Sunoco Pipeline L.P.

If Interim report, Subject to Change as Additional Information Becomes Available
If Interim Report, this Report is cumulative, containing information from previous reports in addition to new information and may change
SPLP PENNSYLVANIA PIPELINE PROJECT
HORIZONTAL DIRECTIONAL DRILLING – INADVERTENT RETURN REPORT FORM

INTERIM REPORT	**IF INTERIM, SEE NOTE ABOVE.**	**NOTES:**	Interim Report 9: On 8/10/2020 at approximately 1530 hours, drilling fluid emerged within wetland WL-H17, and entered streams S-H11 and S-H10. The drilling fluid continued to flow down S-H10 and entered pond H3 (Marsh Creek Reservoir). The drill was in the ream phase at the time of release, with a volume of 7,712 gallons of drilling fluid released (The initial notification of the inadvertent return was estimated to be 1,000 gallons. This estimate was provided by the onsite PG and was based on the surface dimensions of the emergence, approximately 10' x 20' and several inches deep. The number was revised after discussion with the driller and collection of survey data.). Drilling was immediately stopped upon discovery of the IR. Two turbidity curtains were installed at the confluence of S-H10 (UNT to Marsh Creek) and pond H3 (Marsh Creek Reservoir). Ten sand bag and silt fence dams were constructed within S-H10 (UNT to Marsh Creek). Crew members began clean up and recovery of the drilling fluid starting at the location of the IR release point working their way towards pond H3 (Marsh Creek Reservoir). Crew members used pumps and hand tools to recover the drilling fluid and transport it to onsite storage tanks. Stream water was pumped and used to spray remaining bentonite pockets within stream S-H10 (UNT to Marsh Creek). On 8/11/2020, a subsidence feature was discovered at the location of the inadvertent return, within wetland WL-H17. On 8/12/2020 the subsidence was filled with approximately 26 cubic yards of flowable fill. As of 8/17/2020, one containment dam remains within S-H10, the containment structure remains in place at the initial IR location, and two turbidity curtains remain at the confluence of stream S-H10 and pond H3. Drilling fluid has been recovered from WL-H17, S-H11 and S-H10. Additional survey is in progress to implement a recovery plan for drilling fluid within pond H3. No drilling is in process. As of 8/31/2020, the containment structure remains in place at the initial IR location and two turbidity curtains remain at the confluence of stream S-H10 and pond H3. Drilling fluid has been recovered from WL-H17, S-H11, and S-H10. As of 10/12/2020, additional environmental surveys and assessments are being completed and results are being compiled. Driller is prepping for grout of annulus, awaiting minor modification approval. Geophysical survey and anomaly proofing have been completed. The Environmental Inspector (EI), Professional Geologist (PG) and Contractor will continue to monitor the IR/subsidence location as well as installed best management practices (BMPs). No drilling is in process.

REPORT DATE:	Current as of 10/12/2020			**HDD ALIGNMENT #**	PA-CH-100.0000-RD		
PROJECT SITE:	PPP 6 - S3-0290 - Milford Rd./Little Conestoga Rd			**HDD COMPANY:**	Michels Directional Crossing		
DATE AND TIME WHEN IR WAS INITIALLY DISCOVERED				**DATE:**	8/10/2020	**TIME:**	1530
LOCATION: STREET	427-423 Green Valley Rd, Downingtown, PA 19335			**MUNICIPALITY:**	Upper Uwchlan	**COUNTY:**	Chester
LATITUDE:	40.0794	**LONGITUDE:**	-75.7104	**FROM STATION:**	14824+00	**TO STATION**	14824+00
STREAM NAME:	S-H10 (UNT to Marsh Creek), S-H11 (UNT to Marsh Creek)			**POND / LAKE NAME:**	Pond H3 (Marsh Creek Reservoir)	**WETLAND NAME:**	WL-H17 (PEM, PFO)
DEP PERMIT Nos. (102 AND 105)	E&S Permit # ESG0100015001, Water Obstruction Permit E15-862						
CORPS PERMIT NO.	PASPGP-5 (issued April 12, 2017)						
IR TRACKING ID:	PPP6_PA-CH-0100.0000-RD_MilfordRd_IRInterim_09_101320						
IS AUGUST 8, 2017 ORDER APPLICABLE?	**YES**	**LISTED IN WHICH EXHIBIT?**	3	**DESCRIPTION IN EXHIBIT**	HDDs for Reevaluation		

