ARM Group LLC
Engineers and Scientists

September 16, 2020

Ms. Barbara Brown
Project Coordinator
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, MD 21230

Re: NAPL Completion Report
Area B: Parcel B24
Tradepoint Atlantic
Sparrows Point, Maryland

Dear Ms. Brown:

ARM Group LLC (ARM), on behalf of Tradepoint Atlantic (TPA), recently completed a Phase II Investigation of Parcel B24 (the Site) of the TPA property located in Sparrows Point, Maryland. During field activities, a light amount of product sheen was observed in the soil core of B24-003-SB from 13.7 to 14.3 feet below ground surface (bgs) and a trace product sheen, accompanied by an odor, was observed in the soil core of B24-034-SB from 12 to 14 feet bgs. In accordance with the standard procedures of this project, observations of non-aqueous phase liquid (NAPL) in the soil core warranted the installation of a temporary monitoring point (piezometer) to assess potential NAPL mobility. The approved Phase II Investigation Work Plan for Parcel B24 (Revision 1 dated December 27, 2019) had designated that temporary groundwater sample collection points were to be installed at both B24-003-SB and B24-034-SB. Therefore, the prescribed groundwater sample collection points, which also functioned as NAPL screening piezometers, were installed with screen intervals from 5 to 15 feet bgs at both locations shown on **Figure 1**. The combined soil boring observation and piezometer construction logs are provided in **Attachment 1**.

Immediately following the installation of the screening piezometers, ARM used an oil-water interface probe to assess the presence of NAPL. During its initial gauging measurement, B24-003-PZ had a trace observation of NAPL on the oil-water interface probe upon withdraw from the PVC casing. NAPL was not detected in B24-034-PZ. To further delineate NAPL impacts in the vicinity of B24-003-PZ, four delineation piezometers were installed and gauged at surrounding locations approximately 25 feet to the north, east, south, and west. The combined soil boring and piezometer construction logs generated from the supplemental locations are also provided in **Attachment 1**. Additional measurements were collected approximately 48-hours and 30-days

after the piezometers were installed. During all remaining gauging events, no trace or measurable NAPL was detected in any of the screening piezometers. **Table 1** provides all gauging data collected during these events, as well as the piezometer construction details (total depths, screen intervals, etc.) for each location.

On July 1, 2020, the NAPL screening piezometers at these locations were abandoned in accordance with Maryland abandonment standards as stated in COMAR 26.04.04.34 through 36. The piezometers were gauged a final time immediately prior to abandonment, which confirmed that NAPL had not accumulated in the casing of any piezometer. The abandonment forms are included as **Attachment 2**. No additional action is planned in the vicinity of B24-003-SB or B24-034-SB. Based on the lack of accumulated measurable NAPL, the piezometers were sampled as specified in the Parcel B24 Phase II Investigation Work Plan. The site-wide groundwater analytical results will be presented in the forthcoming Phase II Investigation Report.

If you have questions regarding any information covered in this document, please feel free to contact ARM Group LLC at (410) 290-7775.

Respectfully Submitted,
ARM Group LLC

Leandra M. Glumac
Project Geologist

Eric S. Magdar, P.G.
Vice President

FIGURES

Parcel B24 NAPL Piezometers
Phase II & Delineation Locations
September 16, 2020

Figure 1

ARM Group LLC
Engineers and Scientists

Tradepoint Atlantic
Sparrows Point
Baltimore County, MD
ARM Project 20010224

TABLES

Table 1 - Parcel B24
NAPL Gauging Activities

Sample ID	Installation Date	Abandon Date	Total Depth (ft bgs)	Screen Interval (ft bgs)	Riser Stick-Up (ft)	4/16/2020			4/20/2020			4/21/2020		
						Depth to NAPL (ft TOC)	Depth to Water (ft TOC)	NAPL Thickness (ft)	Depth to NAPL (ft TOC)	Depth to Water (ft TOC)	NAPL Thickness (ft)	Depth to NAPL (ft TOC)	Depth to Water (ft TOC)	NAPL Thickness (ft)
B24-003-PZ	4/16/2020	7/1/2020	15	5-15	3.20	**trace**	**11.04**	**trace**	-	11.56	-	NM	NM	NM
B24-003A-PZ	4/22/2020	7/1/2020	15	5-15	3.09	NA	NA	NA	NA	NA	NA	NA	NA	NA
B24-003B-PZ	4/22/2020	7/1/2020	15	5-15	3.44	NA	NA	NA	NA	NA	NA	NA	NA	NA
B24-003C-PZ	5/12/2020	7/1/2020	15	5-15	2.85	NA	NA	NA	NA	NA	NA	NA	NA	NA
B24-003D-PZ	5/12/2020	7/1/2020	15	5-15	3.12	NA	NA	NA	NA	NA	NA	NA	NA	NA
B24-034-PZ	4/21/2020	7/1/2020	15	5-15	2.70	NA	NA	NA	NA	NA	NA	-	9.73	-

