

Sunoco Mariner East II - Pipeline Construction Inadvertent Returns - Waters of the Commonwealth

Date	DEP HDD # or DEP Permit HDD Reference #	County	Location	Description	Status
<u><i>Southwest Region</i></u>					
5/4/2017		Westmoreland	40.441, -79363	150 Gallons; UNT Boatyard Run (CWF) and W-P14; turbid Water ~600 feet in channel	NOV issued 7/28/2017
5/12/2017		Westmoreland	40.44213, -79.34305	300 gallons, 90'x50' area - Wetland W-045	NOV issued 7/28/2017
5/13/2017		Indiana	40 27'10.16", -79 13'30.34"	130 gallons bentonite clay; 20 gallons to UNT Blacklick Creek, no deposition; 200'x5'in W J53 and 2'x300' plume in S-J58	NOV issued 7/28/2017
5/16/2017		Westmoreland	40 26' 17.48", -79 26' 16.11"	30 gallons 2' x 40' area none to lake	IR stopped
5/23/2017		Westmoreland	40 26' 17.48", -79 26' 16.11"	60 gallons: 30 gal, 20, gal, 10 gal to 3 upland areas (2' x 45', 2' x 30', 2'x 40'	IR stopped
5/23/2017		Westmoreland	40.289, -79.668	20,000 gallons drilling mud, 1,000 to stream and rest in upland or ephemeral channel; Ephemeral Stream (TSF), L Sewickley Creek S-229, 250' x 2' unknown depth	NOV issued 7/28/2017

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5/23/2017		Westmoreland	40.289, -79.668	Part of 20,000 gallons above to a 60' x40' farm field, 4-10" deep	NOV issued 7/28/2017
5/23/2017		Westmoreland	40.289, -79.668	Part of 20,000 gallons above to a 100' x 20' farm field, 0.5 -3" deep	NOV issued 7/28/2017
5/24/2017		Westmoreland	40.44213, -79.34305	525 gallons; 300 Gallons to wetland W-045 75'x100', 225 gallons to Spruce Run S-061 600'x10'	NOV issued 7/28/2017
5/25/2017		Westmoreland	40.439, -79.437	25 gallons, 1 pint to Loyahanna Lake; Upland 7' x 50', lake 3' diameter circle	NOV issued 7/28/2017. COA Executed 12/15/2017
5/26/2017		Allegheny	40.223140, -79.893688	50 gallons in a 15' x 30' upland area	IR stopped
5/26/2017		Westmoreland	40 26' 21.13", -79 26' 3.92"	50 Gallons drilling mud to lake, 5 gallons to upland; Loyalhanna Lake S-P27 2 locations ~8'x600', 1 upland 2'x25'	NOV issued 7/28/2017. COA Executed 12/15/2017
5/28/2017		Westmoreland	40 26' 2.44", -79 26' 11.72"	50 gallons to upland area (25' x 50'), 20 gallons to Loyalhanna Lake (5' x25')	NOV issued 7/28/2017. COA Executed 12/15/2017

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5/31/2017		Westmoreland	40 26' 19.19", -79 26' 14.20"	8 Gallons to the Lake; Loyalhanna Lake- no flow path seen leading into the lake or a release point in the water, 20' x 12' area	NOV issued 7/28/2017. COA Executed 12/15/2017
5/31/2017		Allegheny	40.223, -79.893	2000 gallons total, 1500 gallons into the creek and 500 gallons contained in upland; 2 stream (UNT Sunfish Run- WWF) within S-150 upstream of joining S-149; S-149 under travel lane bridge; 1 upland (east of S-150) 50'x20' area; deposits in stream isolated to areas where material was released, turbid water 0.3 miles south to Sunnyside Hollow Road	NOV issued 7/28/2017
6/1/2017		Westmoreland	40.26' 17.48", -79 26'16.11"	10 gal upland, 4 gallon near lake, <1 gallon into lake; upland and lake (multiple locations on the hillside)	NOV issued 7/28/2017. COA Executed 12/15/2017
6/2/2017		Washington	40.231, -79.998	200 gallons to upland areas. 1500 gallons of diluted mixture of water and drilling fluid to stream. Turbid water for ~.25 miles.; 3 upland locations. The material from the third location flowed directly into a culvert and into an UNT of Froman Run.	NOV issued 7/28/2017

