

226 Valley Road  
Media, PA 19063

Mr. John Hohenstein, P.E.  
Chief, Dams and Waterways Section  
Pennsylvania Department of Environmental Protection  
2 East Main Street  
Norristown, PA 19401

May 25, 2018

**Re. SPLP Response to Comments**  
**Hydrogeological Reevaluation Report**  
**Valley Road Crossing HDD (S3-0591)**  
**DEP Permit Nos. E23-524**  
**Middletown Township, Delaware County, Pennsylvania**

Dear Mr. Hohenstein,

I am submitting our comments in response to Sunoco's letter to you, dated May 21, 2018, in response to your March 23, 2018 letter, requesting further information from Sunoco on the above-referenced horizontal directional drilling.

First, I would like to express our disappointment that, in the spirit of transparency and cooperation, this letter from Sunoco was not sent out to all the residents impacted by Sunoco's HDD along Valley Road. Had it not been for an accidental glance at the DEP's website, we would never have known this letter had been sent out to you, thereby losing the opportunity – as those directly impacted by this drilling – to express our comments on Sunoco's responses. It also only gives a 5-day period to respond which is not enough time. We all received the original Reevaluation Report so why not the second? This change in communication means Sunoco can make comments to the DEP without giving residents adequate chance to counter-respond. In other words, this part of the reevaluation process gives Sunoco an advantage.

After reading Sunoco's responses to your March 23 letter, it becomes immediately apparent that Sunoco is attempting to ignore the Department's requests on a variety of issues using the argument that what they are doing is "more than adequate", that the DEP's requests are "not needed" or Sunoco simply does not commit to the request. This leaves the residents watching this process wondering who the regulatory authority is ... Sunoco or the Department of Protection? Surely the requests made by the DEP have some purpose that needs to be met, otherwise the requests would not have been made in the first place? For Sunoco to simply not agree to those requests is tantamount to non-compliance which should result in the DEP revoking the drilling permits. The DEP has been tasked with overseeing this construction in the manner it deems necessary in agreement with its mission. It has the authority to insist on those standards of construction being carried out. It has the authority to revoke permits if those standards and requirements are not met.

These are some examples of Sunoco's non-compliance with the DEP's requests:

1. On page 1, the DEP says that “**surface geophysics should be employed** to provide evidence of the top of bedrock along the whole run...”. Sunoco refuses to do these tests, saying “the five geotechnical bores provide more than adequate information.”

I disagree with Sunoco and agree with the DEP for the following reasons:

Typically, pipeline engineers and horizontal drillers will have the same four questions:

- At what depth is the top of bedrock?
- What lithology is the overburden?
- What lithology is the bedrock?
- Is bedrock fractured?

Irregular bedrock relief may lead to the horizontal drill intersecting overburden. Should bedrock be too deep, horizontal drilling may be impractical. Granular overburden creates challenges for mud containment. Highly permeable bedrock may offer no better containment than granular overburden. Similarly, highly fractured or karsted bedrock may create high permeability zones in lithologies that normally have very low hydraulic conductivities.

While most geophysical methods may offer some insight into answering the above four questions, four methods are particularly useful, and are routinely applied. These include electrical resistivity tomography (ERT), seismic refraction, ground penetrating radar (GPR), in addition to borehole geophysics.

In view of all the problems with Sunoco’s drilling to date, we, as residents who will be directly impacted by Sunoco’s HDD, also insist, along with the DEP, that complete and comprehensive surface and near-surface geophysics be applied to this construction to prevent the negative incidents of the past being repeated.

2. On page 3, the DEP requests a **plan for monitoring wells** along the HDD. The response is that Sunoco “implements regular monitoring of adjacent water wells”, but it does not say what “regular” means nor does it agree to provide a plan.

On the subject of monitoring water wells along the HDD I am saddened and, quite honestly, astounded at Sunoco’s response. That wells will be “regularly monitored” tells us nothing!

The history of Sunoco contaminating water wells along the 350-mile path of ME2 is there for all to see. I would have thought they would want to do everything in their power to monitor well contamination continuously. Sunoco states it implements “regular” monitoring. It was only the end of 2017 that it became apparent to us that there truly was a risk to our private water well being contaminated. Our sole source of water. We have a child with an incurable auto-immune disease. We cannot take even the slightest risk of water contamination.

At this point I contacted Percheron Field Services to discuss my concerns. Despite numerous promises to get back to me “asap” after speaking with “upper management” my concerns were never addressed. I never heard back from Sunoco until 6 months later (in the form of an email), when I was informed that there was no contract or agreement to sign for the “temporary” water supply they were offering. My actual fears were never addressed. No-one ever picked up the phone to talk to me. Is that the behavior of a company that has been granted public utility status? I don’t believe so. Sunoco should have that status removed.