COMPLETE THE FOLLOWING QUESTIONS IF APPLICABLE:

1. IS THE IR ON-GOING? Provide dates, times, and duration of all IRs.	**NO**	**NOTE:**	On 8/10/20 at approximately 1530 hours, approximately 7,712 gallons of drilling fluid emerged within WL-H17, and entered streams S-H11 and S-H10. The drilling fluid continued to flow down S-H10 and entered pond H3 (Marsh Creek Reservoir). The IR ceased emerging after drilling was stopped.
2. HAS THE IR CEASED? Provide date and time for each IR.	**YES**	**NOTE:**	On 8/10/20 at approximately 1530 hours, approximately 7,712 gallons of drilling fluid emerged within WL-H17, and entered streams S-H11 and S-H10. The drilling fluid continued to flow down S-H10 and entered pond H3 (Marsh Creek Reservoir). The IR ceased emerging after drilling was stopped.
3. WHEN WAS DRILLING STOPPED? Provide date and time for each IR.	Drilling was immediately stopped on 8/10/2020 at approximately 1530 hours.		
4. VOLUME OF IR (CURRENT ESTIMATE)?	Approximately 7,712 gallons		
4A. DOES THIS VOLUME RELEASE REPRESENT A TOTAL VOLUME RELEASED SINCE THE RELEASE BEGAN?	**YES**	**NOTE:**	Approximately 7,712 gallons of drilling fluid emerged on 8/10/2020.
5. HAS THIS VOLUME CHANGED SINCE THE LAST REPORT? IF SO, HOW?	**NO**	**NOTE:**	
6. WHAT IS THE DURATION OF EACH IR? Provide dates and times.	The IR ceased emerging on 8/10/2020 at 1530 hours after the IR was discovered and drilling was stopped.		
7. WHAT STEPS WERE TAKEN TO STOP EACH IR? Provide dates and times.	Two turbidity curtains were installed at the confluence of S-H10 (UNT to Marsh Creek) and pond H3 (Marsh Creek Reservoir). Ten sand bag and silt fence dams were constructed within S-H10 (UNT to Marsh Creek). Crew members began clean up and recovery of the drilling fluid starting at the location of the IR release point working their way towards pond H3 (Marsh Creek Reservoir). Crew members used pumps and hand tools to recover the drilling fluid and transport it to onsite storage tanks. Stream water was pumped and used to spray remaining bentonite pockets within stream S-H10 (UNT to Marsh Creek).		
8. WHAT REVISIONS TO THE DRILLING WERE IMPLEMENTED PRIOR TO EACH RESUMPTION OF DRILLING? Provide dates and times.			
8a. What was the technical basis for resuming drilling?			
9. WAS THE DRILLING RESUMED? Provide dates, times, and duration for each IR.	**NO**	**NOTE:**	
9A. IF SO, HAS ANOTHER IR OCCURRED? If YES, provide dates and times for each IR.	**NO**	**NOTE:**	
10. HAS IR BEEN CONTAINED? If YES, Provide dates, times, and measures for each IR.	**YES**	**NOTE:**	Two turbidity curtains were installed at the confluence of S-H10 (UNT to Marsh Creek) and pond H3 (Marsh Creek Reservoir). Ten sand bag and silt fence dams were constructed within S-H10 (UNT to Marsh Creek) on 8/10/2020.
11. HAS A FISH KILL OCCURRED? If YES, Provide dates, times, and measures for each IR.	**NO**	**NOTE:**	
12. ARE FISH AND OR OTHER AQUATIC LIFE IN DISTRESS?	**NO**	**NOTE:**	
13. AS OF THE DATE OF THIS REPORT, DOES DRILLING FLUID REMAIN IN THE WETLAND OR WATERCOURSE?	**YES**	**NOTE:**	Drilling fluid remains in pond H3 (Marsh Creek Reservoir)
14. IS THERE NOTICEABLE HIGH LEVELS OF TURBIDITY IN THE WATERCOURSE? If YES, Provide dates, times, and duration for each IR.	**YES**	**NOTE:**	Drilling fluid remains in pond H3 (Marsh Creek Reservoir)
15. HAS FLUID LOSS OCCURRED? (IF KNOWN) If YES, Provide dates, times, and duration for each loss of fluid.	**YES**	**NOTE:**	500 gallon loss on 3/3/2020.
16. CORRECTIVE MEASURES IMPLEMENTED NOT PREVIOUSLY LISTED ABOVE? Provide dates and times for each IR.			
17. DESCRIPTION OF IMPACTS INCLUDING TIMES, DATES, AND DURATION OF EACH IMPACT.	Drilling fluid emerged within wetland WL-H17, and entered streams S-H11 and S-H10. The drilling fluid continued to flow down S-H10 and entered pond H3 (Marsh Creek Reservoir) on 8/10/20.		

