

Sunoco Mariner East II - Pipeline Construction Inadvertent Returns - Uplands

Date	DEP HDD # or DEP Permit HDD Reference #	County	Location	Description	Status
<i><u>Southwest Region</u></i>					
5/16/2017		Westmoreland	40.438189, - 79.437808, Loyalhanna Township	30 gallons 2' x 40' area, none to Loyalhanna Lake (S-P27)	IR stopped
5/23/2017	S2-0010	Westmoreland	40.438189, - 79.437808, Loyalhanna Township	60 gallons: 30 gal, 20, gal, 10 gal to 3 areas (2' x 45', 2' x 30', 2'x 40')	IR stopped
5/23/2017	S1B-0230	Westmoreland	40.289, -79.668, Hempfield Township	Part of 20,000 gallons above to a 60' x40' farm field, 4-10" deep	IR stopped. NOV issued 7/28/2017
5/23/2017	S1B-0230	Westmoreland	40.289, -79.668, Hempfield Township	Part of 20,000 gallons above to a 100' x 20' farm field, 0.5 -3" deep	IR stopped. NOV issued 7/28/2017
5/26/2017		Allegheny	40.223, -79.893, Forward Township	50 gallons in a 15' x 30' area	IR stopped
6/10/2017	S1B-0120	Washington	Above Huffy RV Center, Union Township	40 gallons discharged near Froman Run (S-27)	IR stopped
6/11/2017	S1B-0120	Washington	40.23052, - 79.99665, Union Township	100 gallons to 125 sq ft area	IR stopped. NOV issued 7/28/2017

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7/18/2017		Washington	West of Monongahela River, Loyalhanna Township	5,000-60,000 gallons to area 250' west of Monongahela River (S-121)	IR Stopped
8/23/2017	S1B-0270	Westmoreland	40.4172, -79.607, Murrysville Borough	~25 gallons to 2 upland areas, 10'-15'; near Turtle Creek (S-215)	IR stopped
10/19/2017	S1B-0050	Washington	40.23534, - 80.13370, North Strabane Township	Approx. 2,000 gallons, aerial extent approximately 4,000 sf	IR stopped.
3/7/2018	S1B-0270	Westmoreland	40.41716, -79.6073, Murrysville Township	1-5 gallons drilling fluid surfaced in an area of 3'x6'	IR stopped
4/30/2018	S1B-250	Westmoreland	40.23559, - 80.09084 Jeannette	Initial report: 9,000 Gallons surfaced to an upland, contained and cleaned up; Follow up report 24,000 gallons	IR Stopped
4/28/2018	S1B-0100	Washington	40.23559, - 80.09084	2 gallons in an upland area, inside easement but outside LOD	IR stopped
5/18/2018	S1B-0050	Washington	40.23549, - 80.13368	About 1000 gallons to upland	IR stopped
5/30/2018	S2-0070	Cambria	40.415714, - 78.859429	About 20 gallons to upland	IR Stopped
6/9/2018	S1B-0190	Westmoreland	40.2406722, - 79.7411288	20 gallons of drilling fluid	IR stopped
7/2/2018	SIB-0050	Washington	40.23549, - 80.13287	75 gallons	IR Stopped

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7/22/2018	S2-0069	Cambria	40.417413, - 78.871815	2,500 gallons	IR stopped. Contained and cleaned up.
8/22/2018	S1B-0050	Washington	40.23557, - 80.13312	20 gallons	IR stopped. Contained and cleaned up.
8/28/2018	S2-0080	Cambria	40.452467, - 78.693298	20 - 30 gallons	Contained and cleaned up
9/25/2018	S2-0070	Cambria	40.415, -78.867	30 gallons 8' by 10' area	Contained and recovered.
2/25/2019	S2-0020-16	Westmoreland	40.44865, - 79.297464	20 gallons, 4' by 28'	Contained and recovered.
2/26/2019	S2-0020-16	Indiana	40.445595, - 79.297464	3,300 gallons inside drill box collected from earthen berm and returned to drill via vacuum truck	Contained and recovered.
5/3/2019	S2-0075-16	Cambria	40.434742, - 78.774013	IR reactivated to approved containment BMP structure in the amount of 60 gallons. Containment was lost and drilling fluid combined with surfacing spring seep water. ~10 gallons of turbid water mixed with drilling fluid flowed outside LOD after passing through E&S controls.	IR ceased and was cleaned up. Additional E&S controls were installed around the containment structure and along the perimeter of the LOD.
<u>Southcentral Region</u>					
4/25/2017	S2-0210	Cumberland	40.228875, - 77.142944, Middlesex Township	15 gallons discharged	IR stopped.
4/26/2017	S2-0210	Cumberland	40.228703, - 77.141032, Middlesex Township	Unknown quantity of drilling solution discharged, stopped emerging shortly after the drilling stopped	IR stopped. COA issued 6/27/2017. NOV's issued 5/17/2017 and 6/5/2017

