

Prepared By: Peter Rathsack

NYSDEC BCP Site No:	C224219	Date:	06/29/2023
Project Name:	450 Union Street	Weather:	Overcast, 70-85 °F
Client:	2201 Union LLC	Time:	7:00 – 14:00

Personnel On-Site:

Environmental Consultant: Vektor Consultants – Peter Rathsack, Ezgi Karayel
 GZA: Matt Del Blazo
 Coastal Environmental Solutions - Patrick Slavin, Brandon Sullivan
 WSP: Harry August

Work Activities Performed:

- Vektor mobilized to the site to oversee the grossly contaminated media (GCM) delineation as per the Remedial Site Optimization Work Plan (RSOWP) along with Coastal Environmental Solutions (driller), and GZA (National Grid’s environmental consultant).
- The locations for DB-9 and DB-10 were measured and marked according to the RSOWP.
- Coastal mobilized with Sonic Drill Rig CRS XL 140 DUO and installed boring (DB-10). DB-10 was installed to a depth of 60 feet bgs to assess the extent of non-aqueous phase liquid (NAPL) and GCM at the site.
 - No GCM as evidenced by staining, sheen, odors, and PID readings was encountered in any portion of the boring.
- Coastal mobilized with Sonic Drill Rig CRS XL 140 DUO and installed boring (DB-9). DB-9 was installed to a depth of 80 feet bgs to assess the extent of non-aqueous phase liquid (NAPL) and GCM at the site.
 - GCM as evidenced by staining, odors, and PID readings was encountered starting at a depth of approximately 30 feet below grade surface (bgs). Coating, blebs and elevated PID reading were encountered from 32 to 33 feet bgs. No olfactory or PID evidence of impacted soils were present below 33 feet bgs.
 - A shake test was conducted for suspected GCM at 32-33 feet interval and did reveal evidence of LNAPL but did not reveal any evidence of DNAPL.
- All soil cuttings were placed into a 55-gallon drum at the Site for future off-site disposal, and DB-1 was backfilled with a concrete slurry.

Samples Collected:

- Vektor collected coal tar delineation samples from DB-9 (32'- 33') from 32 to 33 feet bgs, and DB-9 (33'-35') from 33 to 35 feet bgs. The samples will be analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, herbicides, target analyte list (TAL) metals, and cyanide. One field blank (FB-4) was also collected to be analyzed for the same parameters. One trip blank (TB-4) was included in the samples delivered to the lab.

Community Air Monitoring Program

Real-time Community Air Monitoring Plan (CAMP) was implemented during all intrusive work at an upwind and a downwind location. No CAMP exceedances were observed.