Sample ID	Installation Date	Abandon Date	Total Depth (ft bgs)	Screen Interval (ft bgs)	Riser Stick-Up (ft)	4/22/2020			4/23/2020			4/27/2020		
						Depth to NAPL (ft TOC)	Depth to Water (ft TOC)	NAPL Thickness (ft)	Depth to NAPL (ft TOC)	Depth to Water (ft TOC)	NAPL Thickness (ft)	Depth to NAPL (ft TOC)	Depth to Water (ft TOC)	NAPL Thickness (ft)
B24-003-PZ	4/16/2020	7/1/2020	15	5-15	3.20	NM	NM	NM	NM	NM	NM	NM	NM	NM
B24-003A-PZ	4/22/2020	7/1/2020	15	5-15	3.09	-	11.81	-	NM	NM	NM	-	11.85	-
B24-003B-PZ	4/22/2020	7/1/2020	15	5-15	3.44	-	12.19	-	NM	NM	NM	-	12.26	-
B24-003C-PZ	5/12/2020	7/1/2020	15	5-15	2.85	NA	NA	NA	NA	NA	NA	NA	NA	NA
B24-003D-PZ	5/12/2020	7/1/2020	15	5-15	3.12	NA	NA	NA	NA	NA	NA	NA	NA	NA
B24-034-PZ	4/21/2020	7/1/2020	15	5-15	2.70	NM	NM	NM	-	9.95	-	NM	NM	NM

NA = Not Applicable
NM = Not Measured
SHADED = NAPL Detection
bgs = below ground surface
TOC = Top of Casing

Table 1 - Parcel B24
NAPL Gauging Activities

Sample ID	Installation Date	Abandon Date	Total Depth (ft bgs)	Screen Interval (ft bgs)	Riser Stick-Up (ft)	5/12/2020			5/14/2020			5/18/2020		
						Depth to NAPL (ft TOC)	Depth to Water (ft TOC)	NAPL Thickness (ft)	Depth to NAPL (ft TOC)	Depth to Water (ft TOC)	NAPL Thickness (ft)	Depth to NAPL (ft TOC)	Depth to Water (ft TOC)	NAPL Thickness (ft)
B24-003-PZ	4/16/2020	7/1/2020	15	5-15	3.20	NM	NM	NM	NM	NM	NM	-	11.80	-
B24-003A-PZ	4/22/2020	7/1/2020	15	5-15	3.09	NM	NM	NM	NM	NM	NM	-	12.03	-
B24-003B-PZ	4/22/2020	7/1/2020	15	5-15	3.44	NM	NM	NM	NM	NM	NM	-	12.45	-
B24-003C-PZ	5/12/2020	7/1/2020	15	5-15	2.85	-	11.52	-	-	11.62	-	NM	NM	NM
B24-003D-PZ	5/12/2020	7/1/2020	15	5-15	3.12	-	11.67	-	-	11.82	-	NM	NM	NM
B24-034-PZ	4/21/2020	7/1/2020	15	5-15	2.70	NM	NM	NM	NM	NM	NM	NM	NM	NM

