuation of elementary, secondary schools, daycares, hospitals and retirement communities there is an expectation of catastrophic loss in the event of a leak or explosion. On foot evacuation of high-risk groups such as children, elderly, and non-ambulatory patients is not a plausible method to arrive to safety.

Yet, all of this has been neglected, and rather the "how" of the pipeline has been the question. First through rock deposits and most recently with a resubmitted plan to use trenches, which gives even less of a barrier between highly pressurized natural gas liquids and the public on playgrounds, schools and through the heart of Exton in the epicenter of a shopping mall. Piggybacking on right of ways from previous pipelines only detracts from the remaining integrity of the grounds beneath and grants even more fuel for ignition if a leak or explosion were to occur. Navigating further north would have allowed a build in a more rural area and avoided densely populated areas like schools, shopping malls and hospitals.

The pipeline project was pushed through as a public utility project in order to utilize eminent domain, and yet the responsibility of the pipeline as a public utility has been scarcely applied, which is evident through repeated failures to consider public safety in the location and lack of feasible and effective emergency egress procedures communicated to the public.

Underway are multiple investigations into the methods by which permits were approved, US Marshals receiving compensation to act as private site guards and a 30 million dollar fine assessed due to real estate violations following a pipeline

explosion in Beaver County. All of these activities call into question what oversight, if any, there is in regard to the legal and safe function of the pipeline and related construction. In the last two days, East Goshen residents were fearful of loud explosive bangs from the pipeline that the Energy company did not have the decency to notify Emergency Services and local Law Enforcement of a 'regular maintenance' and instead terrified residents and tied up emergency response teams in the investigation of the 911 calls.

At what point will the duty to protect and serve the constituents bear a higher importance than the protection of a pipeline project plagued with broken laws and manipulation of public services?

For the safety of my home, work, and community I implore you to halt the pipeline project until and unless proper standards of location, oversight and effective emergency egress plans can be made to a degree that preserves public safety-- not disregards it in the name of 'progress'. (28)

25. Comment

The public comment period for this important re-evaluation of HDD permitting was unfortunately timed around the busy holiday season. I believe that this should be extended further than it has already, to allow the public appropriate timing for response.

This mile-long stretch of HDD would start adjacent to our local fire station, dive under busy highway 202, under homes and re-emerge immediately next to a densely-populated apartment complex, which also happens to be the site of a major gasoline leak that was never fully remediated. Two frac-outs have occurred from HDD drilling in this segment already, as you are aware, revealing geological vulnerability that, in the event of a leak, will allow the converted gas to escape and find an ignition source in this heavily-trafficked area. HDD entry and exit points have increased vulnerability for leaks. Why are they located next to a fire station and an apartment building? The DEP must provide justification for these locations. Boot Road has already had multiple repairs from damage related to construction. The wholly-inadequate report submitted acknowledges the potential for more frac outs but does not problem-solve nor address the cause of the road damage to date.

Wells have been impacted immediately in the vicinity of this location due to HDD. The DEP has not addressed the additional risk to wells, nor have they required Sunoco to address this. A geologic fissure is located in this pathway, and the DEP must force Sunoco to prove that our aquifers are not at further risk from resuming HDD. This is the largest usage of HDD installation methodology in the country on any pipeline project, as you are well aware, and it is imperative that extensive justification and planning be submitted. To date, that has not been the case!

Finally, HDD re-evaluation reports must be submitted by a professional engineer. Larry Gremminger, a certified wildlife biologist, has been the main author

for all of the HDD re-evaluation reports. His resume and background should be made available to the public, as should any author of these reports, so we understand how they are qualified to generate such important documents that impact public safety in our densely-populated communities. Mr. Gremminger is not an engineer and should not be submitting an engineering report on behalf of Sunoco.

So many of these issues could have been solved if the initial permit applications were complete with the proper geological and engineering studies. That didn't happen, and here we are. It is vital that the DEP force Sunoco to be accountable and provide adequate justification for every request and permit. This project has been plagued with issues from the onset from an egregious operator, and at this late point, the state should be pulling all permits and keeping it that way to protect the lives of the Pennsylvanians it threatens.

"The time is always right to do what is right." Dr. Martin Luther King, Jr. (29)

26. Comment

Please accept the following as my comment for PA-CH-0290.0000-RD, which has been so graciously extended until January 5. Allowing people to make important comments outside of literally the most hectic twenty days of the year is appreciated.