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4/28/2017	S2-0210	Cumberland	40.228703, - 77.141032, Middlesex Township	Unknown quantity of drilling solution discharged, stopped emerging shortly after the drilling stopped	IR stopped. COA issued 6/27/2017. NOVs issued 5/17/2017 and 6/5/2017
4/29/2017	S2-0210	Cumberland	40.228703, - 77.141032, Middlesex Township	Unknown quantity of drilling solution discharged, stopped emerging shortly after the drilling stopped	IR stopped. COA issued 6/27/2017. NOVs issued 5/17/2017 and 6/5/2017
5/1/2017	S2-0210	Cumberland	40.228703, - 77.141032, Middlesex Township	Unknown quantity of drilling solution discharged; stopped emerging shortly after the drilling stopped	IR stopped. COA issued 6/27/2017. NOVs issued 5/17/2017 and 6/5/2017
5/11/2017	S2-0210	Cumberland	40.228703, - 77.141032, Middlesex Township	Unknown quantity of drilling solution discharged, stopped emerging shortly after the drilling stopped	IR stopped. COA issued 6/27/2017. NOVs issued 5/17/2017 and 6/5/2017
5/18/2017	S2-0210	Cumberland	40.228703, - 77.141032, Middlesex Township	Unknown quantity of drilling solution discharged, stopped emerging shortly after the drilling stopped	IR stopped. COA issued 6/27/2017. NOVs issued 5/17/2017 and 6/5/2017
6/1/2017	S2-0210	Cumberland	40.228703, - 77.141032, Middlesex Township	Re-activation of 5/6/2017 IR, within containment area within wetland WL-I30 (I30), for final recovery of fluids estimated to be 170,000 gallons.	IR stopped. COA issued 6/27/2017. NOVs issued 5/17/2017 and 6/5/2017
6/5/2017	S2-0210	Cumberland	Near Letort Spring Run, Middlesex Township	10 gallon discharge	IR stopped.

Date	DEP HDD # or DEP Permit HDD Reference #	County	Location	Description	Status
6/12/2017	S3-0111	Lancaster	40.280787, - 76.210161, West Cocalico Township	~25 gallons IR to uplands -a total of 5,500 gallons recovered in total, toWetland W-K32	IR stopped.
6/17/2017	S3-0161	Lancaster	40.283092,- 76.16731, West Cocalico Township	100 gallons released to uplands; impact area ~193'x30' (0.14 acres), in corn fields between Wetlands A54 & A55	IRs stopped
6/21/2017	S3-0161	Lancaster	40.283092,- 76.16731, West Cocalico Township	300 gallons released to uplands, between wetlands A54 & Drill (no wetland or Bog Turtle Impacts)	IR stopped.
6/24/2017	S3-0110	Lebanon	50 Chapel Rd, Heidelberg Township	25 gallons discharged	IR stopped.
6/27/2017	S2-0121	Blair	40.412, -78.372, Reservoir Road, Blair Township	~100 gallons discharged	IR stopped. NOV issued 10/26/2017
6/27/2017	S2-0247	Cumberland	40.196, -76.975, Upper Allen Township	~150-200 gallons discharged	IR stopped.
7/8/2017	S3-0091	Lebanon	40.255722, - 76.58493, Londonderry Township	~25 gallons discharged; Drilling stopped after IR discovered; impact area ~300 sq ft.	IR stopped.
10/13/2017	S2-0160	Cumberland	Doubling Gap Rd, Lower Mifflin	~100 gallons to discharged	IR stopped.

Date	DEP HDD # or DEP Permit HDD Reference #	County	Location	Description	Status
10/28/2017	S3-0081	Dauphin	40.239722, - 76.650278, Conewago Township	45 gallons discharged, impact area 120 sq ft	IR stopped.
11/2/2017	S3-0081	Dauphin	40.239722, - 76.650278, Conewago Township	20-46 gallons discharged, impact area 48 sq ft	IR stopped.
11/2/2017	S3-0011	Dauphin	40.205537, - 76.769549, Lower Swatara Township	20-30 gallons release of drilling mud flowed down slope into a grass field at Reservoir Park	IR stopped.
11/3/2017	S3-0081	Dauphin	40.239722, - 76.650278, Conewago Township	10-47 gallons discharged, impact area 80 sq ft	IR stopped.
11/3/2017	S3-0011	Dauphin	40.205537, - 76.769549, Lower Swatara Township	350 gallons total following containment and resumption of drilling	IR stopped.
11/6/2017	S3-0011	Dauphin	40.205537, - 76.769549, Lower Swatara Township	20-30 gallons; initial release has continued and migrated to the north and east when two additional locations emerged within approximately 20 feet of the original location in the upland grassy area	IR stopped. NOV issued 11/14/2017.
11/7/2017	S3-0011	Dauphin	40.205537, - 76.769549, Lower Swatara Township	20-30 gallons; drilling fluid emerged on the eastern side of White House Lane	IR stopped.
11/8/2017	S2-0155	Huntingdon	Huntingdon	~25 gallons discharged, within LOD	IR stopped.
11/13/2017	S2-0200	Cumberland	Cumberland	~10 gallons in a 3'x5' area, just outside the LOD	IR stopped.