Sample ID	Installation Date	Abandon Date	Total Depth (ft bgs)	Screen Interval (ft bgs)	Riser Stick-Up (ft)	5/21/2020			6/15/2020			7/1/2020		
						Depth to NAPL (ft TOC)	Depth to Water (ft TOC)	NAPL Thickness (ft)	Depth to NAPL (ft TOC)	Depth to Water (ft TOC)	NAPL Thickness (ft)	Depth to NAPL (ft TOC)	Depth to Water (ft TOC)	NAPL Thickness (ft)
B24-003-PZ	4/16/2020	7/1/2020	15	5-15	3.20	NM	NM	NM	NM	NM	NM	-	12.17	Abandoned
B24-003A-PZ	4/22/2020	7/1/2020	15	5-15	3.09	NM	NM	NM	NM	NM	NM	-	12.29	Abandoned
B24-003B-PZ	4/22/2020	7/1/2020	15	5-15	3.44	NM	NM	NM	NM	NM	NM	-	12.69	Abandoned
B24-003C-PZ	5/12/2020	7/1/2020	15	5-15	2.85	NM	NM	NM	-	11.64	-	-	12.15	Abandoned
B24-003D-PZ	5/12/2020	7/1/2020	15	5-15	3.12	NM	NM	NM	-	11.76	-	-	12.35	Abandoned
B24-034-PZ	4/21/2020	7/1/2020	15	5-15	2.70	-	10.32	-	NM	NM	NM	-	10.72	Abandoned

NA = Not Applicable
NM = Not Measured
SHADED = NAPL Detection
bgs = below ground surface
TOC = Top of Casing

ATTACHMENT 1

ARM Group LLC
Engineers and Scientists

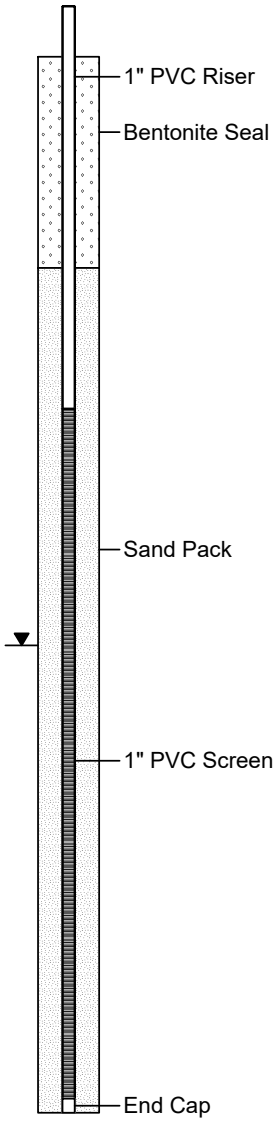
Boring ID: B24-003-SB/PZ

(page 1 of 1)

Client	: Tradepoint Atlantic
ARM Project No.	: 20010224
Project Description	: Sparrows Point - Parcel B24
Site Location	: Sparrows Point, MD
ARM Representative	: L. Perrin
Checked by	: M. Replogle, E.I.T.
Drilling Company	: GSI
Driller	: D. Marchese
Drilling Equipment	: Geoprobe 7822DT

Soil Boring Installation Date	: 04/16/2020
Piezometer Installation Date	: 04/16/2020
Casing/Riser/Screen Type	: PVC
Borehole Diameter	: 2.25"
Riser/Screen Diameter	: 1"
Northing (US ft)	: 568561.39
Easting (US ft)	: 1456819.39
48-Hr DTW	: 11.56' TOC
Trace NAPL detected at 0 hours	
No LNAPL or DNAPL detected at 48 hours	

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0	80	-	B24-003-SB-1	(0-3.5') SLAG with some SILT, SAND, and ROOTS at the surface, SAND and GRAVEL-sized, medium, very dark brown, dry, no plasticity, no cohesion	SW/GP	
		1.9				
		22.6				
		11.2	B24-003-SB-4			
5	60	0.0		(3.5-9.3') SLAG GRAVEL with some SAND-sized SLAG, dense, light gray with some brown, very moist then dry at 4' bgs then wet at 8' bgs, no plasticity, no cohesion	GW	Wet at 8' bgs
		-				
		-				
		0.9				
		4.2				
10	60	2.1		(9.3-11') CLAY, soft to firm, light brown with reddish yellow mottling, very moist, low plasticity, cohesive	CL	
		-				
		-		(11-13.7') CLAY with SAND, soft to firm, light grayish brown with reddish yellow mottling, very moist, low plasticity, cohesive	CL	
		0.0				
		0.0				
15		0.0		(13.7-14.3') CLAYEY SAND and CLAYEY GRAVEL, fine, loose, very dark brown, wet, no plasticity, no cohesion	SC/GC	Very light product sheen from 13.7 to 14.3' bgs
					CL	
				(14.3-15') CLAY with SAND, soft to firm, light grayish brown with reddish yellow mottling, very moist, low plasticity, cohesive		
				End or Boring		



Boring terminated at 15' bgs due to water and piezometer installation
TOC: Top of PVC casing
DTW: Depth to water
bgs: Below ground surface