So, of ALL the areas that should have a plan for monitoring wells, this should be it. Why? Because in 2015, a gasoline pipeline leak was discovered at the junction of Valley Road and Gradyville Road **which we were never informed of**. Sunoco’s sophisticated “leak detection system” **which they promise will keep us safe with these highly volatile NGL’s, had failed to detect the leak**. It was a passerby that noticed it and no-one knows how long it had been leaking. The result was that the gasoline additive, MTBE, leaked into local water wells – **again, something Sunoco never told us**. MTBE is water soluble so it can travel through an aquifer and affect other areas. It’s not clear what the health implications are but my family is not prepared to take that risk. For these reasons alone, I say NO to further HDD by Sunoco. This area is still highly contaminated (according to PHMSA) and HDD along Valley Road will only serve to spread Sunoco’s previous contamination of our water.

Reasons why pre-drilling, during drilling and post-drilling water monitoring are important:

- Soils can be excavated or eroded, disturbed and compacted, or contaminated, which can impact water quality or flow patterns.
- Geology and topography can be altered, leading to landslides and increased sedimentation.
- Water quality and quantity can be impacted by sedimentation from erosion and excavation.
- Herbicides used to manage vegetation growth on the pipeline right-of-way may contaminate water resources.
- Fish and macroinvertebrate habitat quality may be diminished by removal of vegetation, disturbance of substrate, grading of the channel, and placement of structures.
- Grading could alter surface and groundwater flow due to an increase in fractures.
- Exposed geology could erode and leach acid, poisons such as arsenic, metals and previous pipeline leak products such as MBTE (near us) and others.

And it all affect us, the residents living on their private properties along the line of Sunoco’s pipeline construction.

For all these reasons, we need to know EXACTLY what form of well monitoring Sunoco proposes to use and what EXACTLY Sunoco's plan is. "Regularly" means nothing.

3. On page 4, the DEP says that "specific points of **potential weak bedrock and soils** were not individually identified. This should be done." Sunoco responds that this is not needed because the driller will know when weak spots are encountered by monitoring the pressure of the drilling mud.

This response by Sunoco is totally unacceptable and leaves me wondering if they really know what they're doing. In fact, the wake of destruction, devastation and damage Sunoco has left behind for homeowners in the form of contaminated wells, sink holes, house evacuations, flooding in basements due to compacted soil around the pipeline and a multitude of negative impact incidents only serves to convince me they don't.

Pipeline design, pipe jacking, directional drilling and foundation studies require detailed subsurface soil and bedrock testing. To properly identify specific points of potential weak bedrock and soils, Sunoco needs to fill in the gaps between borings with geophysical seismic refraction, electrical resistivity and GPR data to provide a continuous soil and bedrock profile between borings and minimizing the risk of missing a costly subsurface anomaly. How is it that Sunoco is unwilling to do this? Permits should be declined.

4. On page 6, the DEP asks Sunoco to address the possibility of IRs ("inadvertent returns", or frac-outs) where there is **weak soil**. Sunoco talks about the possibility that drillers could use minimum drilling-mud pressure in such locations, but does not commit to requiring drillers to do that.

Well, they should. The drilling fluid usually escapes the borehole due to a fissure in the soil. The drilling fluid is under some pressure produced by an injection pump at the HDD rig as well as head pressure from the weight of the fluid itself in the borehole. In addition to potential negative impacts on the wetland (opposite us and further down Valley Road adjacent to Wawa University) the drilling fluid is considered a contaminant or a "dredged or fill material" as defined by Section 404(b)(1) of the United States federal Clean Water Act. **Deposition of the drilling fluid in the wetland is a violation of the wetland-crossing permit.** As such, every effort must be made to minimize the release of drilling fluid. Furthermore, when drilling fluid is released a great deal of effort must be put into evaluating the situation, containing the released drilling fluid and ultimately remediating the location, if appropriate. Frac-outs are more common in soil types that contain preferential liquid flow paths, such as gravel or cobble deposits, and are less common in soils that are homogeneous, such as pure sand or clay deposits. Another factor in frac-outs is the depth of the HDD. The deeper the crossing the lower the likelihood of experiencing frac-outs. The likelihood of a frac-out is also increased if either the entry or exit point is significantly different in elevation. In this case, the head pressure is increased at the lowest elevation - usually the wetland or other sensitive receptor you are attempting to avoid. Another major factor in some

frac-outs is the pressure exerted on the drilling fluid by the HDD rigs hydraulic system (Reid et al, 1998.). If the pressure produced by the HDD rig is excessive it may force fluid through the soil profile, even consolidated or homogeneous soils, eventually breaking through to the ground surface. The importance of having a regulatory approved contingency plan is imperative. While no plan can foresee all contingencies the mere fact that a plan exists will provide the regulators, contractor and the company with assurances that the possibility of a frac-out has been considered and response actions considered, to the extent possible. For this reason, Sunoco must commit to requiring drillers using minimum drilling mud pressure in such locations and, if necessary, have the drilling overseen by the regulatory agency.