Date	DEP HDD # or DEP Permit HDD Reference #	County	Location	Description	Status
12/1/2017	S3-0161	Lancaster	40.283364, - 76.165275, West Cocalico Township	80 gallon release to 25'x25' area, <40' from end of the drill, past the wetlands, IR occurred within the LOD and no aquatic resources impacted	IR stopped.
12/2/2017	S3-0030	Dauphin	40.21278, - 76.75083, Lower Swatara Township	15-20 gallons released to 2 locations in uplands near exit pit	IR stopped.
12/2/2017	S3-0081	Dauphin	40.239722, - 76.650278, Conewago Township	Unknown quantity, re-activation of 11/2/2017 IR, occurred within the containment area	IR stopped.
12/7/2017	S2-0155	Huntingdon	East of Shade Valley Rd (SR 35), Tell Township	Unknown quantity of drilling solution discharged near the exit pit of the 20" pipe	IR stopped.
12/13/2017	S2-0170	Cumberland	40° 14' 41" N, 77° 19' 39" W, Middlesex / Lower Frankford Township	~25 gallons discharged	IR stopped.
12/16/2017	S3-0081	Dauphin	40.24, -76.64917, Conewago Township	~10 gallons drilling fluid released into a previously installed containment structure outside the LOD	IR stopped.
12/18/2017	S3-0081	Dauphin	40.24, -76.64917, Conewago Township	10 gallons discharged, within existing containment area	IR stopped.
3/6/2018	S2-0156, PA-JU- 0004.0000-WX	Juniata	Lack Township	50 gallons to upland area, contained in pit	IR stopped.

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3/10/2018	S2-0154, PA- HU-0106.0000- RD	Huntingdon	Shirley Township	50 gallons drilling fluid discharged into an upland area in the drill box as shown on the E&S Plan	IR stopped
3/16/2018	S3-0081, PA- DA-0063.0000- RD	Dauphin	Conewago Township	25-40 gallons drilling fluid discharged	IR stopped
3/23/2018	S3-0090, PA- LE-0001.0000- SR	Lebanon	At the J47 HDD Drill	50 gallons total discharge of water only-IR, one of 20 gallons in drill box, then one of 30 gallons just ahead of the drill box.	IR stopped
4/4/2018	S2-0240, PA- CU-0136.0020- RR	Cumberland	Silver Spring TWP	500 gallons back to mud pit, but 20 gallons escaped containment	return stopped
4/5/2018	S2-0210, PA- CU-0136.0002- WX	Cumberland	40.22889, - 77.14278, Middlesex Township	< 1 gallon of drilling fluid discharged	IR stopped
4/13/2018	S2-0210, PA- CU-0136.0002- WX	Cumberland	Middlesex TWP	<1 gallon discharged to upland area	IR stopped
4/16/2018	S2-0240, PA- CU-0136.0020- RR	Cumberland	Silver Spring TWP	~100 gallons to an upland area	IR stopped
4/28/2018	S2-0210, PA- CU-0136.0002- WX	Cumberland	Middlesex TWP	<1 gallon discharged to upland area	IR stopped
5/1/2018	S2-0210, PA- CU-0136.0002- WX	Cumberland	Middlesex TWP	~20 gallons to upland area while blowing down the drill string after setting loss control material after 4/28/2018 IR	IR stopped

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5/5/2018	S2-0240, PA- CU-0136.0020- RR	Cumberland	Silver Spring TWP	A total of 40-50 gallons in three upland locations	IR stopped
5/5/2018	S2-0210, PA- CU-0136.0002- WX	Cumberland	Middlesex TWP	2 gallons in an upland area	IR stopped
5/15/2018	S2-0210, PA- CU-0136.0002- WX	Cumberland	Middlesex TWP	5-10 gallons in an upland area	IR stopped
5/25/2018	PA-YO- 0060.0000-RD	York	Fairview TWP	~5 gallons in an upland area.	IR stopped
8/3/2018	S2-0210, PA- CU-0136.0002- WX	Cumberland	Middlesex TWP	5-10 gallons in an upland area	IR stopped
8/15/2018	S3-0101, PA- LE-0055-0000- RD	Lebanon	40.290, -76.427	15 gallons in a 3' x 6' area outside of LOD.	IR stopped, contained, and remediation reported as complete.
8/23/2018	S2-0210, PA- CU-0136.0002- WX	Cumberland	40.229, -77.142	80 gallons within LOD	IR stopped
8/24/2018	S2-0210, PA- CU-0136.0002- WX	Cumberland	40.229, -77.143	small 'punchout' release within LOD	IR stopped
9/4/2018	S2-0210, PA- CU-0136.0002- WX	Cumberland	Middlesex TWP; 40.229, -77.141	~25 gallons discharged to upland area	IR stopped
9/5/2018	S2-0121, PA- BL-0001.0048- RR	Blair	Blair TWP; 40.412, -78.373	200 gallon "punchout" release within LOD	IR stopped