Riser Stickup: 3.20'
Riser: 0 - 5' bgs
Screen: 5 - 15' bgs [Slot Size: 0.010"]
Sand Pack: 3 - 15' bgs [Grain Size: WG #2]
Bentonite Seal: 0 - 3' bgs [Grain Size: bentonite chips]

ARM Group LLC
Engineers and Scientists

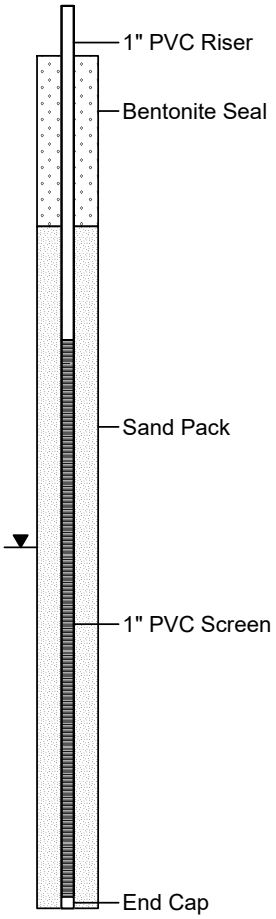
Boring ID: B24-003A-SB/PZ

Client	: Tradepoint Atlantic
ARM Project No.	: 20010224
Project Description	: Sparrows Point - Parcel B24
Site Location	: Sparrows Point, MD
ARM Representative	: L. Perrin
Checked by	: M. Replogle, E.I.T.
Drilling Company	: GSI
Driller	: K. Pumphrey
Drilling Equipment	: Geoprobe 7822DT

Soil Boring Installation Date	: 04/22/2020
Piezometer Installation Date	: 04/22/2020
Casing/Riser/Screen Type	: PVC
Borehole Diameter	: 2.25"
Riser/Screen Diameter	: 1"
Northing (US ft)	: 568571.22
Easting (US ft)	: 1456842.30
48-Hr DTW	: 11.85' TOC

No LNAPL or DNAPL detected at 0 or 48 hours

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0	70	-	No Samples Collected	(0-1') SILT with SAND, very firm, brown, dry, low plasticity, cohesive	ML	
		0.0		(1-4.5') SLAG and BRICK SAND and GRAVEL, dense, greenish gray, dark brown with yellow, dry, no plasticity, no cohesion	SW/GW	
		1.1				
		2.9				
		2.0				
5	76	-		(4.5-6.5') CLAY with trace SAND, firm, brown, moist, low plasticity, cohesive	CL	
		0.0		(6.5-15') SLAG SAND and GRAVEL, dense, gray, dark brown, pale brown and light gray, moist then wet at 8.5' bgs	SW/GW	Wet at 8.5' bgs
		0.4				
		6.1				
		0.0				
10	60	-				Strong petroleum-like odor from 9-10' bgs, trace sheen, no visible product
		-				
		0.0				
		0.0				
		0.0				
15				End or Boring		
20						



Boring terminated at 15' bgs due to water and piezometer installation
TOC: Top of PVC casing
DTW: Depth to water
bgs: Below ground surface

Riser Stickup: 3.09'
Riser: 0 - 5' bgs
Screen: 5 - 15' bgs [Slot Size: 0.010"]
Sand Pack: 3 - 15' bgs [Grain Size: WG #2]
Bentonite Seal: 0 - 3' bgs [Grain Size: bentonite chips]

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Engineers and Scientists

Boring ID: B24-003B-SB/PZ

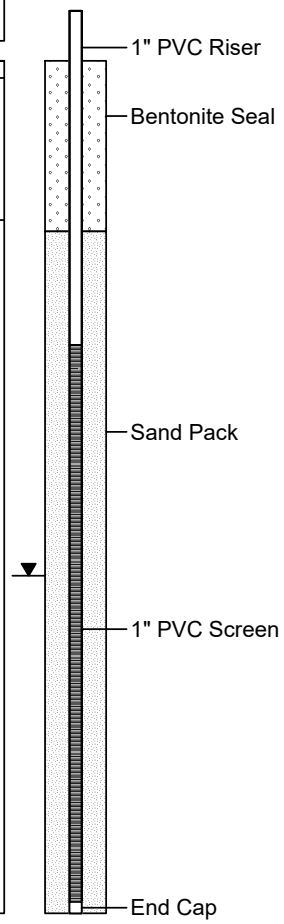
(page 1 of 1)