Reading over this re-evaluation for PA-CH-0290.0000-RD has left me extremely concerned. I would hope and assume that the folks who make the decision to allow Sunoco/Energy Transfer to continue work here feel the same after seeing it as well.

The fact that the DEP would accept any required document/study stating that due to certain circumstances, they couldn't conduct the appropriate studies, had to "leap frog", not getting the appropriate data is unacceptable and irresponsible. In addition to this, Sunoco/Energy Transfer is not being forthcoming in summarizing their past drilling experiences for this stretch of HDD. For example.

In photograph 1 & 2 taken on June 14, 2019, just before reaching the drill site at the entrance to New Corner Apartments and strip mall (closed off for construction) on Ship Rd - you'll see one of two areas requiring vacuum trucks to suck up drilling mud.

In the next photographs, 3 and 4 taken on June 15, 2019, at the entrance (closed off for construction) to New Corner Apartments and strip mall - you'll see workers using the hose from a vacuum truck to suck material out of a hole in the ground in the area where they were cleaning above the ground before.

In photograph 5 taken on June 15, 2019, at the same location mentioned in prior photographs - you'll see a seismic monitoring device being utilized.

In photograph 6 taken on June 20, 2019, at the same location as mentioned above - you'll see a cement truck pouring grout into the area of apparent IRs.

Clearly, the operator that seeks the DEP's approval is withholding critical information that affects the permitting process and decisions made within it. While I understand there may not be the manpower to check up on every falsity an operator may submit (and has historically in this project), that does not excuse putting aside Pennsylvanian's health, safety and welfare.

The DEP has seen what is possible when planning around sensitive geologic conditions is done insufficiently and irresponsibly when Energy Transfer's Revolution Pipeline exploded on September 10, 2018. It seems to me that there was more than enough knowledge prior to the explosion and no action to prevent it.

Additionally, approving any HDD plans that are signed by Larry Gremminger, a certified wildlife biologist, would be incredibly irresponsible in just about any situation. However, given the history of the destruction of this project, the geographic sensitivity of the area and the incredibly high consequences of a pipeline rupturing due to ground movement - irresponsible wouldn't begin to describe it.

Being that the DEP has the responsibility of determining whether or not to approve work that has the potential of catastrophic impacts on both the environment and public safety (both can and do go hand in hand) and are under investigation by multiple local, state and federal agencies - continuing to seemingly risk a catastrophe would not be in the DEP's best interest.

While utilizing HDD as the method of installation for large, high pressured transmission pipelines to carry highly volatile liquids through high consequence areas is not (previously more utilized for sewage, cable and water lines under bodies of water, highways, etc.) does not have the necessary studies completed - it is well known that remediation of contamination and repair due to the leak/rupture of a pipeline installed this way is not possible due to depth. For this reason, the DEP should be sure that the permits they have granted are without deficiencies. It seems obvious that there are and have been many deficiencies in the permitting process.

Please take the opportunity to stop an environmental and public safety catastrophe from occurring by taking the agency's responsibilities seriously for once. Hearing yesterday (January 4) that residents within proximity to this site with private wells have already received paperwork from Sunoco/Energy Transfer about water testing, it is my hope that the DEP even plans on using these comments in the decision-making process. (30)

Attachment – [Melissa DiBernardino - Pictures](#)

27. Comment

This letter is in response to a letter dated December 26, 2019 from Sunoco Pipeline L.P. and received by Shadeland Development Corporation. (copy attached).

Shadeland Development Corporation is strongly opposed to the HOD proposed for Mariner East 2. This project will have a direct negative impact on our property and water supply.

In addition, our property contains many significant environmental features including wetlands, floodplains, watercourses and streams that will also be negatively affected by the proposed HOD activity adjacent to our property.

We are strongly opposed to any approvals or permitting that will allow this proposed construction activity to occur adjacent to our property. (31)
Letter – [Shadeland Development Corp.](#)

28. Comment

Accufacts Inc. (“Accufacts”) was asked to assist West Goshen Township (“WGT”) in reviewing the proposed horizontal directional drill (“HDD”) file and plan for the Mariner East 2, 20-inch pipeline under West Goshen Township (“Analysis”). The original HDD design was modified based on negative impacts associated with a HDD of the 16-inch pipeline within WGT in 2019 that is located in the same general right-of-way. Some of the Mariner East HDD installations experienced problems such as well water quality issues, discharges to waters of the Commonwealth, subsidence such as sinkholes, and excessive vibrations with damage to nearby structures in other nearby eastern Pennsylvania Townships.