5. On page 7, the DEP asks how Sunoco will deal with **groundwater emerging at the HDD** site if its grouting plan for plugging the HDD hole is inadequate. Sunoco responds that it has “not had a failure” of this kind on the ME2 project.

**But there was such a failure at the Shoen Road site last summer, and it has yet to be fixed. The groundwater is not emerging through the bore hole, but it is emerging on a property across the road. Sunoco needs a better answer.**

6. On page 8, the DEP asks Sunoco to **notify the Department during critical drilling phases** so that “DEP regional staff will be provided with adequate advance notice to allow DEP staff to be present” in case there is groundwater following back to the borehole. Sunoco refuses, saying only that it will provide the DEP with “advance notice of commencing all HDDs, project wide”.

Sunoco once again, being non-compliant with the DEP’s requests. Sunoco **MUST** allow DEP inspectors to be **present during critical drilling phases**. In view of the long list of drilling catastrophes, Sunoco’s refusal is once again tantamount to non-compliance and therefore permits should be revoked.

7. On page 11, the DEP says that, given the frac-out problems in the past, drilling contractors should be required to use a **casing** (i.e. a pipe liner) **in the pilot hole** at the entry and exit points. Sunoco refuses, saying that its HDD plan for this site doesn’t require it.

I wonder why. Contractors often use a short section of casing that is ‘dug in’ at the start of construction. This casing is intended to prevent inadvertent near-surface returns, and allows for easy monitoring of drilling mud return levels. Where unconsolidated deposits represent a risk of inadvertent returns on the entry side, the casing may need to be more extensive. Wouldn’t you think Sunoco would want to take the ultimate precautions to avoid any more future problems? It seems to me that Sunoco is taking shortcuts wherever it can at our expense. Non-compliance must result in revoking permits.

On page 13, the DEP again requests **geophysical studies** to determine where the bedrock is, to identify soft soils, and finding rock fractures. Sunoco refuses, saying these studies “will provide no functional data” at this location.

How can they possibly refuse when we know that Sunoco’s statement is simply not true. As stated previously, pipeline engineers and horizontal drillers will have the same four questions:

- At what depth is the top of bedrock?
- What lithology is the overburden?
- What lithology is the bedrock?
- Is bedrock fractured?

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In view of all the problems with Sunoco’s drilling to date, we, as residents who will be directly impacted by Sunoco’s HDD, also insist, along with the DEP, that complete and comprehensive surface and near-surface geophysics be applied to this construction to prevent the negative incidents of the past being repeated.

8. On page 13, the DEP asks Sunoco for “**well depths, casing depths, and water-level depths (based on a water-level survey)**” on the cross-section diagrams of the HDD. Sunoco claims to have done this, but no water-level survey was apparently done. As far as I can see, the water levels shown in the cross sections are only those encountered in Sunoco’s five boreholes, not in local wells. And in the list of 32 private wells given in Attachment 1, 30 of them have a water level of “unknown”.

Sunoco’s incorrect and insufficient data for private wells once again highlights the company’s incompetence.

Sunoco had our well tested and measured. The measurement from the proposed HDD was totally and startlingly incorrect. They measure 490 ft instead of 150 ft from the proposed HDD. Mention of this correction is mentioned as item 27 in Sunoco’s letter to which we are responding. I also informed them of the depth of the well and the depth of the well pump. Why are they not recording the correct information and how can they be allowed to proceed with

simple mistakes like this and insufficient data of private wells? This also totally highlights the lack of interest or concern for people's private water wells which are mostly their sole water sources, as in our case. Our wells do not appear to be a high priority on their data collection list. This HAS to change.

9. On page 16, the DEP recommends that Sunoco **use 20 feet of grouting** (instead of the 15 feet in its plan) when plugging to stop groundwater flow. Sunoco's response is a curt "[Sunoco] appreciates the Department's recommendation." It will clearly be ignored.

We do not need Sunoco to appreciate a recommendation. We need Sunoco to commit to it, as required by the DEP and to be compliant. The DEP is not a consultancy agency, it is a regulatory agency and Sunoco needs to start respecting that.