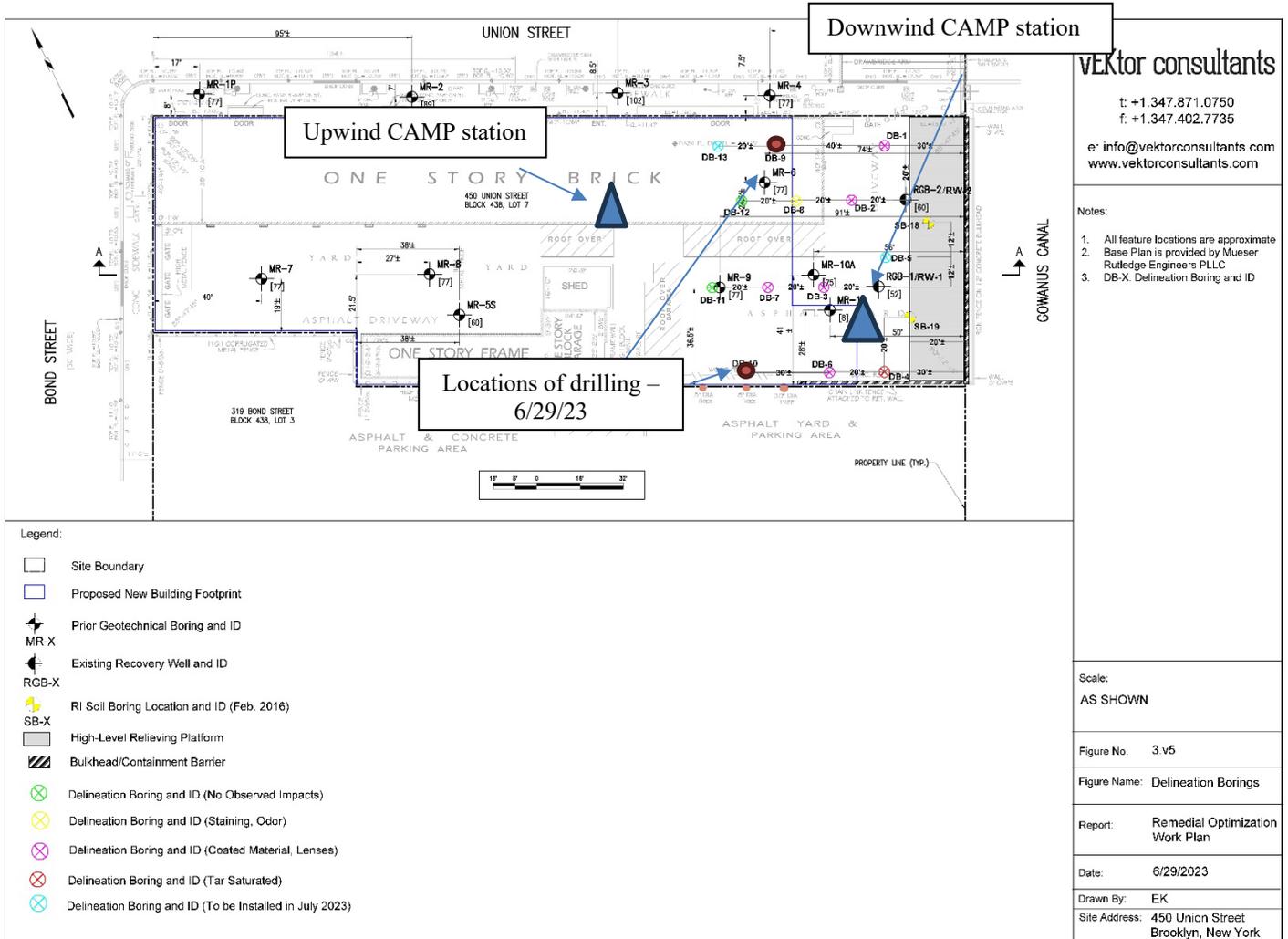
Problems Encountered

N/A

Planned Activities for the Next Day

Continued GCM delineation with the drilling of DB-13 and DB-5.

SITE PLAN / WORK AREAS



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PHOTO LOG

Photo 1: View of the start of drilling at DB-10



Photo 2: View of DB-10 sonic sleeves 30 to 35 feet bgs. and 35 to 40 feet bgs.



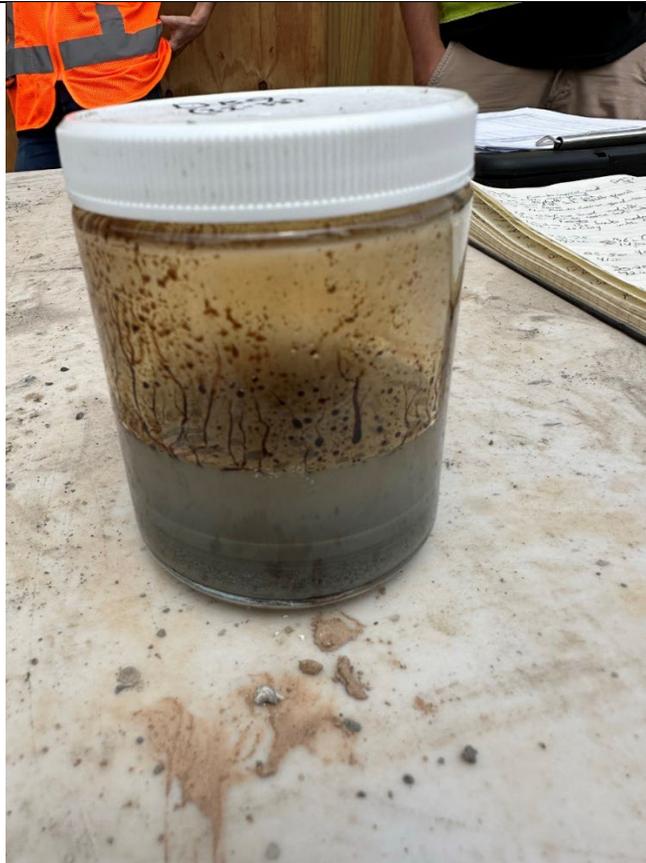
Photo 3: View of drilling at DB-9.



Photo 4: View of DB-9 sonic sleeves 30 to 35 feet and 35 to 40 feet.