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9/29/2018	S2-0142, PA-BL-0126.0000-RD	Blair	Woodbury TWP; 40.434, -78.271	200-gallon "spud-in" release within uplands in the LOD	IR stopped, contained, and remediation reported as complete.
10/24/2018	S2-0142, PA-BL-0126.0000-RD	Blair	Woodbury TWP; 40.433, -78.267	< 200-gallon IR to uplands between Lower Piney Creek Road and the west bank of Piney Creek	IR stopped, containment installed, and clean-up in progress.
10/25/2018	PA-BL- 0001.0078-WX	Blair	Blair TWP; 40.413, -78.373	~ 1 gallon IR to uplands	IR stopped, containment and clean-up reported as complete.
11/27/2018	S2-0142, PA-BL-0126.0000-RD	Blair	Woodbury TWP; 40.433, -78.267	25-50-gallon IR to uplands between Lower Piney Creek Road and the west bank of Piney Creek	IR stopped, containment installed, and clean-up in progress.
12/20/2018	S2-0142, PA-BL-0126.0000-RD	Blair	Woodbury TWP; 40.433, -78.267	>200 gallon IR in uplands at two points within LOD adjacent to Piney Creek	IR stopped, containment installed, and clean-up in progress.
2/13/2019	S2-203-16, PA-CU-0136.0012-RD-16	Cumberland	Middlesex TWP; 40.231, -77.106	~150 gallon IR to uplands about 15' in front of HDD entry pit	IR stopped, containment installed, and clean-up completed as of 2/14/2019.
2/19/2019	S2-203-16, PA-CU-0136.0012-RD-16	Cumberland	Middlesex TWP; 40.231291, - 77.107293	~60-80 gallon IR to uplands outside LOD, but within permanent easement.	IR stopped, containment installed, and clean-up completed as of 2/19/2019.
2/22/2018	S2-0246, PA-CU-0174.0001-RD-16	Cumberland	Middlesex TWP; 40.197, -76.996	<100 gallons to uplands	IR stopped, containment installed, and clean-up in progress.
2/25/2019	S2-0246, PA-CU-0174.0001-RD-16	Cumberland	Middlesex TWP; 40.197, -76.996	~10 gallons to uplands	IR stopped, containment installed, and clean-up in progress.

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2/26/2019	S2-0246, PA- CU-0174.0001- RD-16	Cumberland	Middlesex TWP; 40.197, -76.995	~20 gallons to uplands	IR stopped, containment installed, and clean-up in progress.
2/26/2019	S2-0246, PA- CU-0174.0001- RD-16	Cumberland	Middlesex TWP; 40.197, -76.994	~5 gallons to uplands	IR stopped, containment installed, and clean-up in progress.
3/2/2019	S3-0060, PA- DA-0093.0000- RD-16	Dauphin	Londonderry TWP; 40.223, -76.711	~10 gallons to uplands (punch-out release)	IR stopped, contained, and remediation reported as complete.
3/4/2019	S2-0180, PA- CU-0067.0000- RD-16	Cumberland	Lower Frankford TWP, 40.244, - 77.318	50-100 gallons to uplands	IR stopped, contained, and remediation reported as complete.
3/14/2019	S2-203-16, PA- CU-0136.0012- RD-16	Cumberland	Middlesex TWP; 40.232, -77.111	~3 gallons to uplands	IR stopped, contained, and remediation reported as complete.
3/18/2019	S2-250-16, PA- CU-0203.0000- WX-16	York	Fairview TWP; 40.192, -76.908	~20 gallons to uplands inside LOD/drill box (punch-out release)	IR stopped, contained, and remediation reported as complete.
3/30/2019	S2-0167, PA- CU-0053.0000- RD-16	Cumberland	Lower Frankford; closest address is 640 Grahams Woods Road	~15 gallons to uplands inside LOD/drill box (punch-out release)	IR stopped, contained, and remediation reported as complete.
4/6/2019	S-0250, PA-CU- 0203.0000-WX- 16	York	40.192206, - 76.907795	~20 gallons to an upland	IR stopped, contained, and remediation reported as complete.
4/22/2019	S2-0230, PA- CU-0136.0012- RD-16	Cumberland	40.231, -77.106	~8-10 gallons to uplands inside LOD/drill box (punch-out release)	IR stopped, contained, and remediation reported as complete.