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6/6/2017		Westmoreland		Pump ran out of fuel that was maintaining an IR, 25 gallons to creek; Small amount made it to the storm drain (<1 pint)	NOV issued 7/28/2017. COA Executed 12/15/2017
6/6/2017		Washington	40.2352778, - 80.103333	At start of HDD, noticed streambed material beginning to push up through two spring seeps, about 10' apart and at the toe of the bank of the stream at the NW edge. ~ 5 gallons in stream-no bentonite; S129 UNT Little Chartiers Creek (HQ-WWF), 100 sq. ft.	NOV issued 7/28/2017
6/6/2017		Westmoreland	40.441, -79.363	Unknown quantity bentonite mixture, drilling over, cleanup started, unsure if fish were impacted-about 350 gallons to stream; UNT Boatyard Run (CWF) S-P20 (350 gal); turbid water and mud deposits for ~800' within the channel	NOV issued 7/28/2017
6/8/2017		Washington	40.23055, -79.99622	20 gallons diluted drill water (minor amount made it to creek); Stream S27 (Froman Run)	NOV issued 7/28/2017
6/10/2017		Washington		40 gallons to upland	IR stopped
6/11/2017		Washington	40.23052, -79.99665	100 gallons to 125 sq ft upland area	NOV issued 7/28/2017

Date	DEP HDD # or DEP Permit HDD Reference #	County	Location	Description	Status
6/11/2017		Washington	40.23055, -79.99622	30 gallons of diluted drill mud and water; Stream S27 (Froman Run) about 400' for 3'-5' wide	NOV issued 7/28/2017
6/12/2017		Washington	40.2298, -79.97295	1000-1500 gallons in upland area ~858 sq ft	Investigation Ongoing.
6/23/2017		Washington		Bentonite into stream	NOV issued 7/28/2017
6/24/2017		Washington	40.235123, - 80.102816	1000 gallons bentonite; 2 UNTs Little Chartiers Creek. Streams 280 and 129; 280 is about 10 feet from original IR and 129 IR came up in containment area; ~225' stream 280 impacted pump around and cleanup	NOV issued 7/28/2017
6/29/2017		Westmoreland	40.441, -79.363	410 Gallons Bentonite clay and Water; 60 gallons to upland and 350 to waterbody; UNT Boatyard Run for about 1200' 2 locations in the stream	NOV issued 7/28/2017
7/16/2017		Westmoreland	40°26' 16.22", -79° 26' 11.35"	320 gallons; 20 to Loyalhanna Lake (12' x 30'), 300 to upland	NOV issued 7/28/2017. COA Executed 12/15/2017
7/17/2017		Westmoreland	40°26' 16.22", -79°26' 11.35"	800 gallons, 80 into Loyalhanna Lake (12' x 60'), 720 in upland	NOV issued 7/28/2017. COA Executed 12/15/2017
7/18/2017		Washington		5000-60000 gallons to upland area 250' west of Monongahela River	IR Stopped