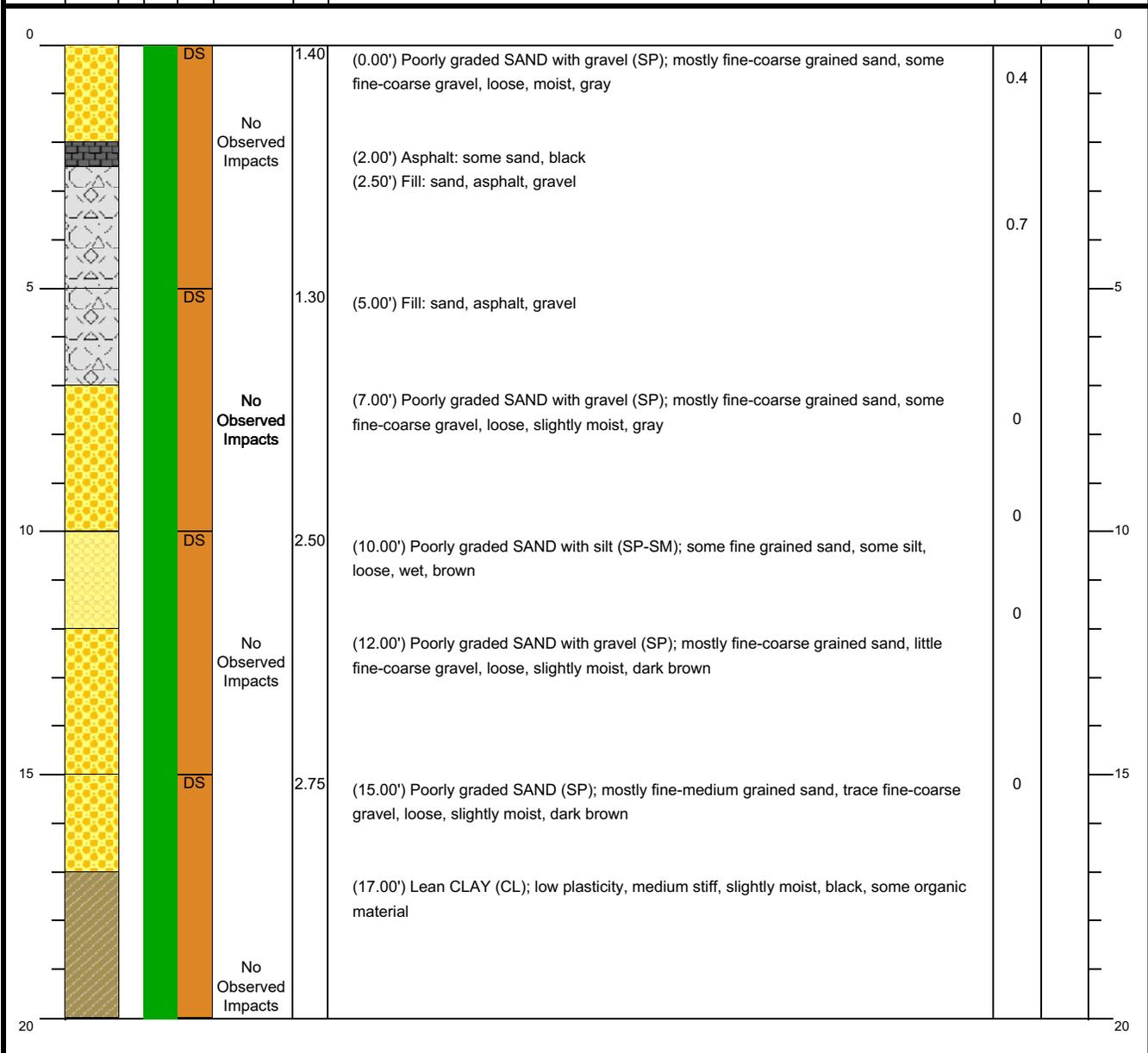


Photo 5: View of shake test
taken from DB-9 32 to 34 feet
below ground surface.



Drilling Start Date: 6/29/2023	Boring Depth (ft): 60
Drilling End Date: 6/29/2023	Boring Diameter (in): 4.00
Drilling Company: Costal Environmental Solutions	Sampling Method(s): DS - Dedicated Plastic Sonic Sleeve
Drilling Method: Sonic	
Drilling Equipment: CRS XL 140 DUO	
Driller: Patrick Slavin	
Logged By: Peter Rathsack	

DEPTH (ft)	LITHOLOGY	COLOR CODE	COLLECT			SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
			Sample Type	Remarks	Recovery (ft)		PID (ppm)	Lab Sample	



NOTES:

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 Sampling Method(s): DS - Dedicated Plastic Sonic Sleeve

DEPTH (ft)	LITHOLOGY	COLOR CODE	COLLECT			SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
			Sample Type	Remarks	Recovery (ft)		PID (ppm)	Lab Sample	
20			DS	No Observed Impacts	4.16	(20.00') Lean CLAY (CL); low plasticity, medium stiff, slightly moist, black, some organic material	0		20
						(23.00') Lean CLAY (CL); low plasticity, medium stiff, slightly moist, black			
25			DS	No Observed Impacts	3.42	(25.00') Lean CLAY (CL); low plasticity, medium stiff, slightly moist, black	4.1		25
						(30.00') Lean CLAY with sand (CL); trace silt, low plasticity, medium stiff, moist, dark brown, some organic material			
30			DS	Odor, Staining	3.50	(30.00') Lean CLAY with sand (CL); trace silt, low plasticity, medium stiff, moist, dark brown, some organic material	3.6		30
						(32.00') Poorly graded SAND (SP); fine-coarse grained, loose, moist, gray	145	DB-9 (32'-33')	
				Coated, Blebs, Odor		(33.00') Poorly graded SAND (SP); mostly fine-coarse grained sand, few silt, medium dense, moist, dark gray	4.5	DB-9 (33'-35')	
35			DS	No Observed Impacts	2.50	(35.00') Poorly graded SAND (SP); fine-coarse grained, loose, slightly moist, dark brown	0		35
40				No Observed Impacts			0		40