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4/23/2019	S3-230, PA-BR-0138.0001-RD-16	Berks	40.22283, -75.9471	~15 gallons to uplands inside LOD/drill box (punch-out release)	IR stopped, contained, and remediation reported as complete.
4/25/2019	S3-0251, PA-BR-0192.0000-RD-16	Berks/Chester	40.1551, -75.8427	~10-15 gallons to uplands inside LOD/drill box (punch-out release)	IR stopped, contained, and remediation reported as complete.
5/20/2019	S2-0230, PA-CU-0136.0012-RD-16	Cumberland	40.231273, -77.106275	~80 gallons to uplands outside LOD	IR stopped, contained, and remediation reported as complete.
5/23/2019	S2-0230, PA-CU-0136.0012-RD-16	Cumberland	40.231273, -77.106275	~30 gallons to uplands outside LOD	IR stopped, contained, and remediation reported as complete.
5/29/2019	S2-0230, PA-CU-0136.0012-RD-16	Cumberland	40.231273, -77.106275	<10 gallons to uplands outside LOD	IR stopped, contained, and remediation reported as complete.
5/31/2019	S2-0230, PA-CU-0136.0012-RD-16	Cumberland	40.231273, -77.106275	<10 gallons to uplands outside LOD	IR stopped, contained, and remediation reported as complete.
2/14/2020	PA-BR-0127.0000-16	Berks	40.2339, -75.9641	~ 20 gallons to uplands within LOD	IR stopped, contained, and remediation reported as complete.
2/15/2020	S2-0109, PA-BL-0001.0031-RD-16	Blair	40.40975, -78.436599	~ 50 gallons to uplands within LOD	IR stopped, contained, and remediation reported as complete.
2/17/2020	S2-0210, PA-CU-0136.0002-WX-16	Cumberland	40.22877776, -77.13886356	40 to 50 gallons to uplands within LOD	IR stopped, contained, and remediation reported as complete.

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2/21/2020	PA-BR-0127.0000-16	Berks	40.2339, -75.9641	20 to 25 gallons to uplands within LOD	IR stopped, contained, and remediation reported as complete.
2/22/2020	PA-DA-0063.0000-RD-16	Dauphin	Conewago Township	~ 40 gallons to uplands within LOD	IR stopped, contained, and remediation reported as complete.
2/24/2020	PA-CU-0176.0019-RD-16	Cumberland	40.196, -76.975, Upper Allen Township	45 to 50 gallons to uplands within LOD	IR stopped, contained, and remediation reported as complete.
2/25/2020	PA-DA-0063.0000-RD-16	Dauphin	Conewago Township	~ 2000 gallons to uplands within LOD	IR stopped, contained, and remediation reported as complete.
2/25/2020	PA-JU-0004.0000-WX-16	Juniata	Lack Township	50 gallons to uplands within LOD	IR stopped, contained, and remediation reported as complete.
2/26/2020	S2-0109, PA-BL-0001.0031-RD-16	Blair	40.40975, -78.436599	300 gallon punch-out IR that occurred within LOD	IR stopped, contained, and remediation reported as complete.
2/26/2020	PA-LE-0117.0000-WX-16	Lebanon	Heidelberg Township	50 gallon punch-out IR that occurred within LOD	IR stopped, contained, and remediation reported as complete.
2/26/2020	PA-DA-0063.0000-RD-16	Dauphin	Conewago Township	470 gallons to uplands within the LOD	IR stopped, contained, and remediation reported as complete.
2/26/2020	PA-LE-0117.0000-WX-16	Lebanon	Heidelberg Township	150 gallon punch-out IR that occurred within LOD, but flowed outside LOD in an upland area	IR stopped, contained, and remediation reported as complete.

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2/27/2020	S2-0109, PA- BL-0001.0031- RD-16	Blair	40.40975, - 78.436599	20 gallon punch-out IR that occurred outside of LOD in uplands	IR stopped, contained, and remediation reported as complete.
3/2/2020	PA-JU- 0004.0000-WX- 16	Juniata	40.301848, - 77.698483	1 gallon punch-out IR to uplands within LOD	IR stopped, contained, and remediation reported as complete.
3/2/2020	PA-HU- 0106.0000-RD- 16	Huntingdon	40.320762, - 77.785956	15 gallon punch-out IR within LOD	IR stopped, contained, and remediation reported as complete.
3/3/2020	PA-CU- 0176.0019-RD- 16	Cumberland	40.196, -76.975, Upper Allen Township	3000 gallons to uplands within LOD, but flowed outside of LOD in an upland area	IR stopped, contained, and remediation reported as complete.
3/4/2020	PA-JU- 0004.0000-WX- 16	Juniata	40.301848, - 77.698483	40 gallons to uplands within the LOD	IR stopped, contained, and remediation reported as complete.
3/7/2020	PA-LE- 0001.0000-SR- 16	Lebanon	40.1529, -76.3505	5 gallon punch-out IR within LOD	IR stopped, contained, and remediation reported as complete.
3/10/2020	S2-0109, PA- BL-0001.0031- RD-16	Blair	40.40975, - 78.436599	500 gallon upland IR within LOD, but flowed outside of LOD in an upland area	IR stopped, contained, and remediation reported as complete.
3/12/2020	PA-LE- 0001.0000-SR- 16	Lebanon	40.1529, -76.3505	200 gallons to uplands within the LOD	IR stopped, contained, and remediation reported as complete.
3/16/2020	PA-JU- 0004.0000-WX- 16	Juniata	40.300997, - 77.674333	20 gallons to uplands within the LOD	IR stopped, contained, and remediation reported as complete.