LIST ANY NOTIFICATIONS OF INCIDENT MADE TO WATER INTAKES, WATER WELL OWNERS AND LANDOWNERS, INCLUDING DATE AND TIME WHEN EACH NOTIFICATION OCCURRED:									
NAME:	2 Private Well Owners	DATE:	8/11/2020	TIME:		PUBLIC OR PRIVATE:	Private	NOTE:	Letters sent.
NAME:	1 Public Water Supply	DATE:	8/10/2020	TIME:	1625	PUBLIC OR PRIVATE:	Public	NOTE:	Informed of release on 8/10, letter sent on 8/11.
NAME:		DATE:		TIME:		PUBLIC OR PRIVATE:		NOTE:	
NAME:		DATE:		TIME:		PUBLIC OR PRIVATE:		NOTE:	
NAME:		DATE:		TIME:		PUBLIC OR PRIVATE:		NOTE:	
NAME:		DATE:		TIME:		PUBLIC OR PRIVATE:		NOTE:	
NAME:		DATE:		TIME:		PUBLIC OR PRIVATE:		NOTE:	

NAME OF ALL PERSON(S) PROVIDING INFORMATION FOR THIS REPORT AND CONTACT INFORMATION							
NAME:	Josh Prosceno	PHONE:	570-336-9606	EMAIL:	josh.prosceno@tetratech.com	TITLE:	LEI
NAME:	Chris Cable	PHONE:	518-533-9847	EMAIL:	chris.cable@tetratech.com	TITLE:	Environmental Inspection Manager
NAME:		PHONE:		EMAIL:		TITLE:	
NAME:		PHONE:		EMAIL:		TITLE:	
NAME:		PHONE:		EMAIL:		TITLE:	

