

Prepared By: Peter Rath sack

<b>NYSDEC BCP Site No:</b>	C224219	<b>Date:</b>	06/16/2023
<b>Project Name:</b>	450 Union Street	<b>Weather:</b>	Sun, Rain, 70-75 °F
<b>Client:</b>	2201 Union LLC	<b>Time:</b>	7:00 – 14:00

**Personnel On-Site:**

Environmental Consultant: Vektor Consultants – Peter Rath sack, Peter Thao, Ezgi Karayel

GZA: Matt Del Blazo

Coastal Environmental Solutions - Patrick Slavin, Mike Martino

WSP: Brian Jessourian

**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-8, DB-11, and DB-12 were measured and marked according to the RSOWP.
- Coastal mobilized with Sonic Drill Rig CRS XL 140 DUO and installed boring (DB-8). DB-8 was installed to a depth of 50 feet bgs to assess the extent of non-aqueous phase liquid (NAPL) and GCM at the site.
  - GCM as evidenced by staining, sheen, odors, and PID readings was encountered starting at a depth of approximately 32 feet below grade surface (bgs). Visual and olfactory evidence of impacted soils continued until approximately 37 feet. No olfactory or PID evidence of impacted soils were present below 37 feet bgs.
  - A shake test was conducted for suspected GCM at 32-34 feet interval and revealed a small amount of LNAPL. A second shake test was conducted to confirm lack of NAPL below 37 feet at the 37-38 feet interval.
- Coastal mobilized with Sonic Drill Rig CRS XL 140 DUO and installed boring (DB-11). DB-11 was installed to a depth of 50 feet bgs to assess the extent of non-aqueous phase liquid (NAPL) and GCM at the site.
  - GCM as evidenced by staining, sheen, odors, and PID readings was not encountered in any portion of the boring.
- Coastal mobilized with Sonic Drill Rig CRS XL 140 DUO and installed boring (DB-12). DB-12 was installed to a depth of 50 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.
- All soil cuttings were placed into a 55-gallon drum at the Site for future off-site disposal, all borings were backfilled with a concrete slurry.

**Samples Collected:**

- Vektor collected coal tar delineation samples from DB-8 (32'- 34') from 32 to 34 feet bgs, and DB-8 (37'-38') from 37 to 38 feet bgs. Vektor collected coal tar delineation samples to confirm a lack of GCM from DB-11 (33'-35') from 33 to 35 feet bgs. (On Hold), DB-11 (36'-38) from 36 to 38 feet bgs. (On Hold), and DB-12 (45'-47') from 45 to 47 feet (On Hold). 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-3) was also collected to be analyzed for the same parameters. One trip blank (TB-3) was included in the samples delivered to the lab.