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3/17/2020	PA-JU- 0004.0000-WX- 16	Juniata	40.301848, - 77.698483	250 gallon IR that occurred outside of LOD in uplands	IR stopped, contained, and remediation reported as complete.
4/8/2020	PA-HU- 0020.0008- WXa-16	Huntingdon	40.368216, - 78.062762	100 gallon punch-out IR that occurred within the drill box in uplands, within the LOD	IR stopped, contained, and remediation reported as complete.
5/5/2020	PA-HU- 0106.0000-RD- 16	Huntingdon	40.320762, - 77.785956	15 gallons to uplands within the LOD	IR stopped, contained, and remediation reported as complete.
5/11/2020	PA-BR- 0181.0000-RD- 16	Berks	40.1658, -75.8567	15 gallon punch-out IR that occurred within the drill box in uplands, within the LOD	IR stopped, contained, and remediation reported as complete.
5/13/2020	PA-HU- 0106.0000-RD- 16	Huntingdon	40.320762, - 77.785956	20 gallons to uplands within the LOD	IR stopped, contained, and remediation reported as complete.
5/14/2020	PA-LE- 0001.0000-SR- 16	Lebanon	40.2520, -76.5986	150 gallon punch-out IR that occurred within the staging area, in uplands and within the LOD	IR stopped, contained, and remediation reported as complete.
5/15/2020	PA-JU- 0004.0000-WX- 16	Juniata	40.301, -77.696	80 gallons to uplands outside of LOD	IR stopped, contained, and remediation reported as complete.
5/19/2020	PA-CU- 0176.0019-RD- 16	Cumberland	40.196, -76.975, Upper Allen Township	10 gallons to uplands outside of LOD	IR stopped, contained, and remediation reported as complete.
5/22/2020	PA-CU- 0176.0019-RD- 16	Cumberland	40.196, -76.975, Upper Allen Township	10 gallons to uplands outside of LOD	IR stopped, contained, and remediation reported as complete.

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5/22/2020	PA-JU- 0004.0000-WX- 16	Juniata	40.301, -77.696	5 gallons to uplands outside of LOD	IR stopped, contained, and remediation reported as complete.
5/26/2020	PA-CU- 0176.0019-RD- 16	Cumberland	40.196, -76.975, Upper Allen Township	10 gallons to uplands outside of LOD	IR stopped, contained, and remediation reported as complete.
5/26/2020	PA-HU- 0110.0000-SR- 16	Huntingdon	Tell	50 gallon punch-out IR to uplands within the LOD	IR stopped, contained, and remediation reported as complete.
5/27/2020	PA-CU- 0176.0019-RD- 16	Cumberland	40.196, -76.975, Upper Allen Township	10 gallons to uplands outside of LOD	IR stopped, contained, and remediation reported as complete.
5/28/2020	PA-CU-0062- 0000-WX-16	Cumberland	Lower Frankford	700 gallons - multiple punch-out IRs to uplands within LOD	IR stopped, contained, and remediation reported as complete.
6/2/2020	PA-CU- 0176.0019-RD- 16	Cumberland	Upper Allen Township	5 gallons to uplands outside of LOD	IR stopped, contained, and remediation reported as complete.
6/5/2020	PA-JU- 0004.0000-WX- 16	Juniata	Lack Township	200 gallons - multiple IRs to uplands within LOD	IR stopped, contained, and remediation reported as complete.
6/12/2020	PA-JU- 0004.0000-WX- 16	Juniata	Lack Township	5 gallon punch-out IR to uplands within the LOD	IR stopped, contained, and remediation reported as complete.
6/20/2020	PA-CU-0062- 0000-WX-16	Cumberland	Lower Frankford	150 gallon punch-out IR to uplands within the LOD	IR stopped, contained, and remediation reported as complete.

