



December 29, 2017

Via Electronic and First Class Mail

Dana Drake, P.E.  
Environmental Program Manager  
Waterway and Wetlands Program  
Pennsylvania Department of Environmental Protection  
Southwest Regional Office  
400 Waterfront Drive  
Pittsburgh, PA 15222-4745

Re: Reevaluation Report  
Norfolk Southern Railroad Crossing (S1B-0250)  
Permit No. E65-973  
Penn Borough, Jeanette, and Hempfield Townships, Westmoreland County

Dear Ms. Drake:

In compliance with the Corrected Stipulated Order dated August 10, 2017 a Reevaluation Report on the above-referenced horizontal directional drill (“HDD”) was submitted to the Department on November 13, 2017. The Department requested more information on the Reevaluation Report by letter dated December 4, 2017. Please accept this letter as a response. Your requests are bolded below followed by the response.

**Item 1 of your letter requests confirmation that SPLP has identified all water supplies within 450 feet of the HDD alignment, and**

**a. Confirm that SPLP has provided proper and adequate notice to all property owners within 450 feet from the HDD alignment and asked for their water supply information.**

As set forth in the Corrected Stipulated Order, 10 day notice letters were sent to the property owners within 450 feet of the above-referenced horizontal directional drill (“HDD”) on November 1, 2017. SPLP requested each landowner to contact the Right-of-Way agent for the local area, and provide SPLP with information regarding: (1) whether the landowner has a water well; (2) where that well is located; and, (3) if the landowner would like to have this well tested, or would allow SPLP to do so. As stated in the reevaluation report for this HDD, there are fifty-eight (58) individual landowners located within 450 feet of the above-referenced HDD, and copies of the letters to these fifty-eight property owners were previously sent to the Department.

**b. Provide all documentation from item 1.a.**

There is no requirement in the Order to provide this copies of these letters and verification of delivery along with the Reevaluation Report to the Department's Regional Offices. Instead, in accordance with paragraph 10 of the Order, copies of the certified mail receipts for these letters have already been provided to Karen Yordy, Executive Assistant, Office of Programs at the Department's Central Office. If the Department requires further proof for the mailing of these letters we suggest you contact Ms. Yordy directly. Nevertheless, an example of one of these letters specifically for this HDD location is included as Attachment A for your information.

**c. Provide the property owners' response to the notifications.**

Subsequent to the submittal of the HDD reevaluation, SPLP engaged in a direct outreach and door to door survey to verify water supplies on properties within 450 ft of the HDD profile. As of the date of this response, SPLP has confirmed the presence of seven (7) private water wells, of which two (2) are within 450 ft of the HDD profile; forty-eight (48) landowners receive water supply via public services, and sixty-seven of the adjacent properties are vacant.

A water supply illustration is provided as Attachment 2. This illustration provides location information for the confirmed private water wells and areas serviced by public water supply surrounding the HDD profile.

**d. Per the Re-evaluation Report, a door-to-door survey was recommended to better define the presence or absence of domestic potable water wells proximal to the ROW. Please provide the results of this survey**

The results of the door-to-door survey are provided in the response to Item 1-c.

**2. Provide discussion and consideration of potential risks to private water supplies.**

Based upon the understanding of the groundwater levels and movement through the overburden and subsurface bedrock fractures and fissures as described in the hydrogeology report, SPLP believes that HDD activities could affect individual well use during active drilling for wells located within 150 linear ft either side of the profile. Use of the wells within this area draws upon the ground water reserves through underground porosity, fissures, and fractures. The HDD is an active "pressure event" in the aquifer that pushes upon the static ground water and at minimum could agitate settled sediments within the water bearing zones, or could result in transport of diluted drilling fluids towards the withdrawn zone for individual wells. As a result, active well use during HDD activities potentially could result in the uptake of turbid water. While this does not present a health hazard, it can be unsightly to users and could affect taste.

As depicted on the attached water supply illustration, the two verified private water wells within 450 ft of the HDD profile are north and north-northwest of the north HDD entry/exit point, at 355 ft and 388 ft respectively.

These water wells are not located within the 150 ft area on either side of the HDD profile; therefore, based upon the locations of these wells, it is SPLP's opinion this HDD does not present a potential risk to private water supplies.

Despite the above information indicating no potential risk to private water wells, SPLP has implemented a number of safeguards if private property owners should experience any adverse effects to their drinking water wells from the construction of the pipeline. These safeguards are set forth in the HDD Inadvertent Return Assessment, Preparedness, Prevention and Contingency Plan (August 8, 2017) approved by the Department.

**3. Provide a detailed discussion of the drilling and IR activity starting June 27, 2017 through July 15, 2017. Information should be provided regarding the date, location, duration and volume of each IR as well as when drilling ceased and resumed.**

This information is provided as Attachment 3 to this response.