Client	: Tradepoint Atlantic
ARM Project No.	: 20010224
Project Description	: Sparrows Point - Parcel B24
Site Location	: Sparrows Point, MD
ARM Representative	: L. Perrin
Checked by	: M. Replogle, E.I.T.
Drilling Company	: GSI
Driller	: K. Pumphrey
Drilling Equipment	: Geoprobe 7822DT

Soil Boring Installation Date	: 04/22/2020
Piezometer Installation Date	: 04/22/2020
Casing/Riser/Screen Type	: PVC
Borehole Diameter	: 2.25"
Riser/Screen Diameter	: 1"
Northing (US ft)	: 568591.52
Easting (US ft)	: 1456810.15
48-Hr DTW	: 12.26' TOC

No LNAPL or DNAPL detected at 0 or 48 hours

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-0.3') Marble coarse GRAVEL, loose, light gray and white, dry, no plasticity, no cohesion	GP	
		17.7		(0.3-2.8') Non-native SAND and SLAG, SAND and GRAVEL-sized, medium dense, dark brown with gray, dry, no plasticity, no cohesion	SW/GW	
	68	0.6	No Samples Collected			
		14.0				
		3.5				
5		1.2		(2.8-15') SLAG GRAVEL with some SAND-sized SLAG, medium dense to dense, dry to moist, then wet at 8.4' bgs, no plasticity, no cohesion		
		6.4				
	90	0.2				Wet at 8.4' bgs
		0.1				
		0.1			GW	
10		-				
		0.0				
	80	0.0				
		0.0				
		0.0				
15				End or Boring		
20						



Boring terminated at 15' bgs due to water and piezometer installation
TOC: Top of PVC casing
DTW: Depth to water
bgs: Below ground surface

Riser Stickup: 3.44'
Riser: 0 - 5' bgs
Screen: 5 - 15' bgs [Slot Size: 0.010"]
Sand Pack: 3 - 15' bgs [Grain Size: WG #2]
Bentonite Seal: 0 - 3' bgs [Grain Size: bentonite chips]

ARM Group LLC
Engineers and Scientists

Boring ID: B24-003C-SB/PZ

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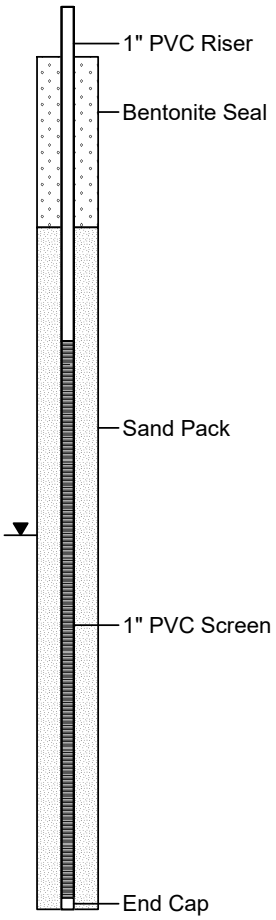
Client	: Tradepoint Atlantic
ARM Project No.	: 20010224
Project Description	: Sparrows Point - Parcel B24
Site Location	: Sparrows Point, MD
ARM Representative	: L. Perrin
Checked by	: M. Replogle, E.I.T.
Drilling Company	: GSI
Driller	: D. Marchese
Drilling Equipment	: Geoprobe 7822DT

Soil Boring Installation Date	: 05/12/2020
Piezometer Installation Date	: 05/12/2020
Casing/Riser/Screen Type	: PVC
Borehole Diameter	: 2.25"
Riser/Screen Diameter	: 1"
Northing (US ft)	: 568561.82
Easting (US ft)	: 1456794.52
48-Hr DTW	: 11.62' TOC