10. On page 17, we once again address the issue of water supplies. I have commented on this several times now and am still not satisfied with Sunoco's replies or provisions. I ask the DEP to please **ONLY ALLOW SUNOCO TO PROVIDE PERMANENT ALTERNATIVES** so that private wells **HAVE NO CHANCE OF BEING IMPACTED**. They need to hook all those with private wells up to public water. If public water lines do not exist, then they can lay the infrastructure.

After hearing of contaminated and negatively-impacted water wells and the consequences my family has decided that Sunoco's offer of a "temporary" water buffalo is totally unacceptable. Sunoco obviously realizes that their drilling has caused many problems and, by offering these so-called water buffalo's, residents will be perfectly happy with this solution.

As I have repeated many times, this is NOT a solution for us. First of all, Sunoco does not define "temporary". Days, weeks, months ... years? Secondly, I have spoken with residents in Edgmont Township who suffered numerous problems with these water buffalo's. Please refer to the comments on the original Reevaluation Report for Edgmont Township to understand the numerous problems residents encountered. We will NOT be allowing our property to be put to that risk. I asked Sunoco if I could see a water buffalo contract or agreement and Stephen Sanders of Percheron Field Services emailed me that there was no contract or agreement (I have that email) so how on earth can they be offering "agreements" as specified in Item 29? And what protection does "no agreement" offer the homeowner in the event of Sunoco damaging the private well, the homeowner's internal filtration system, pinhole leaks in pipes and damage to appliances in the event of sediment or contamination? **EVERYTHING IS GEARED TOWARDS SUNOCO DRILLING ON WITHOUT ANY REGARD FOR THE SAFETY, WELLBEING OR HEALTH OF THE PROPERTY OWNERS OR RESPECTING THE PROPERTY OF THOSE HOMEOWNERS. NOTHING IS GEARED TOWARDS PROTECTING THE HOMEOWNER FROM DAMAGE OR HAVING SOMETHING IN PLACE TO PROVIDE COMPENSATION OR REMEDIATION IN THE CASE OF DAMAGE CAUSED BY SUNOCO.** How many times and how many dollars do impacted homeowners

have to spend on lawyers to fight for their right to clean water? I thought this was in Pennsylvania's Constitution?!

It is, in short, disgraceful that a company making billions is putting the residents of these townships through all this when THESE RESIDENTS DON'T EVEN WANT THE PIPELINE.

I was assured by our Percheron Field Agent, Lance Vaught, that Sunoco would supply the qualified contractors to install the water buffalo and would see to all the required paperwork and permits. But an email from Edgmont Township's zoning officer told me this, again, WAS NOT TRUE. This is the email from Edgmont Township's Zoning Officer on April 18, 2018:

Ms. Fuller: What I know is this:

- Edgmont discovered, during this fall, that Sunoco had installed alternative water supplies to properties near its Mariner East II HDD drill easement area without first contacting authorities for advice, permits, or regulations
- Edgmont researched the matter fully with code officials, electricians, building officials, property owners and water scientists and Aqua public water company to become educated on the topic
- Edgmont's staff developed a protocol to provide for the permitting of temporary water supply facilities, commonly called water buffalos in an effort to protect the safety, health and welfare of its residents
- Edgmont has struggled with Sunoco to gain compliance and get permits issued and safety inspections completed for the temporary water facilities already installed
- Edgmont has discovered improperly installed electric line in at least one of the temporary water supply systems, once it was able to get the work inspected
- Edgmont has learned that Sunoco has now disconnected some of these alternate water supplies and reconnected households to previously abandoned wells, again without first contacting the authorities for advice, permits or regulations
- Edgmont researched the matter and developed a series of dormant well testing criteria that it required Sunoco to perform, with satisfactory results, prior to any future reconnecting of residences to their previously abandoned wells and has requested this testing from Sunoco
- Sunoco is resisting furnishing the township with the well testing results it requires and continues to re-connect residences to their former drinking water well supplies

This is very concerning to your elected officials, the Township Manager and administrative staff, who will continue to try to gain compliance from Sunoco. I have copied this e=mail to your state representatives, the PaDEP and the Public Utility Commission for their information. If you have any questions or concerns, you may also direct them there.

Samantha Reiner  
Zoning Officer  
Edgmont Township  
P.O. Box 267  
Gradyville, PA 19039  
[sreiner@edgmont.org](mailto:sreiner@edgmont.org)



The penalty for Sunoco behaving like this? Twice the cost of the permit! That is not a deterrent.