**4. The Report states that the ME-1, 12-inch line was not accurately located and had to be resurveyed. Please describe in detail how it was discovered that the pipeline was not accurately located and why it was not located where Sunoco believed it to be located. Was the ME-1 line compromised from drilling of the ME-II pilot? Are there concerns that other portions of the ME-1 line are not properly located? Provided the results of the resurveying effort.**

The foregoing question indicates that the Department may have misunderstood the statement concerning tracking data for the pilot hole. The HDD Reanalysis states specifically, *"During verification of the tracking data for the pilot hole in progress, it was discovered that the 12-inch line was not accurately located and resurveying was required. Drilling was suspended on July 15, 2017 in order to reevaluate the drill design in relation to the verified location of the Mariner I pipeline and based upon the verification data, a new profile was designed to ensure safety during installation of the proposed 20-inch pipeline"* This statement in the reevaluation specifically regards "verification of tracking data". The driller's tracking data on where the pilot hole bottom assembly (drilling tool) should have been relative to the known location of the ME-1 pipeline was not matching to the tracking log used by the driller during the ME-II pilot hole attempt in progress. This was a drafting error made by the driller caught during verification. As noted 3.1.2 of the Hydrogeological Report in Attachment 1 of the HDD Reevaluation, the driller was having difficulty steering the bottom hole assembly in the desired directions. In short, the drilling tool was not where the driller thought it should have been. This is not an uncommon problem when HDD's have steering difficulties and is

why there is constant verification of where the new HDD pilot is actually located, most especially when in near proximity to an existing in-service pipeline. The combination of the steering difficulties and IR's as noted elsewhere in the reevaluation contributed to the decision by SPLP to reevaluate this HDD profile, which had commenced prior to the Order.

The ME-1 pipeline was not compromised and was in no jeopardy during this ME-2 pilot hole attempt. The whole purpose of tool tracking and survey verification is to prevent an incident during an HDD when parallel to and when crossing over or under other buried utilities.

SPLP has no concerns that other portions of the ME-1 pipeline are not properly located, and there are no resurveying results of the ME-1 pipeline to provide. The location of the ME-1 pipeline is accurately represented on both HDD plan and profile drawings provided in Attachment 2 of the reevaluation report.

SPLP appreciates the effort required to review and approve the Reanalysis of the Norfolk Southern Railroad HDD (S1B-0250).

Sincerely,



Matthew Gordon  
Project Director

Attachments:

- 1 - Example Landowner Communication
- 2 - Water Supply Illustration
- 3 - Item 3 Response; IR Discussion and Data

**ATTACHMENT 1**  
**EXAMPLE LANDOWNER COMMUNICATION**



**SUNOCO PIPELINE**  
An ENERGY TRANSFER Partnership

November 1, 2017

**BY CERTIFIED AND FIRST CLASS MAIL**  
**7015 1730 0000 9109 2757**

[Redacted Address]

Re: Mariner East 2 – Pennsylvania Pipeline Project  
Horizontal Directional Drilling Construction Notification  
and Private Water Supply/Well Sampling Offer

[Redacted Contact Information]

Dear [Redacted Name],

Sunoco Pipeline L.P. (SPLP) is writing to inform you that a certain construction activity known as Horizontal Directional Drilling (HDD) for Mariner East 2, also known as the Pennsylvania Pipeline Project, is located within 450 feet of your property boundary. This HDD will begin as soon as ten (10) days of the date of this letter.

As part of this construction activity, SPLP is offering private water supply/well testing at SPLP's expense if you have a private water supply/well located within 450 feet of the HDD alignment. SPLP will provide you copies of all test results from your private water supply/well. Please note that upon their request, we will provide the test results to the Pennsylvania Department of Environmental Protection as well.

To assist with this process, SPLP is requesting that you contact the Sunoco representative for your area by calling Maria Davis at (412) 375-2000 to provide SPLP with the following information:

1. If you have a private water supply/well on your property;
2. The location of your private water supply/well on your property; and,
3. If you would like to have your private water supply/well tested.