NOTES:

Drilling Start Date: 6/29/2023	Boring Depth (ft): 60
Drilling End Date: 6/29/2023	Boring Diameter (in): 4.00
Drilling Company: Costal Environmental Solutions	Sampling Method(s): DS - Dedicated Plastic Sonic Sleeve
Drilling Method: Sonic	
Drilling Equipment: CRS XL 140 DUO	
Driller: Patrick Slavin	
Logged By: Peter Rathsack	

DEPTH (ft)	LITHOLOGY	COLOR CODE	COLLECT			SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
			Sample Type	Remarks	Recovery (ft)		PID (ppm)	Lab Sample	
40			DS	No Observed Impacts	3.00	(40.00') Lean CLAY with sand (CL); some fine-medium sand, trace silt, low plasticity, stiff, moist, brown	0.5		40
45			DS	No Observed Impacts	1.66	(45.00') Lean CLAY with sand (CL); some fine-medium sand, trace silt, low plasticity, stiff, moist, brown	1.3		45
50			DS	No Observed Impacts	3.58	(50.00') Poorly graded SAND (SP); mostly medium-coarse grained sand, trace silt, loose, moist, brown	0		50
55			DS	No Observed Impacts	2.66	(53.00') SILT with sand (ML); trace fine-coarse gravel, little fine-coarse sand, mostly silt, low plasticity, medium stiff, moist, brown	0		55
60				No Observed Impacts		(55.00') Poorly graded SAND (SP); medium-coarse grained, loose, slightly moist, brown	0		60

NOTES:

Client: 2201 Union LLC
 Project: 450 Union
 Address: 450 Union Street, Brooklyn, NY

PRELIMINARY BORING LOG
 Boring No. DB-9
 Page: 4 of 5

Drilling Start Date: 6/29/2023	Boring Depth (ft): 60
Drilling End Date: 6/29/2023	Boring Diameter (in): 4.00
Drilling Company: Costal Environmental Solutions	Sampling Method(s): DS - Dedicated Plastic Sonic Sleeve
Drilling Method: Sonic	
Drilling Equipment: CRS XL 140 DUO	
Driller: Patrick Slavin	
Logged By: Peter Rathsack	

DEPTH (ft)	LITHOLOGY	COLOR CODE	COLLECT			SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
			Sample Type	Remarks	Recovery (ft)		PID (ppm)	Lab Sample	
60						(60.00') No Recovery			60
65						(65.00') No Recovery			65
70			DS		2.50	(70.00') Poorly graded SAND with gravel (SP); mostly fine-coarse grained sand, some fine-coarse gravel, loose, slightly moist, brown	0		70
75			DS	No Observed Impacts	2.90		0		75
80				No Observed Impacts			0		80

NOTES:

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PRELIMINARY BORING LOG
 Boring No. DB-9
 Page: 5 of 5

Drilling Start Date: 6/29/2023	Boring Depth (ft): 60
Drilling End Date: 6/29/2023	Boring Diameter (in): 4.00
Drilling Company: Costal Environmental Solutions	Sampling Method(s): DS - Dedicated Plastic Sonic Sleeve
Drilling Method: Sonic	
Drilling Equipment: CRS XL 140 DUO	
Driller: Patrick Slavin	
Logged By: Peter Rathsack	

DEPTH (ft)	LITHOLOGY	COLOR CODE	COLLECT			SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
			Sample Type	Remarks	Recovery (ft)		PID (ppm)	Lab Sample	

80						(80.00') Boring terminated			80
85									85
90									90
95									95
100									100

NOTES:

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Drilling Company: Costal Environmental Solutions	Sampling Method(s): DS - Dedicated Plastic Sonic Sleeve
Drilling Method: Sonic	
Drilling Equipment: CRS XL 140 DUO	
Driller: Patrick Slavin	
Logged By: Peter Rathsack	

DEPTH (ft)	LITHOLOGY	COLOR CODE	COLLECT			SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
			Sample Type	Remarks	Recovery (ft)		PID (ppm)	Lab Sample	
0			DS		2.75	(0.00') Fill: brick, asphalt, concrete	0		0
				No Observed Impacts					
5			DS		0.80	(5.00') Fill: brick, asphalt, concrete	0		5
				No Observed Impacts					
10			DS		0.75	(10.00') Fill: brick, crushed concrete	0		10
				No Observed Impacts					
15			DS		1.85	(15.00') Poorly graded SAND (SP); some fine-coarse grained sand, some silt, loose, moist, gray	0		15
				No Observed Impacts					
						(17.50') Poorly graded SAND (SP); mostly coarse grained sand, trace silt, medium dense, moist, gray	1.1		
				No Observed Impacts					
20									20