Date	DEP HDD # or DEP Permit HDD Reference #	County	Location	Description	Status
6/22/2020	PA-CU-0062-0000-WX-16	Cumberland	Lower Frankford	50 gallon punch-out IR to uplands within the LOD	IR stopped, contained, and remediation reported as complete.
7/3/2020	PA-CU-0136.0002-WX-16	Cumberland	Middlesex Township	35 gallon IR to uplands within LOD	IR stopped, contained, and remediation reported as complete.
7/11/2020	PA-CU-0062-0000-WX-16	Cumberland	Lower Frankford	10 gallon IR to uplands within LOD	IR stopped, contained, and remediation reported as complete.
8/12/2020	PA-CU-0136.0002-WX-16	Cumberland	Middlesex Township	15 gallon IR to uplands within LOD	IR stopped, contained, and remediation reported as complete.
8/20/2020	PA-CU-0136.0002-WX-16	Cumberland	Middlesex Township	5 gallon IR to uplands within LOD	IR stopped, contained, and remediation reported as complete.
<u>Southeast Region</u>					
5/4/2017	S3-0631	Delaware	Brookhaven Borough	50 gallons release of drilling fluids into uplands, lawn area of vacant lot; no fluids reached Chester Creek (S-H41/S-H37)	IR stopped.
6/7/2017	S3-0520	Chester	East Goshen Township	100 gallons of drilling solution in two locations. One emergence was outside of the LOD. The second was within no disturbance LOD	IR stopped.
9/8/2017		Chester	East Goshen Township	40 gallons of drilling solution to upland area	IR Stopped. Solution Cleaned Up.
10/5/2017	S3-0400	Chester	West Whiteland Township	50-75 gals to upland area	IR Stopped. Solution Cleaned Up.

Date	DEP HDD # or DEP Permit HDD Reference #	County	Location	Description	Status
10/5/2017		Chester	East Goshen Township	500 gallons to upland area	IR Stopped. Solution Cleaned Up.
10/6/2017		Delaware	Middletown Township	50 gallons of drilling solution to upland areas	IR Stopped. Solution Cleaned Up.
10/7/2017		Chester	East Goshen Township	600 gallons to upland area	IR Stopped. Solution Cleaned Up.
10/10/2017		Chester	East Goshen Township	50 gallons of drilling solution to upland areas	IR Stopped. Solution Cleaned Up.
10/10/2017		Chester	East Goshen Township	20 gallons of drilling solution to upland areas	IR Stopped. Solution Cleaned Up.
10/13/2017		Delaware	Edgmont Township	50 gallons of drilling solution to upland areas	IR Stopped. Solution Cleaned Up.
10/18/2017		Delaware	Edgmont Township	1 gallon of drilling solution to upland areas	IR Stopped. Solution Cleaned Up.
10/20/2017		Delaware	Middletown Township	30 gallons of drilling solution to upland areas	IR Stopped. Solution Cleaned Up. DEP Inspected.
10/24/2017		Delaware	Edgmont Township	1 gallon of drilling solution to upland areas	IR Stopped. Solution Cleaned Up.
10/25/2017		Delaware	Edgmont Township	15 gallons to two upland area	IR Stopped. Solution Cleaned Up.
11/1/2017	S3-0670	Delaware	Commerce Drive, Upper Chichester Township	Undetermined quantity, drilling solution discharged	IR stopped.

Date	DEP HDD # or DEP Permit HDD Reference #	County	Location	Description	Status
11/11/2017	S3-0400	Chester	West Whiteland Township	Unknown quantity to uplands area	IR stopped. Solution cleaned up, DEP inspected, work suspended pending DEP approval. No initial report, no verbal notice. NOV Issued 11/16/2017
11/18/2017		Delaware	Slitting Mill Road, Edgmont Township	~4 gallons of drilling solution, along the shoulder of Slitting Mill Road	IR stopped.
11/18/2017		Delaware	Slitting Mill Road, Edgmont Township	~2 gallons of drilling solution, along the shoulder of Slitting Mill Road	IR stopped.
11/20/2017	S3-0331	Chester	Uwchlan Township	~75 gallons of drilling solution emerged along North Whitford Road	IR stopped.
11/30/2017		Chester	Uwchlan Township	40 gallons discharged under the matting of the work area, during pilot hole	IR stopped.
12/12/2017		Delaware	Edgmont Township	~100 gallon discharge within the ROW	IR stopped.
12/21/2017	S3-0320	Chester	Along Herman O West Drive, Uwchlan Township	15 gallons discharged; drilling stopped and fluids cleaned-up alongside the roadway. No resources impacted; Loss of Circulation of 1,000 gallons also occurred at this site on the same day.	IR stopped. NOV issued on 1/8/2018