**If you would like to have your private water supply/well tested, you must contact the Sunoco Representative for your area within the next then (10) days by calling Maria Davis at (412) 375-2000. Your private water supply/well will be tested at a mutually-convenient**

7015 1730 0000 9109 2757

U.S. Postal Service™ <b>CERTIFIED MAIL® RECEIPT</b> Domestic Mail Only	
For delivery information, visit our website at <a href="http://www.usps.com">www.usps.com</a> ®	
OFFICIAL USE	
Certified Mail Fee \$ _____	
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy) \$ _____	
<input type="checkbox"/> Return Receipt (electronic) \$ _____	
<input type="checkbox"/> Certified Mail Restricted Delivery \$ _____	
<input type="checkbox"/> Adult Signature Required \$ _____	
<input type="checkbox"/> Adult Signature Restricted Delivery \$ _____	
Postage \$ _____	
Total Postage and Fees \$ _____	
Sent To _____	
Street and _____	
City, State _____	
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions	

**time within ten (10) days of SPLP's receipt of your request for testing. If you do not contact the Sunoco representative, there will be no further contact from us regarding any private water supply/well testing.**

If you have any questions or concerns, please do not hesitate to contact the Sunoco representative for your area by calling Maria Davis at (412) 375-2000.

Thank you for your cooperation.

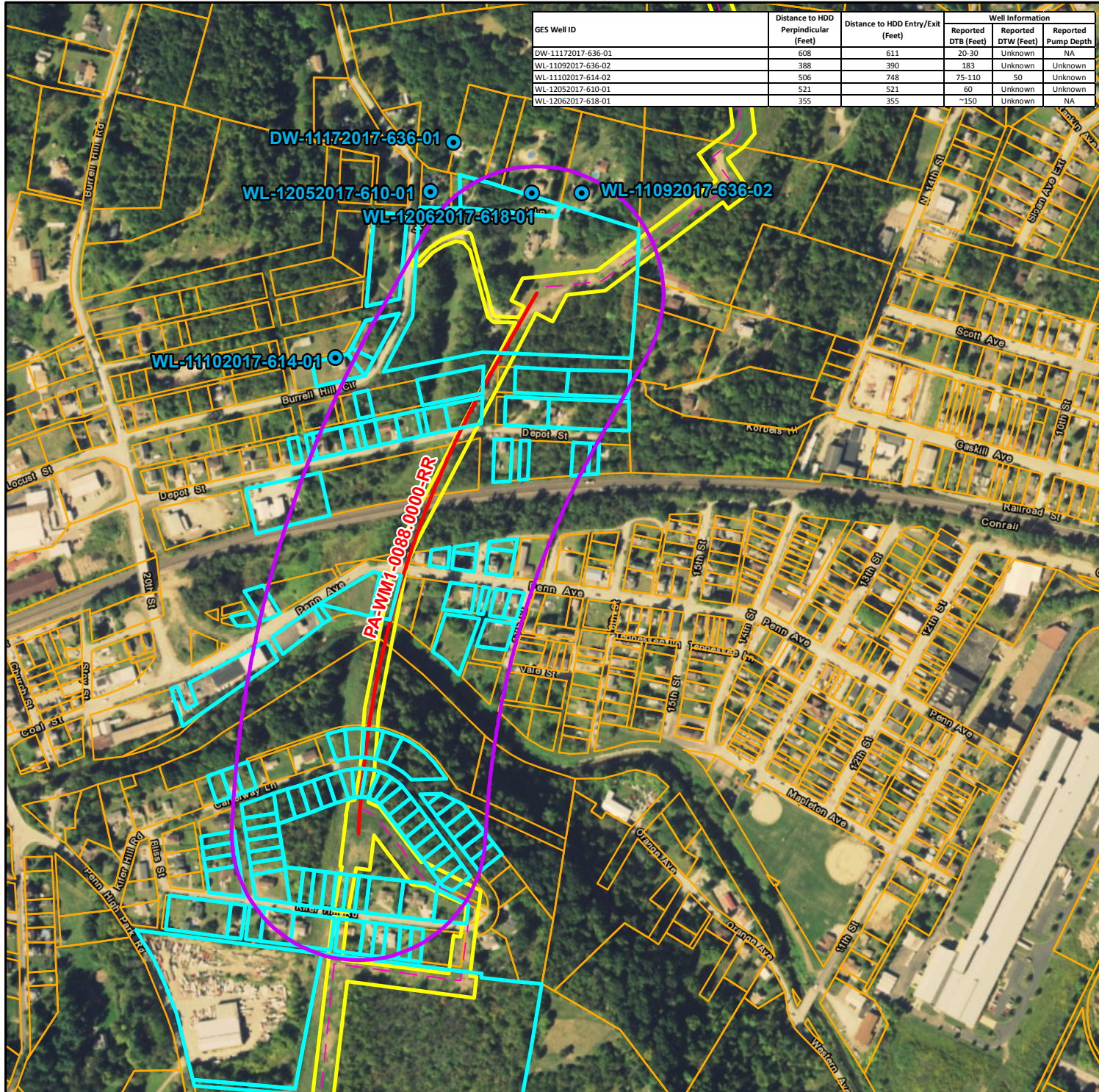
A handwritten signature in blue ink, appearing to read "Mark McConnell". The signature is fluid and cursive, with the first name "Mark" being more prominent than the last name "McConnell".