**Community Air Monitoring Program**

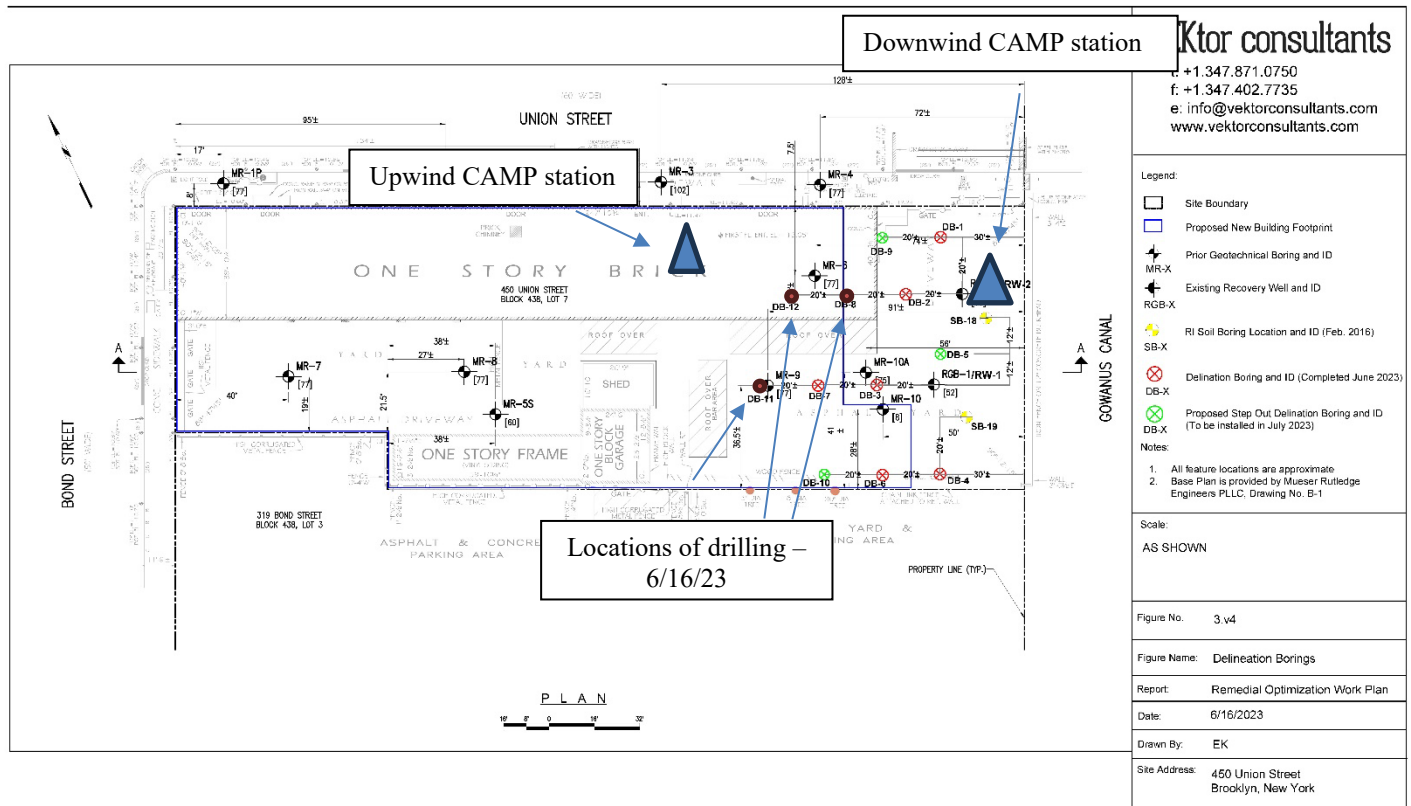
Real-time Community Air Monitoring Plan (CAMP) was implemented during all intrusive work at an upwind and a downwind location. No CAMP exceedances were observed.

**Problems Encountered**

N/A

**Planned Activities for the Next Day**

N/A

**SITE PLAN / WORK AREAS**

## PHOTO LOG

Photo 1: View of CAMP station and Coastal Environmental Solutions setting up Sonic Drill Rig CRS XL 140 DUO





Photo 2: View of DB-8 sonic sleeves 30 to 35 feet bgs. and 35 to 40 feet bgs.



Photo 3: View of shake test from DB-8 32 to 34 feet bgs and shake test DB-8 37-38.





Photo 4: View of DB-11 sonic sleeves 30 to 35 feet and 35 to 40 feet.




Photo 5: View of DB-12 sonic sleeves 10 to 15 feet and 35 to 40 feet.