IMPACTED RESOURCE(S)					
RESOURCE:	WETLAND WL-H17	SURFACE WATER CLASSIFICATION OR WETLAND TYPE:	PEM/PFO	WHAT STEPS HAVE BEEN TAKEN TO ELIMINATE OR MITIGATE THE IMPACTS?	Sandbag and silt fence containment constructed at release point. Drilling fluid recovered using hand tools and pumps.
RESOURCE:	STREAM S-H10	SURFACE WATER CLASSIFICATION OR WETLAND TYPE:	DRAINS TO HQ-TSF	WHAT STEPS HAVE BEEN TAKEN TO ELIMINATE OR MITIGATE THE IMPACTS?	Sandbag and silt fence containments constructed within stream. Drilling fluid recovered using hand tools and pumps.
RESOURCE:	STREAM S-H11	SURFACE WATER CLASSIFICATION OR WETLAND TYPE:	DRAINS TO HQ-TSF	WHAT STEPS HAVE BEEN TAKEN TO ELIMINATE OR MITIGATE THE IMPACTS?	Sandbag and silt fence containments constructed within stream. Drilling fluid recovered using hand tools and pumps.
RESOURCE:	POND H3	SURFACE WATER CLASSIFICATION OR WETLAND TYPE:	HQ-TSF	WHAT STEPS HAVE BEEN TAKEN TO ELIMINATE OR MITIGATE THE IMPACTS?	Two turbidity curtains were installed at the confluence of S-H10 and pond H3.
RESOURCE:		SURFACE WATER CLASSIFICATION OR WETLAND TYPE:		WHAT STEPS HAVE BEEN TAKEN TO ELIMINATE OR MITIGATE THE IMPACTS?	
RESOURCE:		SURFACE WATER CLASSIFICATION OR WETLAND TYPE:		WHAT STEPS HAVE BEEN TAKEN TO ELIMINATE OR MITIGATE THE IMPACTS?	
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ADDITIONAL INFORMATION			
IF DRILLING RESUMED DOES IT INVOLVE A CHANGE IN EQUIPMENT, DEPTH OR ALIGNMENT?	NO	NOTE:	
PUBLIC OR PRIVATE WATER SUPPLY - PROXIMITY TO DOWNSTREAM WATER INTAKES?		NOTE:	
PROXIMITY TO PUBLIC OR PRIVATE WATER SUPPLIES AND WELLS?	YES	NOTE:	
LIST AND DESCRIBE MATERIAL(S) RELEASED:	A mixture of bentonite clay and water with native cuttings		
HAS THE ESTIMATED QUANTITY OF THE RELEASE INCREASED SINCE THE LAST REPORT? IF SO, HOW?	YES	NOTE:	Approximately 7,712 gallons of drilling fluid emerged on 8/10/2020.□
ESTIMATED AERIAL EXTENT OF RELEASE	8/10/2020 - 25'x25' at initial IR release location		
EXTENT (LINEAR FEET/MILES) OF DOWNSTREAM EDGE OF RELEASE, IF ANY	IR traveled approximately 1,800 feet downstream from S-H10 (UNT to Marsh Creek) into pond H3 (Marsh Creek Reservoir). Extent into pond H3 (Marsh Creek Reservoir) unknown.		
DESCRIBE ROOT CAUSE(S) OF IR			
OTHER COMMENTS: NOTE ANY MATERIAL CHANGE IN THE INFORMATION FROM PRIOR REPORTS)			
HAVE THE IMPACTS FROM THE IR BEEN REMEDIATED? Please provide date of remediation.	8/10/2020 - Sandbag and silt fence containment set up at IR location. Ten sandbag and silt fence containments constructed within stream S-H10. Two turbidity curtains installed at the confluence of S-H10 and pond H3. Drilling fluid recovered using hand tools and pumps. As of 10/12/2020, drilling fluid remains in pond H3.		

PRINTED NAME, TITLE AND SIGNATURE OF PERSON(s) COMPLETING THIS REPORT							
NAME:	Chris Cable	TITLE:	Environmental Inspection Manager	SIGNATURE:	Christopher J Cable	DATE:	10/13/2020

PADEP USE ONLY			
AUTHORIZATION FROM PADEP OR CCD TO RESUME HDD REQUIRED?		NOTE:	
PERMIT AMENDMENT?		NOTE:	
PADEP / CCD REVIEWER NAME:		DATE:	

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IV. PHOTO DOCUMENTATION

Notes:

View of drilling fluid within WL-H17 at location of IR release point.

8/10/2020

Notes:

View of drilling fluid flowing downstream within stream S-H10 (UNT to Marsh Creek).

8/10/2020

Notes:

View of drilling fluid within stream S-H10 (UNT to Marsh Creek).

8/10/2020

Notes:

View of drilling fluid entering pond H3 (Marsh Creek Reservoir).

8/10/2020

Notes:

View of contractor crew members installing two turbidity curtains at the confluence of stream S-H10 (UNT to Marsh Creek) and pond H3 (Marsh Creek Reservoir).

8/10/2020

Notes:

View of IR release location within WL-H17.