So, to summarize, Sunoco has chosen the route for the ME2 and ME2X to run down Valley Road. We know that this is a bad route for three important reasons:

1. Most of the homes in this residential area are on Valley Road and the pipeline will be within a few feet of them, as is the case with us.
2. It endangers most of the wells in the area which are near these homes, as is the case with us (150 ft).
3. It sends the drill directly through an area where the ground is known to be polluted with the chemical MBTE from a previous **undetected Sunoco leak**, thus further spreading the pollution throughout the area.

Here is the issue. Sunoco was required, by the August 9, 2017 agreement, to consider alternative routes for many sections of the pipeline. The potential problems with this route, compared to any other, are huge. There is much more open space on either side of this route where the environmental consequences of construction, or the risks from a leak or rupture, would be far less. Sunoco's response to this legal requirement set forth in the August 9 agreement is simply to respond that other routes were "impracticable". We all know that Sunoco favors this route for its own convenience since the easement already exists for Mariner East 1. We must remember, however, that when ME1 was constructed along this route there were no homes here. It was a rural area. That is not the case now. This is now a highly-populated residential area which should not be used for industrial pipelines. The fact that ME1 – an 87-year old pipeline – was repurposed to carry these highly volatile NGL's without any notification to residents (non-compliance with Title 49, Part 195 of the Code of Federal Regulations for Pipeline Safety) 150 ft from my home already fills me with horror.

The DEP must insist on proof from Sunoco that it did, in compliance with the August 9, 2017 agreement, analyze alternative routes and exactly why this route was preferable. For it to be more "convenient" to Sunoco is simply not sufficient justification.

One last point I wish to make – an important point – is that since Sunoco has been given public utility status, the Mariner project is subject to **Title 49, Part 195 of the Code of Federal Regulations regarding Pipeline Safety**. Why, therefore, in keeping with **Part 195.440** regarding **Public Awareness**, were **the residents of Middletown Township**:

- not informed of the dangers, the risk or any kind of Emergency Evacuation or Safety Plan that would protect us?
- not informed that the ancient 87-year old Mariner East 1 had been re-purposed?
- not informed by Sunoco that this 87-year old and narrow 8" pipe was now transmitting highly volatile NGL's at high pressure - namely propane, ethane and butane - in the opposite direction to the original flow of petroleum product it used to transport, through our densely populated areas - the areas that were more or less uninhabited back in 1931?

Non-compliance by Sunoco means that we were:  
**not informed of the possible hazards, associated with unintended releases from a hazardous liquid pipeline facility.**

- **not informed of the physical indications that such a release may have occurred**
- **not informed of the steps that should be taken for public safety in the event of a hazardous liquid pipeline releas**
- **not informed about the procedures to report such an event**

<https://www.gpo.gov/fdsys/pkg/CFR-2010-title49-vol3/pdf/CFR-2010-title49-vol3-sec195-440.pdf>

According to the Code of Federal Regulations, the program and the media used **must be as comprehensive as necessary to reach all areas in which the operator transports hazardous liquid.** There is absolutely nothing on the Delaware County Emergency Preparedness Guide for NGL Pipeline leaks/ruptures

- <http://www.co.delaware.pa.us/depts/2016emergencyPlanningGuide.pdf>

Overall, Sunoco's responses in this document suggest to me that Sunoco has decided it is fine to ignore the DEP's requests, it is fine to ignore the rules and regulations of a Township, it is fine to ignore the requirements of Title 49, Part 195.440 of the Code of Federal Regulations for Pipeline Safety with respect to Public Awareness and it is fine to collect incorrect or insufficient data with respect to people's properties – especially private wells – which will be directly impacted by the proposed HDD along the already contaminated Valley Road... contaminated by Sunoco by an “undetected leak” back in 2015.

The company is determined to do as it pleases and it will continue to do so unless it is stopped. It is the duty and the mission of the regulatory agencies, the public officials and Governor Wolf himself to ensure that it doesn't continue. Only they have the authority and the power to stop this.

Sincerely,

Rosemary Fuller

Cc: Kathryn Urbanowicz, Esq.  
Clean Air Council

Cc: Aaron J. Stemplewicz, Esq.  
Delaware Riverkeeper Network

Cc: Andrew Haines  
Middletown Township Manager

Cc: Brian Zidek  
Delaware County Council Member

Cc: Kevin Madden  
Delaware County Council Member

Cc: Rosemary Chiavetta  
Secretary, PA PUC

Cc: Gladys Brown  
Chairman, PA PUC

Cc: Chris Quinn  
State Representative, 168<sup>th</sup> Legislative District

Cc: Senator Tom Killion  
9<sup>th</sup> District

Cc: Senator Andrew Dinniman  
19<sup>th</sup> District

Cc: Governor Tom Wolf