Date	DEP HDD # or DEP Permit HDD Reference #	County	Location	Description	Status
9/5/2017		Westmoreland	40.4172, -79.607	500-700 gallons bentoite clay and water to an UNT to Turtle Creek and Turtle Creek	NOV issued 9/26/2017
9/22/2017	PA-IN-0000.0001.WX-16	Westmoreland	40°26'42.5", -79°18'03.9"	2700 gallons to Wetland W-N28, 30'x50' area	NOV issued 1/25/2018
9/27/2017	PA-IN-0022.0001-RD-16	Indiana	40°27'03.3", -79°12'38.9"	Unknown quantities to UNT Weirs Run, Weirs Run, and at least 1000' of Blacklick Creek	NOV issued 1/25/2018
10/3/2017	PA-CA-0091.0016-RD	Cambria	40.414, -78.567	less than 50 gallons drilling fluid to Wetland M-59	NOV issued 1/25/2018
10/10/2017	PA-CA-0091.0016-RD	Cambria	40.414, -78.567	about 250 gallons into existing containment area	NOV issued 1/25/2018
10/11/2017	PA-CA-0091.0016-RD	Cambria	40.414, -78.567	less than 50 gallons drilling fluid to Wetland M-59	NOV issued 1/25/2018
12/13/2017	PA-CA-0047.0000-SR	Cambria	40.437155, -78.763529	2 Gallons into UNT Stewart Run	NOV issued 1/25/2018
5/8/2018	PA-CA-0016.0000-RD	Cambria	40.417053, -78.873039	UNT Hinckston Run, unknown quantity	NOV issued 5/15/2018
5/14/2018	PA-WA1-0127.0000-RR	Washington	40.23559, -80.09084	4 gallons to S130	NOV issued 5/25/2018
5/25/2018	PA-WA1-0127.0000-RR	Washington	40.23565, -80.09093	16 ounces to S130	NOV issued 6/29/2018
6/19/2018	PA-WM1-0023.0000-RD	Westmoreland	40.24118, -79.74122	50 gallons to S-172	NOV issued 6/19/2018

Date	DEP HDD # or DEP Permit HDD Reference #	County	Location	Description	Status
6/21/2018	PA-CA-0023.0000-RD	Cambria	40.416, -78.866	1,500 gallons to Hinckston Run (S-N39) and Wetland W-N24	NOV issued 6/25/2018
7/11/2018	PA-CA-0016.0000-RD	Cambria	40.417413, -78.871815	3,500 gallons to unidentified wetland	NOV issued 7/16/2018
7/16/2018	PA-WA-0119.0000-RD	Washington	40.23546, -80.10322	3 ounces to stream S-129	NOV issued 7/18/2018
7/21/2018	PA-CA-0016.0000-RD	Cambria	40.417413, -78.871815	unknown quantity to UNT to Hinckston Run	NOV issued 7/24/2018
8/3/2018	PA-CA-0069.0000-RD	Cambria	40.452829, -78.684689	300 to 400 gallons to wetland WL-N18	NOV issued 8/13/2018
8/4/2018	PA-CA-0069.0000-RD	Cambria	40.452829, -78.684689	2,000 gallons to stream S-N34 and wetland WL-N18	NOV issued 8/13/2018
8/4/2018	WA1-0127.0000-RD	Washington	40.236, -80.091	1 - 2 gallons to stream S130	NOV issued 8/13/2018
<i>Southcentral Region</i>					
5/6/2017	PA-CU-0136.0003-RD	Cumberland	40.228757, -77.132769	160,000 gallons.; wetland WL-130 (EV)	IR stopped. NOV issued 5/17/2017. COA Executed 6/27/2017.
5/10/2017		Lancaster	40.280, -76.195	wetland J54 and stream J59	IR stopped. Remediation reported as complete.
5/13/2017	PA-LA-0004.0000-SR	Lancaster	40.280833, -76.210278	25 to 30 gallons; west side of wetlands K-32	IR stopped.