NOTES:

Drilling Start Date: 6/29/2023
 Drilling End Date: 6/29/2023
 Drilling Company: Costal Environmental Solutions
 Drilling Method: Sonic
 Drilling Equipment: CRS XL 140 DUO
 Driller: Patrick Slavin
 Logged By: Peter Rathsack

Boring Depth (ft): 60
 Boring Diameter (in): 4.00
 Sampling Method(s): DS - Dedicated Plastic Sonic Sleeve

DEPTH (ft)	LITHOLOGY	COLOR CODE	COLLECT			SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
			Sample Type	Remarks	Recovery (ft)		PID (ppm)	Lab Sample	
20			DS	No Observed Impacts	4.25	(20.00') SILT with sand (ML); few fine sand, mostly silt, low plasticity, medium stiff, moist, dark gray (20.50') Lean CLAY (CL); some clay, low plasticity, medium stiff, moist, gray, brown organic material, some organic material	14		20
25			DS	No Observed Impacts	1.80	(23.50') Lean CLAY (CL); trace fine-medium sand, some silt, mostly clay, medium plasticity, medium stiff, moist, gray (25.00') SILT with sand (ML); some fine-medium sand, mostly silt, low plasticity, soft, moist, light gray	0		25
30			DS	No Observed Impacts	2.58	(30.00') SILT with sand (ML); some fine sand, mostly silt, nonplastic, soft, moist, gray	0		30
35			DS	No Observed Impacts	1.83	(32.50') Poorly graded SAND (SP); mostly fine-coarse grained sand, trace silt, loose, moist, gray (35.00') Lean CLAY (CL); trace silt, low plasticity, soft, moist, gray, brown	0.4		35
40				No Observed Impacts		(38.00') Poorly graded SAND (SP); mostly coarse grained sand, trace silt, loose, moist, gray	0.2		40

NOTES:

Drilling Start Date: 6/29/2023
 Drilling End Date: 6/29/2023
 Drilling Company: Costal Environmental Solutions
 Drilling Method: Sonic
 Drilling Equipment: CRS XL 140 DUO
 Driller: Patrick Slavin
 Logged By: Peter Rathsack

Boring Depth (ft): 60
 Boring Diameter (in): 4.00
 Sampling Method(s): DS - Dedicated Plastic Sonic Sleeve

DEPTH (ft)	LITHOLOGY	COLOR CODE	COLLECT			SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
			Sample Type	Remarks	Recovery (ft)		PID (ppm)	Lab Sample	
40			DS	No Observed Impacts	2.90	(40.00') Poorly graded SAND (SP); fine-medium grained, loose, moist, brown			40
						(42.00') Peat: organic material, some clay	9.4		
						(43.00') Lean CLAY (CL); some fine-coarse gravel, some fine-coarse sand, some clay, low plasticity, soft, moist, gray, some organic material			
45			DS	No Observed Impacts	2.16	(45.00') Poorly graded SAND with gravel (SP); some fine-coarse grained sand, some fine-coarse gravel, loose, moist, gray	0		45
						(45.50') Poorly graded SAND (SP); mostly fine-medium grained sand, trace silt, loose, moist, gray			
50			DS	No Observed Impacts	2.58	(50.00') Poorly graded SAND (SP); fine-coarse grained, very loose, slightly moist, light brown	0		50
							0		
55			DS	No Observed Impacts	2.25	(55.00') SILT (ML); some fine-coarse gravel, some fine-coarse sand, mostly silt, low plasticity, medium stiff, slightly moist, light brown	0		55
60				No Observed Impacts					60

NOTES:

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 Project: 450 Union
 Address: 450 Union Street, Brooklyn, NY

PRELIMINARY BORING LOG
 Boring No. DB-10
 Page: 4 of 4

Drilling Start Date: **6/29/2023**
 Drilling End Date: **6/29/2023**
 Drilling Company: **Costal Environmental Solutions**
 Drilling Method: **Sonic**
 Drilling Equipment: **CRS XL 140 DUO**
 Driller: **Patrick Slavin**
 Logged By: **Peter Rathsack**

Boring Depth (ft): **60**
 Boring Diameter (in): **4.00**
 Sampling Method(s): **DS - Dedicated Plastic Sonic Sleeve**