No LNAPL or DNAPL detected at 0 or 48 hours

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-0.5') SILTY SAND, loose, dark brown, dry, no plasticity, no cohesion	SM	
		-		(0.5-4.2') Non-native SAND and SLAG GRAVEL, medium dense, dark brown to very dark brown with trace gray, dry, no plasticity, no cohesion	SW/GW	
	54	0.0	No Samples Collected			
		0.0				
		0.0		(4.2-5') SLAG GRAVEL with CLAY lens, medium dense, light gray, very moist to wet, no plasticity, no cohesion	GW	
5		0.8		(5-7') CLAY, firm, pale brown and reddish yellow, moist, low plasticity, cohesive	CL	
		33.0				
	98	8.6		(7-8.8') SLAG GRAVEL, fine, reddish brown with reddish yellow, dry, no plasticity, no cohesion	GP	Wet at 9.5' bgs
		0.0				
		0.0		(8.8-9.5') CLAY, firm, pale brown and reddish yellow, moist, low plasticity, cohesive	CL	
10		-		(9.5-12.4') SLAG GRAVEL, fine, reddish brown with reddish yellow, wet, no plasticity, no cohesion	GP	
		-				
	56	3.6		(12.4-15') CLAY with some SAND, firm to soft, pale brown with reddish yellow, moist, low plasticity, cohesive	CL	
		0.2				
		0.2				
15				End or Boring		
20						



Boring terminated at 15' bgs due to water and piezometer installation
TOC: Top of PVC casing
DTW: Depth to water
bgs: Below ground surface

Riser Stickup: 2.85'
Riser: 0 - 5' bgs
Screen: 5 - 15' bgs [Slot Size: 0.010"]
Sand Pack: 3 - 15' bgs [Grain Size: WG #2]
Bentonite Seal: 0 - 3' bgs [Grain Size: bentonite chips]

ARM Group LLC
Engineers and Scientists

Boring ID: B24-003D-SB/PZ

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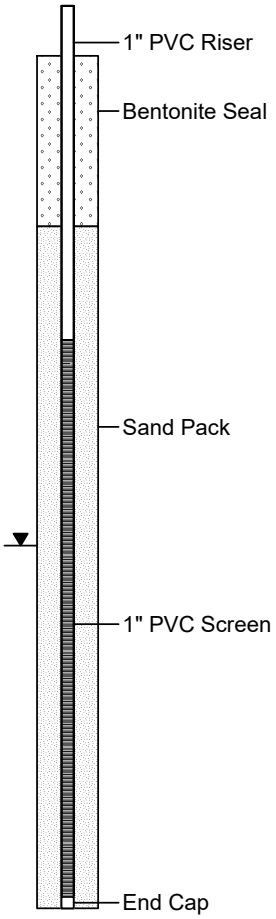
Client	: Tradepoint Atlantic
ARM Project No.	: 20010224
Project Description	: Sparrows Point - Parcel B24
Site Location	: Sparrows Point, MD
ARM Representative	: L. Perrin
Checked by	: M. Replogle, E.I.T.
Drilling Company	: GSI
Driller	: D. Marchese
Drilling Equipment	: Geoprobe 7822DT

Soil Boring Installation Date	: 05/12/2020
Piezometer Installation Date	: 05/12/2020
Casing/Riser/Screen Type	: PVC
Borehole Diameter	: 2.25"
Riser/Screen Diameter	: 1"
Northing (US ft)	: 568538.40
Easting (US ft)	: 1456823.46
48-Hr DTW	: 11.82' TOC
No LNAPL or DNAPL detected at 0 or 48 hours	

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS
0		-		(0-0.5') SILTY SAND, loose, dark brown, dry, no plasticity, no cohesion	SM
		0.0		(0.5-3') Non-native SAND and SLAG GRAVEL, fine and coarse, medium dense, dark brown and gray, dry, no plasticity, no cohesion	SW/GW
	80	0.0	No Samples Collected		
		4.0		(3-7.5') SLAG GRAVEL, fine to coarse, light gray and gray, dry, then very moist from 7-7.5' bgs, no plasticity, no cohesion	GW
		0.0			
5		-			
		0.2			
	86	0.0		(7.5-9.2') CLAY, very firm to hard, light brown, brown, and reddish yellow, dry, low plasticity, cohesive	CL
		0.7			
		0.0		(9.2-11') SLAG GRAVEL, fine to coarse, with trace CLAY lenses, medium dense, black, no plasticity, no cohesion	GP
10		-			
		4.0		(11-15') CLAY with trace GRAVEL, very firm, light brown and reddish yellow, dry, low plasticity, cohesive	CL
	86	2.0			
		0.1			
		0.3			
15				End or Boring	
20					



REMARKS

Wet at 9.2' bgs

Boring terminated at 15' bgs due to water and piezometer installation
TOC: Top of PVC casing
DTW: Depth to water
bgs: Below ground surface