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5/19/2017	PA-CU-0136.0002WX	Cumberland	40.228703, -77.141032	50 gallons; wetland 32 (ER Call); wetland I32 (initial report); wetland W-I21 (interim report 1); wetland W-I32 (interim report 2)	IR stopped. COA Executed 6/27/2017.
5/26/2017	PA-CU-0136.0002WX	Lancaster	40.280, -76.195	30 to 50 gallons; stream J59	IR stopped. Remediation reported as complete.
5/31/2017	PA-BR-0075.0000-RD	Berks	40.277, -76.020	500 gallons; Pond-B7 (retention pond)	IR stopped.
6/3/2017	PA-CU-0136.0002WX	Cumberland	40.228603, -77.140614	~150 gallons (initial) 450 gallons (total); WL-I32 (initial report)	IR stopped. COA Executed 6/27/2017.
6/9/2017	PA-LA-0004.0000-SR	Lancaster	40.281, -76.209	~20 gallons; wetland W-K32	IR stopped.
6/12/2017	PA-LA-0004.0000-SR	Lancaster	40.280787, -76.210161	~25 gallons initial on 6/12/2017--a total of 5500 recovered in total.; Wetland W-K32	IR stopped.
6/20/2017	PA-BR-0075.0000-RD	Berks	40 16' 38", - 76 1'12"	~20 gallons in culvert, 10-20 gallons in pond B7	IR stopped.
6/23/2017	PA-LE-0117.0000-WX	Lebanon	40 17' 7", -76 14' 17"	~300 gallons; Wetland H-13	IR stopped.
6/26/2017	PA-BL-0126.0000-RD	Blair	40.34, -78.269	2,000 gallons; stream S-M33 (HQ-CWF)	IR stopped.
6/28/2017	PA-BL-0001.0027-RD	Blair	40.409, -78.442	~100 gallons; Wetland M-79 (PFO)	IR stopped. NOV issued 10/26/2017

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7/1/2017	PA-BL-0001.0027- RD	Blair	2800 ft east of Mill Road Duncansville. 40.409, -78.442	50 gal and then 250 gal ; PFO and possible WT trib	IR stopped.
7/6/2017	PA-HU-0078- 0000-WX	Huntingdon	40.342, -77.852	~300 gallons; Stream L28	IR stopped
7/11/2017	PA-CU- 0136.0003-RD	Cumberland	I-81 drill. 40.134352, 77.75766	none stated	IR stopped. COA Executed 6/27/2017.
7/13/2017		Cumberland	Newville	none stated; discharge of hydrotest water through an approved outlet, but at the 'wrong location'.	Additional information provided by SPLP indicates that discharge of hydrotest water occurred through a BMP in an upland area and that the quality of the water was in compliance with the requirements of the PAG-10.
7/19/2017		Lancaster	~1000 FT W of S Peartown Rd. 40.28250, -76.15806	250 gallons; Wetland A-56	IR stopped.

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8/17/2017	PA-YO- 0063.0000-RR	Dauphin	Susquehanna River Drill. 40° 11' 57" N, 76° 47' 48"W	495 gallons; Susquehanna River	IR was not active at the time of discovery. It is suspected to have occurred on 7/19/2017--when approximately 1,000 gallons of mud was reportedly lost during drilling operations. Low visibility in the river reportedly prevented previous detection of IR.
8/24/2017	PA-YO- 0063.0000-RR	Dauphin	Susquehanna River Drill. 40° 11' 57" N, 76° 47' 48"W	50 gallons; Susquehanna River	IR stopped. NOV issued 8/30/2017. Clean-up completed. DEP approved HDD restart on 9/12/2017.
8/31/2017	PA-BL-0001.0027 RD	Blair	40° 24' 33" N, 78° 26' 36" W	50-75 gallons into Wetland W-M79	IR stopped. Containment/clean-up in progress. NOV issued 10/26/2017.
8/31/2017	PA-LE-0055.0000- RD	Lebanon	40.29063°, - 76.428132°	50 gallons to Snitz Creek	IR stopped. Containment/clean-up completed. DEP approved HDD restart on 9/14/2017. NOV issued 10/27/2017.