Accufacts concurs with the Analysis findings that HDD of the 20-inch, as newly proposed, is the best alternative for crossing WGT provided additional conditions beyond those listed in the Analysis are imposed by PA DEP and implemented by SPLP.

Given the unknown schedule and length of time the HDD may take, WGT should be notified of the following during the HDD activities to install the 20-inch pipeline:

1. when the pilot bore phase starts and when it ends;
2. when the reaming phase starts and ends;
3. when the final pipe pull starts and ends;
4. indications of possible frac outs (IRs or LOCs) during HDD.

In addition, SPLP should establish monitoring stations to continuously measure and record vibration forces in the general location of the HDD activities, and make those records available for inspection by WGT personnel and consultants throughout the HDD activities.

Given the vibration forces that are associated with larger diameter pipe, long HDDs, especially during reaming activities, it is important to set up vibration monitoring stations along the pipeline right-of way to gauge possible impacts from this activity. Vibrations, both intensity and velocity, should be measured

and recorded at the surface at locations where residential structures are in close proximity to the pipeline right-of-way.

The 16-inch pipeline HDD within WGT in 2019 experienced two of what the Analysis identified as inadvertent returns (“IRs), closer to the HDD entrance and exit points where the drill depth was not as great, as well as a loss of drilling fluid circulation (“LOC”) event. While the right procedure upon the LOC was apparently observed (stopping the HDD activity pending investigation), the details of this event, such as possible volume and possible duration, were not reported in the Analysis. LOC events imply drilling fluids used in the HDD activity were being lost somewhere, but the release of drilling fluids, which probably occurred deeper in the HDD activity, didn’t reach the surface, where it might be observed and mitigated.

A detailed review of the Analysis indicates that SPLP is proposing within WGT to HDD the 20-inch along the same general pipeline right-of-way as the 16-inch installation. The new proposed 20-inch HDD compared to the original 20-inch HDD scheme will be different in several ways. The newly proposed 20-inch HDD will be slightly longer (by about 60 feet), drilled deeper (lowered 98 feet below the design depth originally permitted), generally placed lower than the nearby 16-inch, and utilize intercept drilling. Intercept drilling using more than one drill entry will shorten the actual bore path and should lower the drilling fluid pressure that is associated with longer one entry HDDs that led to frac outs, also called blowouts (either IRs or LOCs).

A critical consideration when reviewing the proposed new 20-inch HDD was the statement “There are no known or mapped sinkholes or other karst features in the area of HDD S3- 0421.” While the exact subsurface conditions cannot be completely predicted to avoid frac outs that are associated with IRs or LOCs, the identification of possible sensitive water wells and their distance from the HDD activity serves as an important parameter to try and avoid well contamination from possible HDD drilling fluids. By design the drilling fluids are nontoxic but nobody wants muddy drinking water should their water be provided by a well and a frac out reaches the well. Distance of the two nearby identified water wells (one cited at about 462 feet and the other at 620 feet from the HDD) would suggest a low risks of HDD frac out contamination from drilling fluids, but the wells should be closely monitored throughout the HDD. With the exception of the two water wells, it is reported the rest of the landowners within a 450 foot zone on either side of the proposed HDD are on public water supply.

Accufacts conditionally supports the Analysis’ conclusion that the HDD effort for the 20-inch pipeline is the best method to cross WGT with this pipeline, provided the additional precautions identified above are incorporated (i.e. notice to the Township of the key HDD activities and continuous vibration monitoring). It is worth noting that sometimes the effort to comply with an HDD deadline can rush or accelerate the process to the point where such efforts drive IR and frac outs. It

is therefore important that the HDD process not be rushed, but focus on doing it right while ensuring the pipe is installed properly underground. The HDD driller should be allowed to take the necessary time to evaluate issues that will unexpectedly occur during the actual HDD activities. This is especially important given the depth of this particular HDD, its proximity to residential structures, and the associated unknowns regarding the geology, even though best efforts may have been completed to limit the unknowns and prevent possible water well contamination and damage to nearby structures. Lastly, I must note that while many efforts have been incorporated to assure a successful HDD of the 20-inch pipeline within WGT, there are always unknowns that can arise during HDD activities that could cause the attempt to be aborted. Not all HDDs are successful for various reasons, usually associated with subsurface geology anomalies. (32)

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