Riser Stickup: 3.12'
Riser: 0 - 5' bgs
Screen: 5 - 15' bgs [Slot Size: 0.010"]
Sand Pack: 3 - 15' bgs [Grain Size: WG #2]
Bentonite Seal: 0 - 3' bgs [Grain Size: bentonite chips]

ARM Group LLC
Engineers and Scientists

Boring ID: B24-034-SB/PZ

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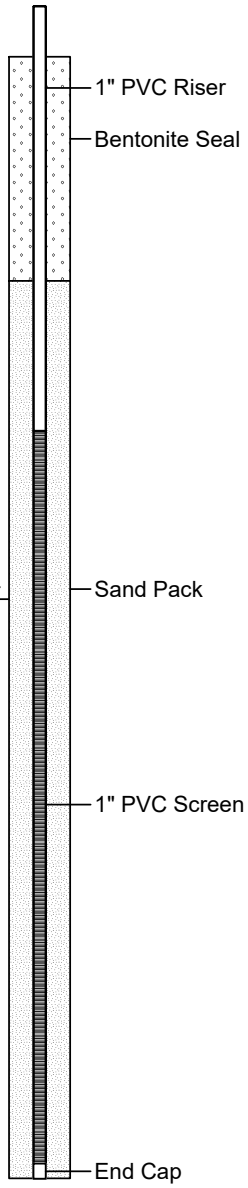
Client	: Tradepoint Atlantic
ARM Project No.	: 20010224
Project Description	: Sparrows Point - Parcel B24
Site Location	: Sparrows Point, MD
ARM Representative	: L. Perrin
Checked by	: M. Replogle, E.I.T.
Drilling Company	: GSI
Driller	: K. Pumphrey
Drilling Equipment	: Geoprobe 7822DT

Soil Boring Installation Date	: 04/21/2020
Piezometer Installation Date	: 04/21/2020
Casing/Riser/Screen Type	: PVC
Borehole Diameter	: 2.25"
Riser/Screen Diameter	: 1"
Northing (US ft)	: 569458.42
Easting (US ft)	: 1457177.41
48-Hr DTW	: 9.95' TOC

No LNAPL or DNAPL detected at 0 or 48 hours

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B24-034-SB-1	(0-0.5') SAND with SILT, very fine to fine, loose, brown, dry, no plasticity, no cohesion	SW-SM	
		0.3		(0.5-1.5') NON-NATIVE SAND with SLAG BRICK, SAND and GRAVEL-sized, medium, brown to dark brown and gray with yellowish red, dry, no plasticity, no cohesion	SW/GW	
	92	0.2		(1.5-2') CONCRETE, SAND and GRAVEL-sized, medium, white, dry, no plasticity, no cohesion	NA	
		0.5				
		0.0	B24-034-SB-5	(2-7.3') NON-NATIVE SAND and SLAG, SAND and GRAVEL-sized, medium to dense, brown to dark brown and gray, dry, no plasticity, no cohesion	SW/GW	
5		-				
		0.1				
	78	0.4		(7.3-7.5') METALLIC SLAG, coarse GRAVEL to COBBLE-sized, dense, gray and red, dry, no plasticity, no cohesion	GP	Wet at 7.5' bgs
		0.1		(7.5-12') SLAG GRAVEL, SAND and GRAVEL-sized, medium to dense, dark brown, wet, no plasticity, no cohesion	GW/SW	
		0.3				
10		-				
		-				
	70	-		(12-14') SILT with intermittent very coarse SAND layers, soft, black with trace gray, wet, low plasticity, cohesive	ML	Heavy sludge-like odor and trace sheen present. No visible product.
		-				
		-		(14-15') SAND with trace fine GRAVEL, medium to coarse, loose to medium, black and brown, wet, no plasticity, no cohesion	SW	
15				End of Boring		



Boring terminated at 15' bgs due to water and piezometer installation
TOC: Top of PVC casing
DTW: Depth to water
bgs: Below ground surface

Riser Stickup: 2.70'
Riser: 0 - 5' bgs
Screen: 5 - 15' bgs [Slot Size: 0.010"]
Sand Pack: 3 - 15' bgs [Grain Size: WG #2]
Bentonite Seal: 0 - 3' bgs [Grain Size: bentonite chips]

ATTACHMENT 2

Well/Piezometer Abandonment Form

Well/Piezometer ID: B24-003-PZ

General Project Information:

Client: Tradepoint Atlantic

Site Location: Sparrows Point, MD

Parcel ID: B24

Abandonment Date: 7/1/20

Abandonment Contractor: GSI

Abandonment Method (circle appropriate):

1. PVC → (Pulled) / Split / Perforated / Left-In-Place / Overdrilled, 4.25" hollow stem
2. Abandoned → (Grout) / Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)/oil-water interface probe

ARM Representative(s): J. Barna

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 15'	Depth to Water (TOC): 12.17'
Measured: 18.05'	Depth to NAPL (TOC): No LNAPL/DNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): **B24-003**

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):

ARM Group LLC
Engineers and Scientists
9175 Guilford Road - Suite 310
Columbia, Maryland 21046
(410) 290-7775 FAX: (410) 290-7775

Well/Piezometer Abandonment Form

Well/Piezometer ID: B24-003A-PZ

General Project Information:

Client: Tradepoint Atlantic

Site Location: Sparrows Point, MD

Parcel ID: B24

Abandonment Date: 7/1/20

Abandonment Contractor: GSI

Abandonment Method (circle appropriate):

1. PVC → (Pulled) / Split / Perforated / Left-In-Place / Overdrilled, 4.25" hollow stem
2. Abandoned → (Grout) / Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)/oil-water interface probe

ARM Representative(s): J. Barna

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 15'	Depth to Water (TOC): 12.29'
Measured: 17.80'	Depth to NAPL (TOC): No LNAPL/DNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): **B24-003**

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):

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Well/Piezometer Abandonment Form

Well/Piezometer ID: B24-003B-PZ

General Project Information:

Client: Tradepoint Atlantic

Site Location: Sparrows Point, MD

Parcel ID: B24

Abandonment Date: 7/1/20

Abandonment Contractor: GSI

Abandonment Method (circle appropriate):

1. PVC → (Pulled) / Split / Perforated / Left-In-Place / Overdrilled, 4.25" hollow stem
2. Abandoned → (Grout) / Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)/oil-water interface probe

ARM Representative(s): J. Barna

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 15'	Depth to Water (TOC): 12.69'
Measured: 18.02'	Depth to NAPL (TOC): No LNAPL/DNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): **B24-003**

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):

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Well/Piezometer Abandonment Form

Well/Piezometer ID: B24-003C-PZ

General Project Information:

Client: Tradepoint Atlantic

Site Location: Sparrows Point, MD

Parcel ID: B24

Abandonment Date: 7/1/20

Abandonment Contractor: GSI

Abandonment Method (circle appropriate):

1. PVC → (Pulled) / Split / Perforated / Left-In-Place / Overdrilled, 4.25" hollow stem
2. Abandoned → (Grout) / Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)/oil-water interface probe

ARM Representative(s): J. Barna

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 15'	Depth to Water (TOC): 12.15'
Measured: 17.60'	Depth to NAPL (TOC): No LNAPL/DNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): **B24-003**

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):

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Well/Piezometer Abandonment Form

Well/Piezometer ID: B24-003D-PZ

General Project Information:

Client: Tradepoint Atlantic

Site Location: Sparrows Point, MD

Parcel ID: B24

Abandonment Date: 7/1/20

Abandonment Contractor: GSI

Abandonment Method (circle appropriate):

1. PVC → (Pulled) / Split / Perforated / Left-In-Place / Overdrilled, 4.25" hollow stem
2. Abandoned → (Grout) / Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)/oil-water interface probe

ARM Representative(s): J. Barna

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 15'	Depth to Water (TOC): 12.35'
Measured: 18.90'	Depth to NAPL (TOC): No LNAPL/DNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): **B24-003**

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):

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Well/Piezometer Abandonment Form

Well/Piezometer ID: B24-034-PZ

General Project Information:

Client: Tradepoint Atlantic

Site Location: Sparrows Point, MD

Parcel ID: B24

Abandonment Date: 7/1/20

Abandonment Contractor: GSI

Abandonment Method (circle appropriate):

1. PVC → (Pulled) / Split / Perforated / Left-In-Place / Overdrilled, 4.25" hollow stem
2. Abandoned → (Grout) / Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)/oil-water interface probe

ARM Representative(s): J. Barna

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 15'	Depth to Water (TOC): 10.72'
Measured: 17.36'	Depth to NAPL (TOC): No LNAPL/DNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): **B24 Phase II**

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):

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