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9/5/2017	PA-BL-0001.0048 RR	Blair	roadshoulder in the vicinity of 2156 Reservoir Road, Hollidaysburg	20-30 gallons to wetland BB58	IR stopped. Containment/clean-up in progress. NOV issued 10/26/2017.
9/8/2017	PA-DA- 0056.0000-RD	Dauphin	40° 15' 5" N, 76° 40' 6" W	250-300 gallons, impacting wetland C26	IR stopped. Containment/clean-up in progress. NOV issued 10/26/2017.
9/15/2017	PA-YO- 0063.0000-RR	Dauphin	Susquehanna River Drill. 40° 14' 55.7" N, 76° 47' 48" W	350 gallons to the Susquehanna River	IR stopped. Containment/clean-up in progress. NOV issued 9/18/2017.
9/20/2017	PA-LE-0055.0000- RD	Lebanon	40.29063°, - 76.428132°	~1 gallon to Snitz Creek	IR stopped. Containment/clean-up in progress. NOV issued 10/27/2017.
9/27/2017	PA-CU- 0062.0000-WX	Cumberland	40° 14' 41" N, 77° 19' 39" W	500 gallons to wetland J35	IR stopped. Containment/clean-up in progress. NOV issued 10/26/2017.
9/28/2017	PA-CU- 0136.0003-RD	Cumberland	I-81 drill. 40.134352, 77.75766	~2.5 gallons to wetland I30	COA Executed 6/27/2017

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10/10/2017	PA-HU-0106.0000-RD	Huntingdon	40.321145,-77.789497	5,000-10,000 to wetland K69	IR stopped. Containment/clean-up in progress. NOV issued 10/26/2017.
11/10/2017	PA-DA-0005.0000-RD	Dauphin	40.205643, -76.769297	~300 gallons to wetland W118	IR Stopped. Containment/clean-up in progress. NOV issued 11/14/2017.
11/11/2017	N/A--not permitted as HDD	Berks	40.1886, -75.891	unquantified release to UNT to Hay Creek (S-Q90)	IR Stopped. Containment/clean-up in progress. NOV issued 11/16/2017.
11/20/2017	PA-BL-0001.0094-WX-16	Blair	40.441, -78.331	~10 gallon release to an UNT to Frankstown Branch Juniata River (S-BB92) and associated wetland (Wetland Q60)	IR Stopped. Containment/clean-up in progress. NOV issued 11/22/2017.
12/5/2017	PA-DA-0056.0000-RD	Dauphin	40° 15' 5" N, 76° 40' 6" W	~200 gallon release into wetland C26 during the punch out of the pilot hole.	IR stopped. Containment/clean-up in progress.
12/20/2017	PA-LE-0001.0000-SR	Lebanon	40.254, -76.592	~50 gallon release in an upland, which ran downslope into wetland A30.	IR stopped. Containment/clean-up in progress. NOV issued 12/22/2017

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12/20/2017	PA-HU-0020.0008-WX-16	Huntingdon	40.369, -78.066	25-30 gallons to an upland area, which ran downslope into Raystown Lake.	IR stopped. Containment/clean-up in progress. NOV issued 12/22/2017
12/29/2017	PA-LE-0001.0000-SR	Lebanon	40.254, -76.592	~15 gallon release to wetland A30-- within pre-existing containment (see 12/20/2017 event at same location) and 3 gallon release to wetland A30 outside of existing containment.	IR stopped. Containment/clean-up in progress.
2/27/2018	PA-CU-0062.0000-WX	Cumberland	40.2447, -77.3306	~100 gallon release to stream S-J41 (UNT to Locust Creek--WWF) and wetland J35	IR stopped. Containment/clean-up in progress. NOV issued 2/28/2018.
3/15/2018	PA-LE-0055.0000-RD	Lebanon	40.2904, -76.4278	~50 gallon release to stream S-A17 (Snitz Creek--TSF)	IR stopped. Containment/clean-up in progress. NOV issued 3/16/2018.
3/15/2018	PA-BL-0001.0094-WX-16	Blair	40.0000, -78.3247	~200 gallon release into wetland L54	IR stopped. Containment/clean-up in progress. NOV issued 3/16/2018.
3/23/2018	PA-HU-0106.0000-RD	Huntingdon	40.321145, -77.789497	<1 gallon release into wetland K69 (PEM)	Drilling stopped. Containment/clean-up in progress. NOV issued 3/26/2018.