8/17/2020

Notes:

View of sandbag containment within S-H10 (UNT to Marsh Creek).

8/17/2020

Notes:

View of stream S-H10 (UNT to Marsh Creek) following cleanup.

8/17/2020

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Notes:

View of stream S-H10 (UNT to Marsh Creek) following cleanup.

8/17/2020

Notes:

View of stream S-H10 (UNT to Marsh Creek) following cleanup.

8/17/2020

Notes:

View of turbidity curtain at the confluence of stream S-H10 (UNT to Marsh Creek) and pond H3 (Marsh Creek Reservoir).

8/17/2020

Notes:

View of pond H3 (Marsh Creek Reservoir).

8/17/2020

Notes:

View of IR release location within WL-H17.

8/22/2020

Notes:

View of turbidity curtain at the confluence of stream S-H10 (UNT to Marsh Creek) and pond H3 (Marsh Creek Reservoir).

8/22/2020

Notes:

View of pond H3 (Marsh Creek Reservoir).

8/24/2020

Notes:

View of stream S-H10 (UNT to Marsh Creek)

8/24/2020

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HORIZONTAL DIRECTIONAL DRILLING – INADVERTENT RETURN REPORT FORM

Notes:

View of IR release location and containment within WL-H17.

8/28/2020

Notes:

View of stream S-H10 (UNT to Marsh Creek)

8/31/2020

Notes:

View of stream S-H10 (UNT to Marsh Creek)

8/31/2020

Notes:

View of pond H3 (Marsh Creek Reservoir).

8/31/2020

Notes:

View of IR release location and containment within WL-H17.

9/4/2020

Notes:

View of stream S-H10 (UNT to Marsh Creek)

9/5/2020

Notes:

View of turbidity curtain at the confluence of stream S-H10 (UNT to Marsh Creek) and pond H3 (Marsh Creek Reservoir).

9/14/2020

Notes:

View of stream S-H10 (UNT to Marsh Creek)

9/14/2020

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HORIZONTAL DIRECTIONAL DRILLING – INADVERTENT RETURN REPORT FORM

Notes:

View of IR release location and containment within WL-H17.

9/21/2020

Notes:

View of stream S-H10 (UNT to Marsh Creek)

9/21/2020

Notes:

View of IR release location and containment within WL-H17.

9/28/2020

Notes:

View of turbidity curtain at the confluence of stream S-H10 (UNT to Marsh Creek) and pond H3 (Marsh Creek Reservoir).

9/28/2020

Notes:

View of IR release location and containment within WL-H17.

10/5/2020

Notes:

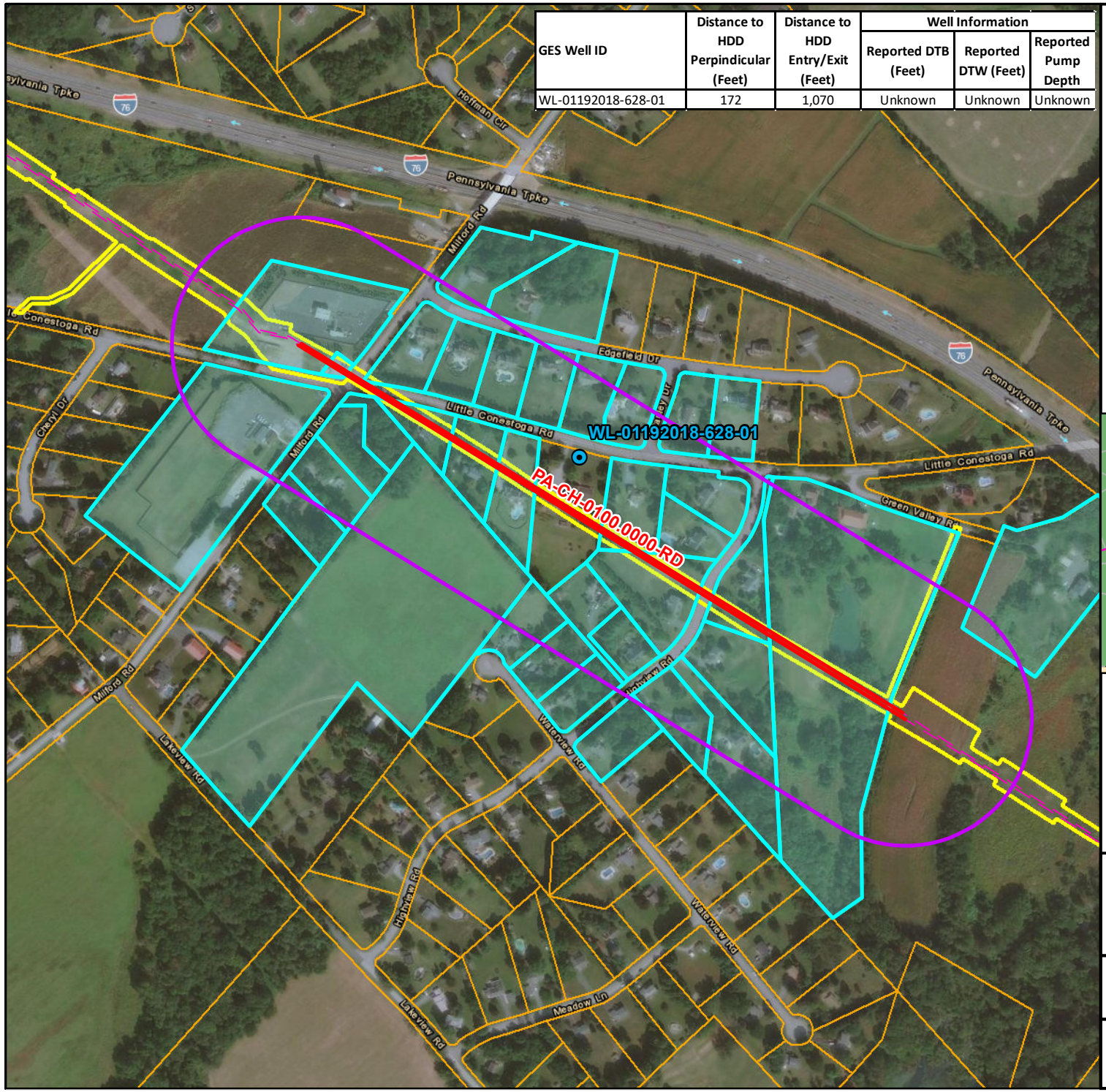
View of IR release location and containment within WL-H17.

10/12/2020

PRINTED NAME, TITLE AND SIGNATURE OF PERSON(s) COMPLETING THIS REPORT

NAME:	Chris Cable	**TITLE:**	Environmental Inspection Manager	**SIGNATURE:**	Christopher J Cable	**DATE:**	10/13/2020

GES Well ID	Distance to HDD Perpindicular (Feet)	Distance to HDD Entry/Exit (Feet)	Well Information		
			Reported DTB (Feet)	Reported DTW (Feet)	Reported Pump Depth
WL-01192018-628-01	172	1,070	Unknown	Unknown	Unknown



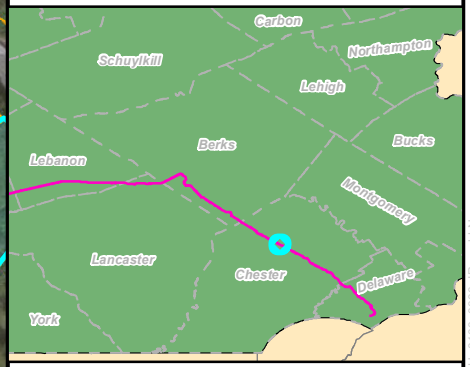
Legend

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

****Testing locations current as of 09/08/2020**

- GES Testing Location

Location



0 250 500 Feet

Well Location Map
HDD# PA-CH-0100.0000-RD
Chester County, PA.

Prepared By: TETRA TECH

Date: 10/13/2020

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

Coordinate System: NAD 83 Stateplane, PA South, Feet