Date	DEP HDD # or DEP Permit HDD Reference #	County	Location	Description	Status
4/18/2018	S3-0620	Delaware	Turnbridge Apts, Glen Riddle Road, Middletown Township; 39.8937; -75.43121	150 gallons of drilling fluid discharged at new IR location (~50 ft) behind the apartment building; stopped drill, set up containment area, vacuumed and squeegeed area; DEP on site to confirm clean up. No resource impacts, public notices made.	IR stopped, area cleaned. Notice provided and initial report submitted. DEP approved restart next day.
4/19/2018	S3-0620	Delaware	Turnbridge Apts, Glen Riddle Road, Middletown Township; 39.8937; -75.43121	Approx. 8,000 gallons (3 tanker trucks filled) of drilling fluid discharged at same IR location of 4/18 IR event, aerial extent approx. 8' x 10', but continued drilling utilizing vacuum pumps into tankers while discharging to surface; squeegeed area upon stopping drill at end of day. DEP on site late in the day as no notice was provided.	IR stopped, area cleaned up. DEP did not receive interim report for this event as a re-activation of 4/18/2018 IR event.
4/20/2018	S3-0620	Delaware	Turnbridge Apts, Glen Riddle Road, Middletown Township; 39.8937; -75.43121	Drilling commenced until new IR at new location of approx. 20 gallons of drilling fluid immediately adjacent to the 4/18/2018 -4/19/2018 IR location. Drilling stopped, extended existing containment area to capture new area, vacuumed and squeegeed to remove drilling fluids. No water resource impacts	IR stopped, area cleaned up. DEP notified and on site to confirm clean up. No initial report submitted for new IR.

Date	DEP HDD # or DEP Permit HDD Reference #	County	Location	Description	Status
4/22/2018 & 4/23/2018	S3-0620	Delaware	Turnbridge Apts, Glen Riddle Road, Middletown Township; 39.8937; -75.43121	Drilling occurred on Saturday, 4/21/2018, then stopped. At some point early Sunday, 4/22/2018, the upland containment area showed signs of clear water. Maintenance crew pumped the groundwater into frac tanks staged in the ROW for disposal.	Drill stopped on 4/23/2018. DEP notified of the "making water" event and restart plan was submitted to DEP on 4/25/2018. NOV issued 5/3/2018 for failure to notify & submit initial reports for 4/18, 19, 20 and 21-23rd events; response submitted 5/8/2018, under review by SERO DEP PG; DEP/SPLP meeting and restart approval given 5/14/2018 with geophysical testing results to be provided prior to pipe pull back

Date	DEP HDD # or DEP Permit HDD Reference #	County	Location	Description	Status
5/18/2018	S3-0620	Delaware	Turnbridge Apts, Glen Riddle Road, Middletown Township; 39.8937; -75.43121	Drilling commenced on 5/15/2018 until new upland IR occurred just outside of the IR location of 4/18-19-20/2018; approx. 50 gallons of drilling fluid was expressed more akin to a sponge than a hole/spout due to the ground being so saturated from heavy rain events. Drilling stopped, the existing containment area was extended to capture new area (just against the brick wall of the apt. bldg), vacuumed and squeegeed to remove drilling fluids. No water resources impacted.	LCMs added to drilling fluids, allowed to set 24-48 hours, no drilling continued throughout the rest of 5/18/2018 or the following 2 days due to the weather forecast. Drilling started on 5/21/2018. DEP on site to observe the start-up of rig.
8/22/2018	S3-0620	Delaware	Turnbridge Apts, Glen Riddle Road, Middletown Township; 39.8937; -75.43121	New upland IR occurred just outside of the ongoing IR location known as the "Upland T.A." Approx. 50 gallons of drilling fluid was expressed but did not enter the WL-I1 nearby. Drilling stopped, the fluid was vacuumed/squeegeed to remove fluid. No water resources impacted. A new IR containment area (sandbags) was established.	NOV issued 8/29/2018 for 2 additional new IR events that occurred at the same time just southeast of this upland IR in the WL-I1.
8/6/2018	S3-0620	Delaware	Turnbridge Apts, Glen Riddle Road, Middletown Township; 39.8937; -75.43121	New subsidence (asphalt pavement) collapse in the parking lot area just outside of the "Upland T.A.". Drilling stopped until area could be secured and approx. 24 yards of flowable fill was dumped into the subsidence hole and sectioned off from access by apartment complex residents.	Area remains secured and monitored for any further activity of drilling fluid being expressed in this area while drilling commences.

Date	DEP HDD # or DEP Permit HDD Reference #	County	Location	Description	Status
8/28/2018	S3-0620	Delaware	Turnbridge Apts, Glen Riddle Road, Middletown Township; 39.8937; -75.43121	Two new IR sites in the Upland T.A. area outside of the original containment and the two smaller areas from the 8/22/2018 and 8/26/2018 IR events; 1st IR released 25 gallons of drilling fluid, the 2nd IR released 50 gallons; both IR events occurred in the evening hours.	Drilling stopped, the fluid was vacuumed/squeegeed to remove fluid. No water resources impacted. Drilling commence after clean-up & containment established. DEP ERT inspected sites to confirm on 8/29/2018 AM.
8/8/2020	S3-0360	Chester	Shoen Road, West Whiteland Twp, 40.0392, -75.6358	seep management containment area was bypassed due to underdrain in the roadside swale, turbid water appearance of drilling mud	NOV issued 8/20/2020, request restart report; temporary supersedeas filed, EHB allowed drilling to commence; hearing 9/1/2020