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3/29/2018	PA-PE-0002.0000- RD	Perry	40.2928, -77.6498	< 1 gallon release to wetland L1 (PFO)	IR stopped. Containment/clean-up in progress. NOV issued 3/30/2018.
4/4/2018	PA-BL-0001.0094 WX-16	Blair	40.4444, -78.3247	~10 gallon release to wetland L54	IR stopped. Containment/clean-up in progress. NOV issued 4/6/2018.
4/9/2018	PA-BL-0001.0048 RR	Blair	40.4122, -78.3722	500 gallon discharge to wetland BB58 from IR just upslope of wetland boundary.	IR stopped. Containment/clean-up in progress. NOV issued 4/10/2018.
4/20/2018	PA-LE-0055.0000- RD	Lebanon	40.2904, -76.4278	~20 gallon release to stream S-A17 (Snitz Creek--TSF)	Drilling stopped. Containment/clean-up in progress. NOV issued 4/20/2018.
6/1/2018	PA-LE-0055.0000- RD	Lebanon	40.2904, -76.4278	~2 quart release to stream S-A17 (Snitz Creek--TSF)	Drilling stopped. Containment/clean-up in progress. NOV issued 6/1/2018.
6/10/2018	PA-LE-0055.0000- RD	Lebanon	40.2904, -76.4278	1 cup release to stream S-A17 (Snitz Creek--TSF)	Drilling stopped. Containment/clean-up in progress. NOV issued 6/11/2018.

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6/15/2018	PA-BL-0001.0048 RR	Blair	40.4122, -78.3722	200-300 gallon release to wetland BB58	IR stopped. Containment/clean-up in progress. NOV issued 6/15/2018.
6/27/2018	PA-LE-0055.0000 RD	Lebanon	40.2904, -76.4278	~5 gallon release to stream S-A17 (Snitz Creek--TSF)	Drilling stopped. Containment/clean-up in progress. NOV issued 6/28/2018.
6/27/2018	PA-BR- 0181.0000-RD	Berks	40.290, -75.858	unquantified release to East Branch Conestoga River	Drilling stopped. Containment/clean-up in progress. NOV issued 6/28/2018.
7/7/2018	PA-CU-0136- 0002-WX	Cumberland	40.228834, - 77.138988	~1 gallon release to wetland I32	Drilling stopped. Containment/clean-up in progress. NOV issued 7/9/2018
7/25/2018	PA-CU-0136- 0002-WX	Cumberland	40.228678, - 77.140557	~5 gallon release that ran into wetland I32	Drilling stopped. Containment/clean-up in progress. NOV issued 7/25/2018

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<u>Southeast Region</u>					
5/3/2017		Delaware	Brookhaven Borough – at edge of Chester Creek Rd. and onto sidewalk – IR went into storm drain and then Chester Creek	500 gallons of drilling fluid to Chester Creek; lost return of 20,000 gallons of drill fluid. IR identified 5.09 PM.	NOV issued 5/9/2017.
5/4/2017		Delaware	Brookhaven Borough – upland lawn area of vacant lot	50 gallons release of drilling fluids into uplands; no fluids reached Chester Creek. IR identified 3.10 PM.	IR stopped.
5/10/2017		Delaware	Brookhaven Borough – within Chester Creek	75 gallons release of drilling fluids emerging in 3 locations in Creek (25 gallons in each location). IR identified at 12.15 PM.	IR stopped.
5/17/2017		Delaware	Brookhaven Borough – within Chester Creek	5 gallons total release of drilling fluids in 2 locations in Chester Creek. IR identified at 1.45 PM.	IR stopped.
5/18/2017		Delaware	Brookhaven Borough – within Chester Creek	25 gallons release of drilling fluids in 1 location in Chester Creek. IR identified at 12.40 PM.	IR stopped.