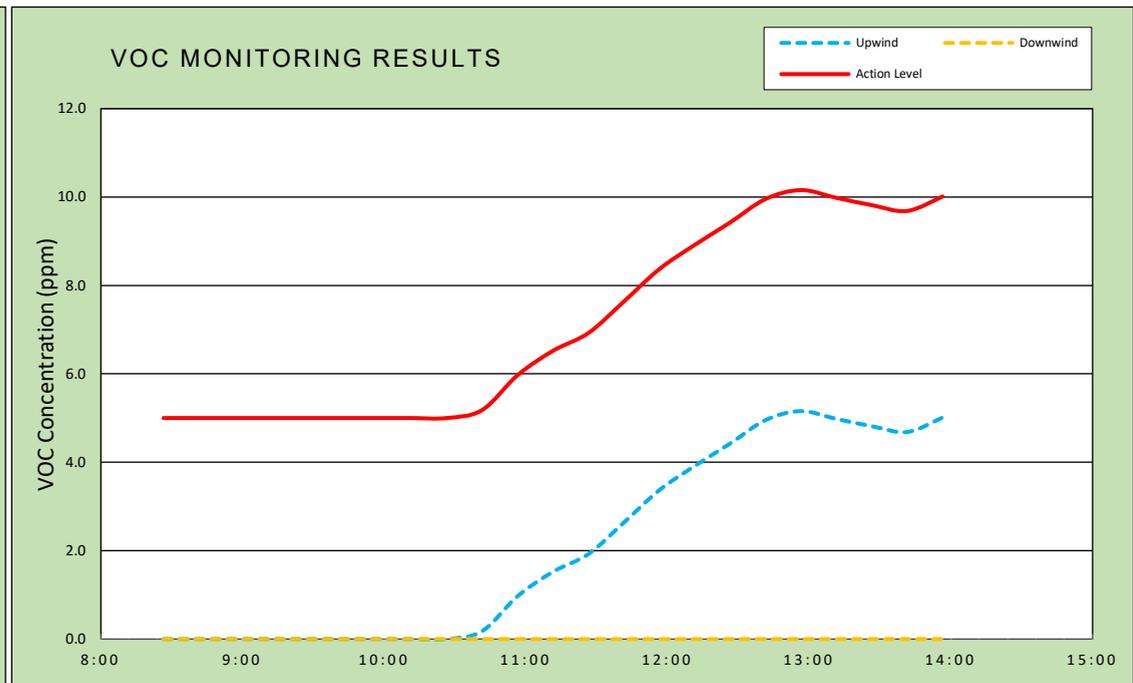
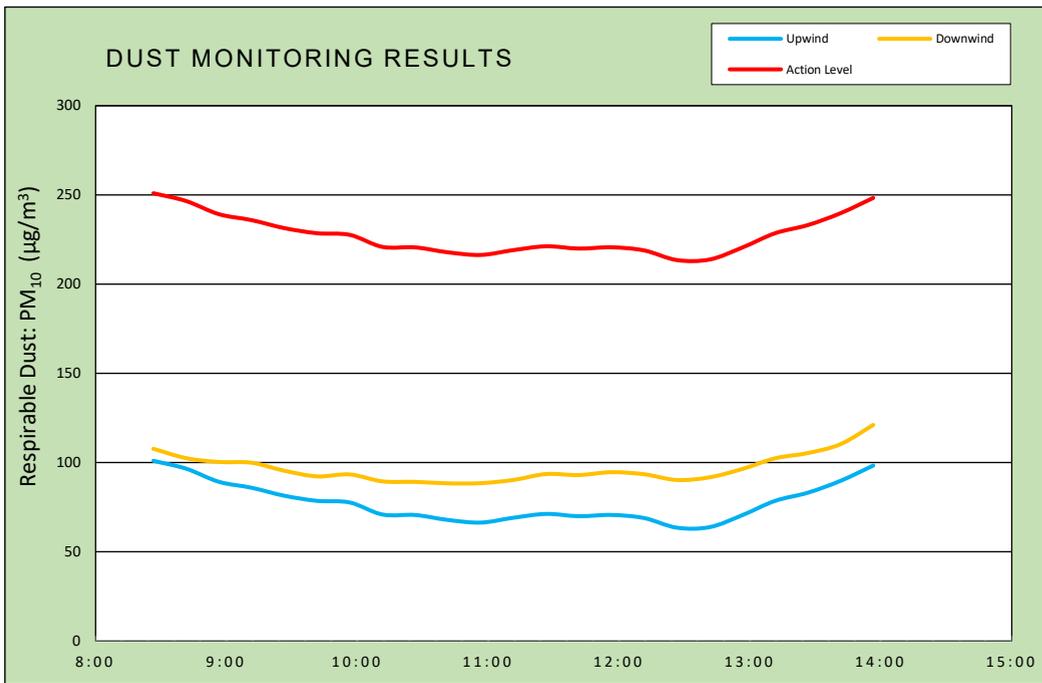
DEPTH (ft)	LITHOLOGY	COLOR CODE	COLLECT			SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
			Sample Type	Remarks	Recovery (ft)		PID (ppm)	Lab Sample	
60						(60.00') Poorly graded SAND with gravel (SP); mostly fine-coarse grained sand, some fine-coarse gravel, some clay, loose, moist, brown			60
						(60.00') Boring terminated			
65									65
70									70
75									75
80									80