Mark McConnell  
Land Project Manager  
Representing Sunoco Pipeline L.P.

**ATTACHMENT 2**  
**WATER SUPPLY ILLUSTRATION**



GES Well ID	Distance to HDD Perpendicular (Feet)	Distance to HDD Entry/Exit (Feet)	Well Information		
			Reported DTB (Feet)	Reported DTW (Feet)	Reported Pump Depth
DW-11172017-636-01	608	611	20-30	Unknown	NA
WL-11092017-636-02	388	390	183	Unknown	Unknown
WL-11102017-614-02	506	748	75-110	50	Unknown
WL-12052017-610-01	521	521	60	Unknown	Unknown
WL-12062017-618-01	355	355	~150	Unknown	NA



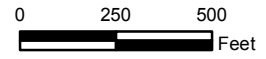
**Legend**

- LOD
- Parcel
- PPP Centerline
- HDD
- 450 foot buffer of HDD alignment
- Public Water Supply/Landowner Confirmed No Well

**\*\*Testing locations current as of 12/08/2017**

- GES Testing Location

**Location**



**Well Location Map**  
**HDD# PA-WM1-0088.0000-RR**  
**Westmoreland County, PA.**

Prepared By:



Date:  
**12/28/2017**

Base Map:  
 ESRI World Imagery, 09/24/2015

Coordinate System: NAD 83 Stateplane, PA South, Feet

G:\Support\17-201656-FRPA\GIS\WellLocations\WellLocation\_PA\_WM1\_0088\_0000.mxd

**ATTACHMENT 3**  
**ITEM 3 IR RESPONSE AND DATA**



**Attachment 3**  
**Response to Item 3**  
**PADEP comments on HDD S1B – 0250 Norfolk Southern RR**

***3. Provide a detailed discussion of the drilling and IR activity starting June 27, 2017 through July 15, 2017. Information should be provided regarding the date, location, duration and volume of each IR as well as when drilling ceased and resumed.***

The drilling fluid observed at the surface between June 27, 2017, and June 29, 2017, was fully contained during drilling activities using an interceptor trench to collect the drilling fluids to a dug pit which were then pumped to the HDD entry pit. Drilling fluids that appeared at the surface never left the Limit of Disturbance (LOD). SPLP was not tracking volumes for this type of discharge at the time of these events.

The initial pilot hole for the 20-inch line proved difficult to steer due to variations in the hardness of the bedrock formation, and multiple attempts were made to pull back and reenter the boring to achieve and maintain the correct alignment. Drilling was suspended on July 15, 2017, to reevaluate the drill design.

The following is a summary of drilling activity starting June 27, 2017 through July 15, 2017. The distances reported below are from the point of entry, and the reported depths are depths from land surface to the HDD bottom hole assembly as communicated by MAXX representatives to the drill site PG.

**June 27, 2017:** The pilot hole encountered a void at a distance of 910 feet (ft) from the entry point, drilling north to south, at approximately 99 ft below ground surface (ft bgs). At distance of 929 ft, circulation was lost. Lost Control Material (LCM), Magmafiber™, was added to the drilling fluid and drilling resumed for one hour when drilling fluid appeared on the northwest corner of the drill pad within the LOD. The drilling fluid was promptly managed by installing a pit and diversion ditch on the pad. Drilling was stopped for the day. No drilling fluid was noted off the drill pad or outside of the LOD.

**June 28, 2017:** A blockage was noted at the release point in the well bore and driller attempted to ream the hole to clear it. Partial returns were noted at the diversion ditch and returns were controlled by pumping from the newly dug pit to the drill pit. The borehole was not advanced.

**June 29, 2017:** Drilling fluid stopped flowing to the surface and drilling resumed with no new flow noted, but the surveyed path for the pilot hole was determined to be incorrect and drilling was stopped to evaluate options.

**June 30, 2017:** Drilling activities resumed; however, there was no advancement of the pilot hole. No new drilling fluid was seen at the surface.

**July 1, 2017:** Drill pipe was tripped out and drilling activities were suspended until a reevaluation of the location of the pilot hole alignment and exit point could be completed. No appearance of drilling fluid at the surface was observed.

**July 2, 2017:** Drilling resumed and the pilot bore was advanced to 1,150 ft before it was determined that the drill bit had drifted off the current planned profile alignment. Drilling pipe was tripped out and there was no new appearance of drilling fluid at the surface.

**July 3, 2017 to July 14, 2017:** Drilling activities were suspended while the surveyed path to exit point could be reevaluated. No new appearance of drilling fluid at the surface was observed.

**July 15, 2017:** HDD rig was demobilized from the site and drilling suspended pending reevaluation of drill path.