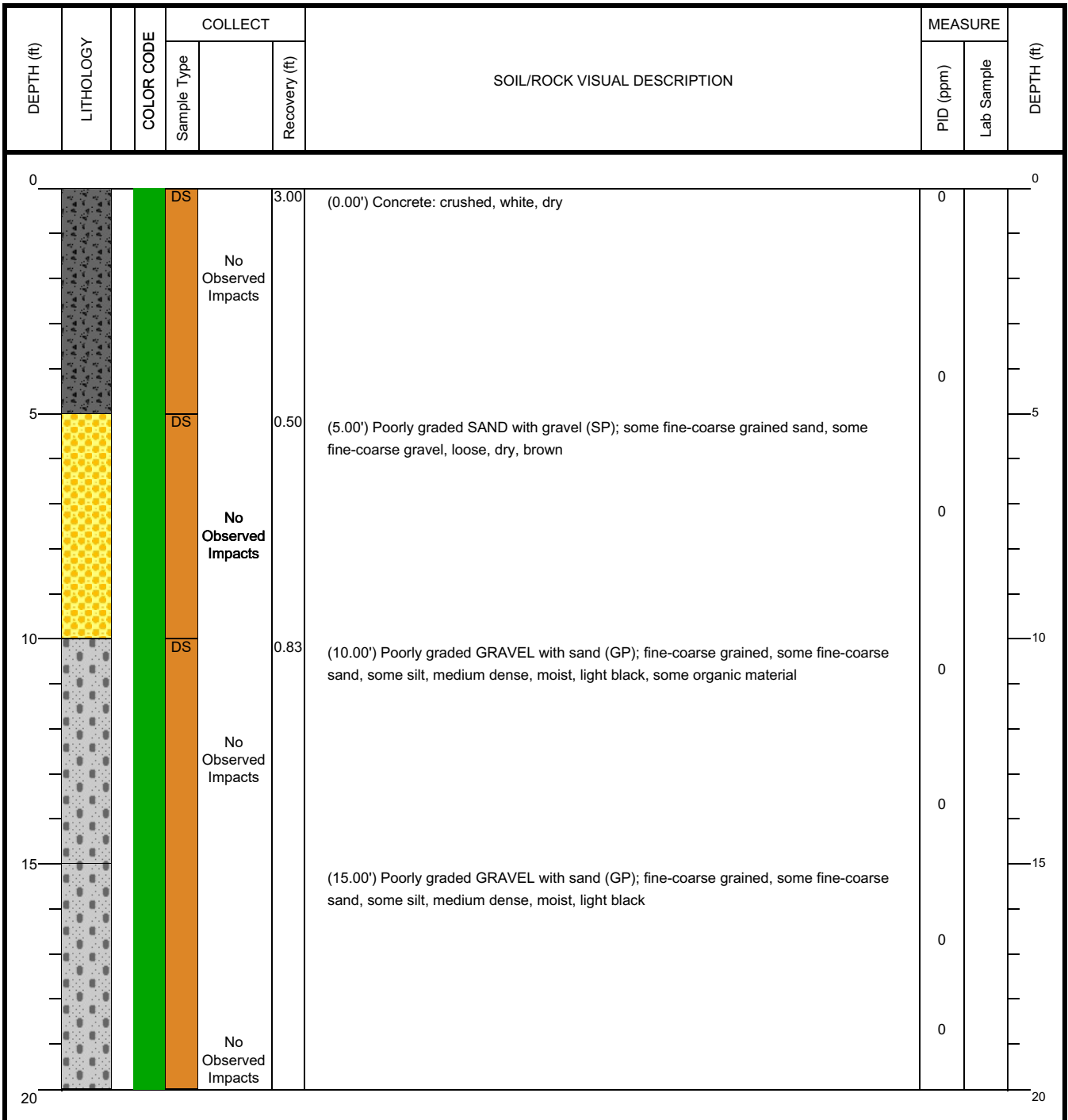
Photo 6: View of Coastal  
Environmental Solutions  
grouting DB-11.





	Client: 2201 Union LLC	<b>PRELIMINARY BORING LOG</b> Boring No. DB-8 Page: 1 of 3
	Project: 450 Union	
	Address: 450 Union Street, Brooklyn, NY	

Drilling Start Date: 6/16/2023 Drilling End Date: 6/16/2023 Drilling Company: Costal Environmental Solutions Drilling Method: Sonic Drilling Equipment: CRS XL 140 DUO Driller: Patrick Slavin Logged By: Peter Rathsack	Boring Depth (ft): 50 Boring Diameter (in): 4.00 Sampling Method(s): DS - Dedicated Plastic Sonic Sleeve
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NOTES:

Drilling Start Date: <b>6/16/2023</b>	Boring Depth (ft): <b>50</b>
Drilling End Date: <b>6/16/2023</b>	Boring Diameter (in): <b>4.00</b>
Drilling Company: <b>Costal Environmental Solutions</b>	Sampling Method(s): <b>DS - Dedicated Plastic Sonic Sleeve</b>
Drilling Method: <b>Sonic</b>	
Drilling Equipment: <b>CRS XL 140 DUO</b>	
Driller: <b>Patrick Slavin</b>	
Logged By: <b>Peter Rathsack</b>	