NOTES:

vEktor consultants 37 W. 37th St, 6th Floor - New York, NY	DAILY AIR MONITORING REPORT 450 Union Street Brooklyn, New York					06/29/2023	
						Rev. No. 0	Page 1 of 2
						Project Number:	
						Dust Action Level	150 $\mu\text{g}/\text{m}^3$
		VOC Action Level	5 ppm				

Weather Data Range for Work Day		Wind Direction	NW	Relative Humidity (%)	48.0 - 74.0	Daily Rain Total (in)	0.00	Readings in the summary table and graphs below are the reported downwind concentrations.
Temperature (°F)	70.0 - 83.0	Wind Speed (MPH)	1.8 - 3.3	Barometer (inHg)	30.00 - 30.00	Avg. Dew Point Temp (°F)	61.2	

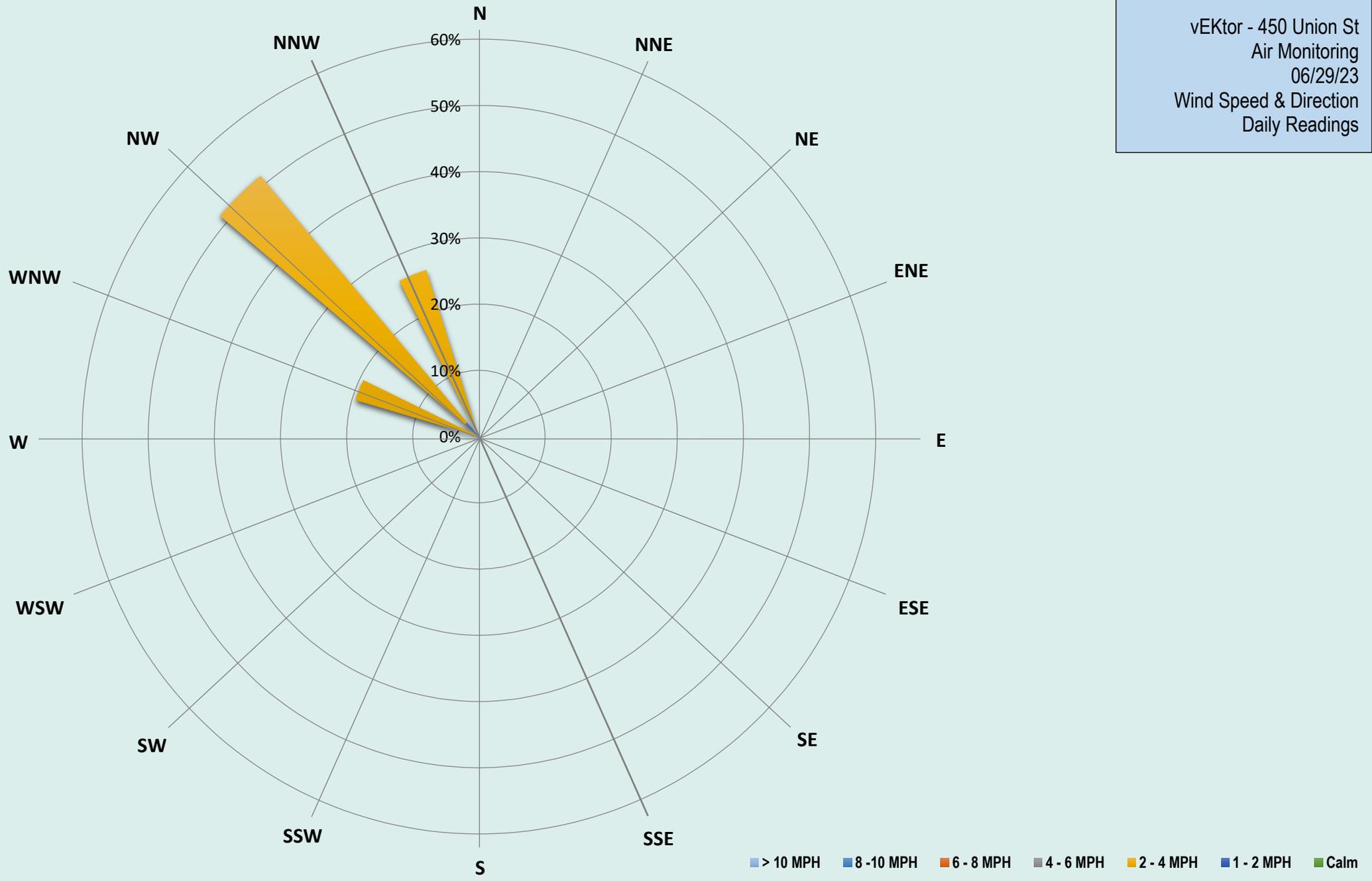
Station Location	Daily Avg. Dust Concentration ($\mu\text{g}/\text{m}^3$)	Max 15-Min Dust Concentration ($\mu\text{g}/\text{m}^3$)	Time of Max Dust Reading	Daily Avg. VOC Concentration (ppm)	Max 15-Min VOC Concentration (ppm)	Time of Max VOC Reading
Upwind	78.2	104.0	8:16	2.2	5.3	14:17
Downwind	97.6	122.6	14:21	0.0	0.0	8:13