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5/19/2017		Delaware	Brookhaven Borough – within Chester Creek	200 gallons total release of drilling fluids in 2 locations in Chester Creek. IR identified at 12.20 PM.	IR stopped.
5/27/2017		Delaware	Brookhaven Borough – within Chester Creek	25 gallons release of drilling fluids in 1 location in Chester Creek	IR stopped.
6/17/2017		Chester	Upper Uwchlan Township, Hickory Park	5 gallons of drilling solution into tributary to Marsh Creek	IR stopped.
6/24/2017		Chester	Upper Uwchlan Township	100 gallons of drilling solution into wetland and stream.	IR stopped.
7/17/2017		Delaware	Middletown Township	1500 gallons of drilling solution into UNT to Chester Creek	NOV issued 7/20/2017.
8/29/2017	S3-0290	Chester	Upper Uwchlan	50 gallons of drilling solution into wetland and stream.	IR Stopped /Under investigation. NOV issued on 9/8/2017.
9/2/2017		Delaware	Middletown Township	50 gallons of drilling solution into UNT of Chester Creek	IR Stopped/Under Investigation. NOV issued on 9/12/2017.
9/9/2017		Chester	Upper Uwchlan	.5 gallon of drilling solution to Marsh Creek	IR Stopped. Solution lost downstream.

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10/25/2017	S3-0500	Chester	East Goshen Township	500 gallons in total, 490 gal to uplands, ~ < 10 gal to storm drain street inlet	IR Stopped. Solution Cleaned Up. DEP Inspected. NOV Issued 11/3/2017.
10/27/2017	S3-620; PA-DE-0100.0000-RR-16	Delaware	Middletown Township	1 gallon of drilling solution to Waters	IR stopped, solution cleaned up, DEP inspected, work suspended. NOV Issued 11/3/2017, work suspended pending DEP approval.
12/15/2017	S3-620; PA-DE-0100.0000-RR-16	Delaware	Middletown Township	40 gallons of drilling solution to UNT of Chester Creek	Mud pump inoperable so solution overwhelmed containment area entering creek; DEP inspected and work suspended pending DEP approval; late initial report; NOV to be issued.
7/14/2018	S3-620; PA-DE-0100.0000-RR-16	Delaware	Middletown Township; 39.8944, -75.4319	100 gallons of drilling solution into wetland WL-11 (initial IR)	Drilling stopped, IR cleaned up, wetlands washed, ERT on site to confirm event and sufficient containment area. Initial notification received. NOV issued 7/19/2018, Restart report required.

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7/20/2018	S3-620; PA-DE-0100.0000-RR-16	Delaware	Middletown Township; 39.8944, -75.4319	80 gallons of drilling solution into wetland WL-I1 of which approx. 30 gallons entered into S-I3; also, at same time, an unknown amount of turbid water was observed being discharged from a stormwater pipe outfall into S-I4	Drilling stopped, IR cleaned up, wetlands washed, DEP on site to confirm event and sufficient containment areas established. Initial notification received 7/23/2018 along with Restart Report required. NOV issued 7/25/2018.
7/30/2018	S3-620; PA-DE-0100.0000-RR-16	Delaware	Middletown Township 39.8944, -75.4319	Approx. 50 gallons of drilling solution onto uplands parking lot area near Tunbridge Apts, some of the fluid entered the storm drain inlet which then discharged from the stormwater pipe outfall into S-I4	Drilling stopped upon IR; containment and clean-up confirmed completed; Restart Report submitted (revised), approval given 7/31/18; NOV issued 7/31/18, NOV Response received 8/2/2018.