DEPTH (ft)	LITHOLOGY	COLOR CODE	COLLECT			SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
			Sample Type		Recovery (ft)		PID (ppm)	Lab Sample	
20									20
						(20.00') Poorly graded SAND (SP); fine-medium grained, medium dense, moist, brown			
						(22.00') Lean CLAY (CL); little fine-medium sand, medium plasticity, soft, moist, black	0.1		
						(24.00') Poorly graded SAND (SP); fine-coarse grained, loose, moist, black, some organic material	0.2		
25						(25.00') ORGANIC SOIL (OH); mostly clay, high plasticity, stiff, moist, dark gray	0		25
							0		
							0		
30						(30.00') Poorly graded SAND (SP); fine-coarse grained, loose, moist, dark gray, trace organic material			30
						(31.50') Lean CLAY (CL); some fine-coarse sand, medium plasticity, medium stiff, moist, brownish, trace organic material	5.5	DB-8 (32'-34')	
							6.5		
35						(35.00') Lean CLAY (CL); some fine-coarse sand, medium plasticity, medium stiff, moist, brownish	6		35
						(36.50') Poorly graded SAND with gravel (SP); some fine-coarse grained sand, some fine-coarse gravel, trace silt, medium dense, moist, brownish	0	DB-8 (37'-38')	
							0		
40									40

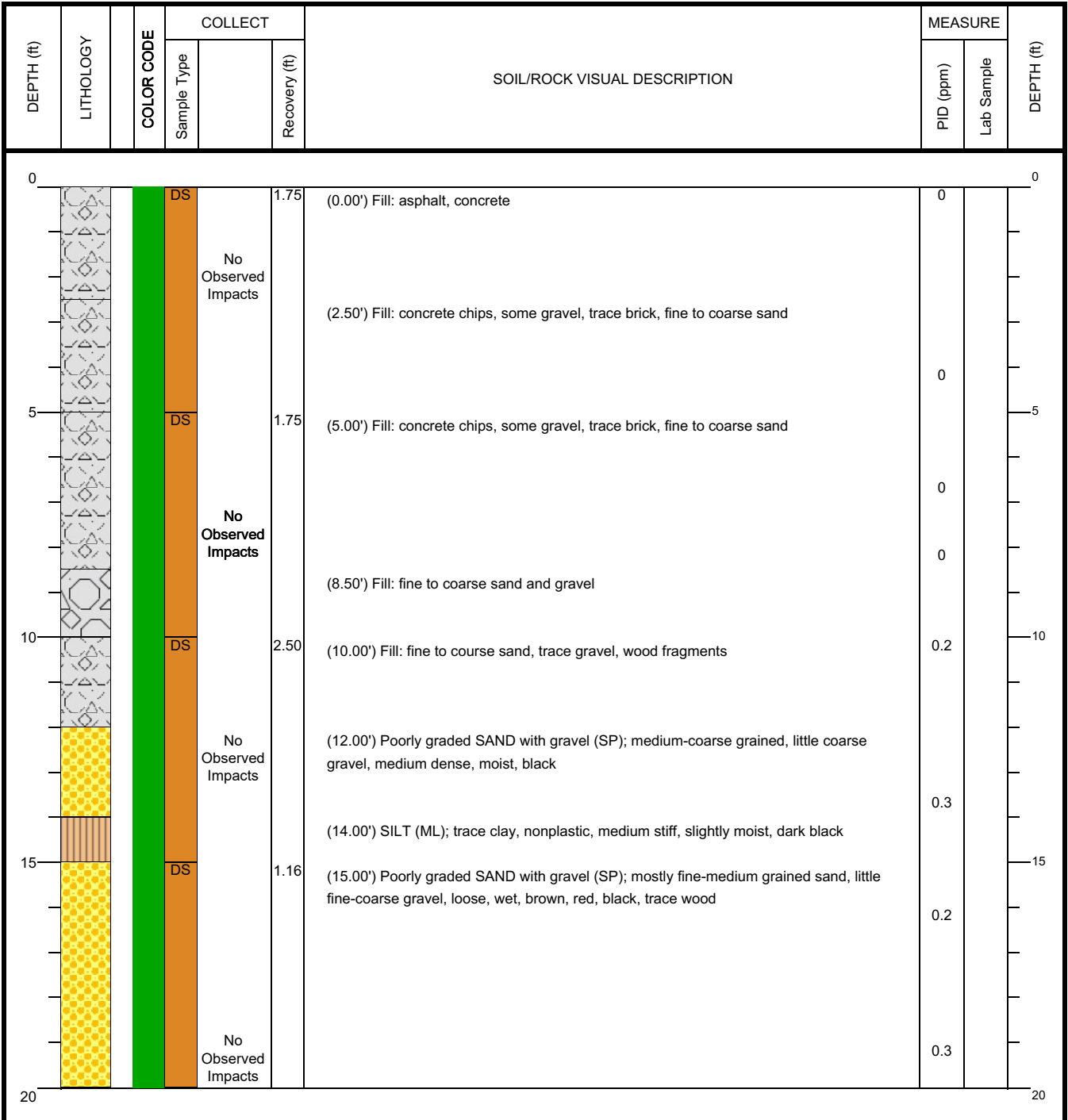
NOTES:




vEktor consultants			Client: 2201 Union LLC Project: 450 Union Address: 450 Union Street, Brooklyn, NY			PRELIMINARY BORING LOG Boring No. DB-8 Page: 3 of 3		
Drilling Start Date: 6/16/2023 Drilling End Date: 6/16/2023 Drilling Company: Costal Environmental Solutions Drilling Method: Sonic Drilling Equipment: CRS XL 140 DUO Driller: Patrick Slavin Logged By: Peter Rathsack						Boring Depth (ft): 50 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	Recovery (ft)		PID (ppm)	Lab Sample	
40			DS		(40.00') Poorly graded SAND with gravel (SP); fine-coarse grained, little fine-coarse gravel, loose, moist, gray			40
				No Observed Impacts				
45			DS		(45.00') Fat CLAY (CH); little fine-coarse gravel, some fine-coarse sand, medium plasticity, stiff, slightly moist, black and brown			45
				No Observed Impacts				
50					(47.50') Poorly graded SAND (SP); fine-coarse grained, trace fine-coarse gravel, little clay, medium dense, moist, light brown			50
					(50.00') Boring terminated			
55								55
60								60
NOTES:								

<div> <div>vEktor consultants</div> </div>	Client: 2201 Union LLC	PRELIMINARY BORING LOG
	Project: 450 Union	Boring No. DB-11
	Address: 450 Union Street, Brooklyn, NY	Page: 1 of 3