Air Monitoring Notes:

Weather Notes:

vEKtor - 450 Union St
Air Monitoring
06/29/23
Wind Speed & Direction
Daily Readings



Thursday, June 29, 2023				
Number of Instances Where Downwind Particulates				0
Number of Comparable Data Points =				23
Start Time:				8:27
End Time:				13:57
PARTICULATE DATA				
Upwind		Downwind		Exceeds Particulate Alarm Limit
Time	15-Min Avg Concentration (ug/m ³)	Time	15-Min Avg Concentration (ug/m ³)	
8:27	100.9	8:27	107.7	-
8:42	96.6	8:42	102.5	-
8:57	89.2	8:57	100.3	-
9:12	85.9	9:12	99.9	-
9:27	81.4	9:27	95.4	-
9:42	78.5	9:42	92.2	-
9:57	77.6	9:57	93.3	-
10:12	70.9	10:12	89.4	-
10:27	70.6	10:27	89.2	-
10:42	67.8	10:42	88.3	-
10:57	66.3	10:57	88.4	-
11:12	69.0	11:12	90.2	-
11:27	71.2	11:27	93.5	-
11:42	69.9	11:42	93.0	-
11:57	70.6	11:57	94.6	-
12:12	68.9	12:12	93.4	-
12:27	63.5	12:27	90.2	-
12:42	63.8	12:42	91.7	-
12:57	70.5	12:57	96.4	-
13:12	78.5	13:12	102.4	-
13:27	83.1	13:27	105.3	-
13:42	89.7	13:42	110.3	-
13:57	98.3	13:57	121.1	-

Exceedance Level

250.9
246.6
239.2
235.9
231.4
228.5
227.6
220.9
220.6
217.8
216.3
219.0
221.2
219.9
220.6
218.9
213.5
213.8
220.5
228.5
233.1
239.7
248.3

Upwind DustTrak Data Summary		
Daily Maximum	116.3	ug/m ³
Daily Minimum	59.3	ug/m ³
Daily Average	78.2	ug/m ³
Maximum 15-Minute Average	100.9	ug/m ³

Downwind DustTrak Data Summary		
Daily Maximum	126.2	ug/m ³
Daily Minimum	85.0	ug/m ³
Daily Average	97.6	ug/m ³
Maximum 15-Minute Average	121.1	ug/m ³

Thursday, June 29, 2023				
Number of Instances Where Downwind VOCs Exceeds				0
Number of Comparable Data Points =				0
Start Time:				8:27
End Time:				13:57
PID DATA				
Upwind		Downwind		Exceeds VOC Alarm Limit
Time	15-Min Avg Concentration (ppm)	Time	15-Min Avg Concentration (ppm)	
8:27	0.0	8:27	0.0	-
8:42	0.0	8:42	0.0	-
8:57	0.0	8:57	0.0	-
9:12	0.0	9:12	0.0	-
9:27	0.0	9:27	0.0	-
9:42	0.0	9:42	0.0	-
9:57	0.0	9:57	0.0	-
10:12	0.0	10:12	0.0	-
10:27	0.0	10:27	0.0	-
10:42	0.2	10:42	0.0	-
10:57	1.0	10:57	0.0	-
11:12	1.5	11:12	0.0	-
11:27	1.9	11:27	0.0	-
11:42	2.6	11:42	0.0	-
11:57	3.4	11:57	0.0	-
12:12	3.9	12:12	0.0	-
12:27	4.4	12:27	0.0	-
12:42	5.0	12:42	0.0	-
12:57	5.2	12:57	0.0	-
13:12	5.0	13:12	0.0	-
13:27	4.8	13:27	0.0	-
13:42	4.7	13:42	0.0	-
13:57	5.0	13:57	0.0	-

Exceedance Level

5.0

5.0

5.0

5.0

5.0

5.0

5.0

5.0

5.0

5.0

5.2

6.0

6.5

6.9

7.6

8.4

8.9

9.4

10.0

10.2

10.0

9.8

9.7

10.0

Upwind PID Data Summary		
Daily Maximum	5.3	ppm
Daily Minimum	0.0	ppm
Daily Average	2.2	ppm
Maximum 15-Minute Average	5.2	ppm

Downwind PID Data Summary		
Daily Maximum	0.0	ppm
Daily Minimum	0.0	ppm
Daily Average	0.0	ppm
Maximum 15-Minute Average	0.0	ppm