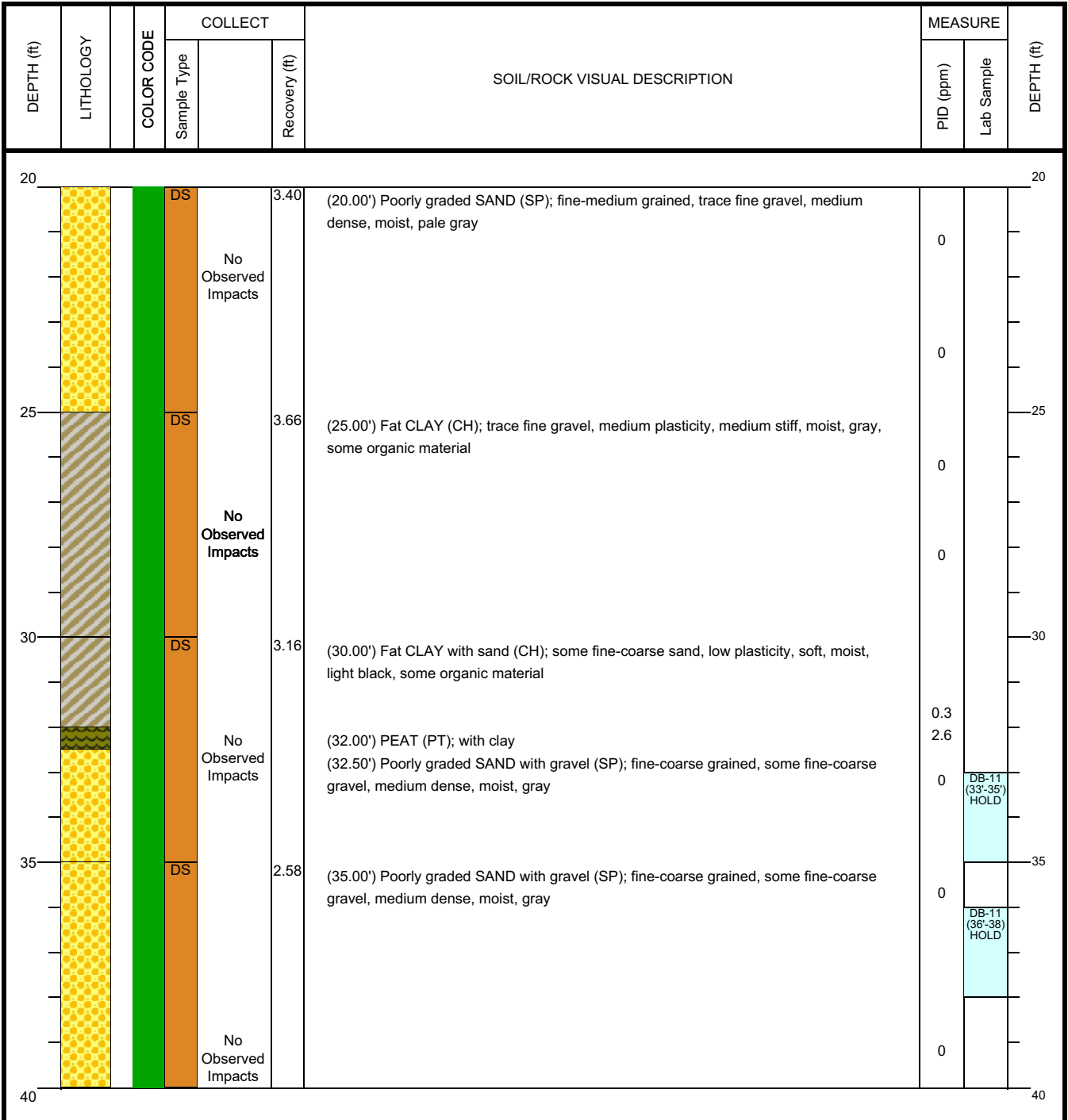
Drilling Start Date: 6/16/2023 Drilling End Date: 6/16/2023 Drilling Company: Costal Environmental Solutions Drilling Method: Sonic Drilling Equipment: CRS XL 140 DUO Driller: Patrick Slavin Logged By: Peter Rathsack	Boring Depth (ft): 50 Boring Diameter (in): 4.00 Sampling Method(s): DS - Dedicated Plastic Sonic Sleeve
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NOTES:

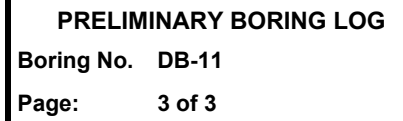
	Client: 2201 Union LLC	<b>PRELIMINARY BORING LOG</b> Boring No. DB-11 Page: 2 of 3
	Project: 450 Union	
	Address: 450 Union Street, Brooklyn, NY	

Drilling Start Date: <b>6/16/2023</b> Drilling End Date: <b>6/16/2023</b> Drilling Company: <b>Costal Environmental Solutions</b> Drilling Method: <b>Sonic</b> Drilling Equipment: <b>CRS XL 140 DUO</b> Driller: <b>Patrick Slavin</b> Logged By: <b>Peter Rathsack</b>	Boring Depth (ft): <b>50</b> Boring Diameter (in): <b>4.00</b> Sampling Method(s): <b>DS - Dedicated Plastic Sonic Sleeve</b>
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NOTES:



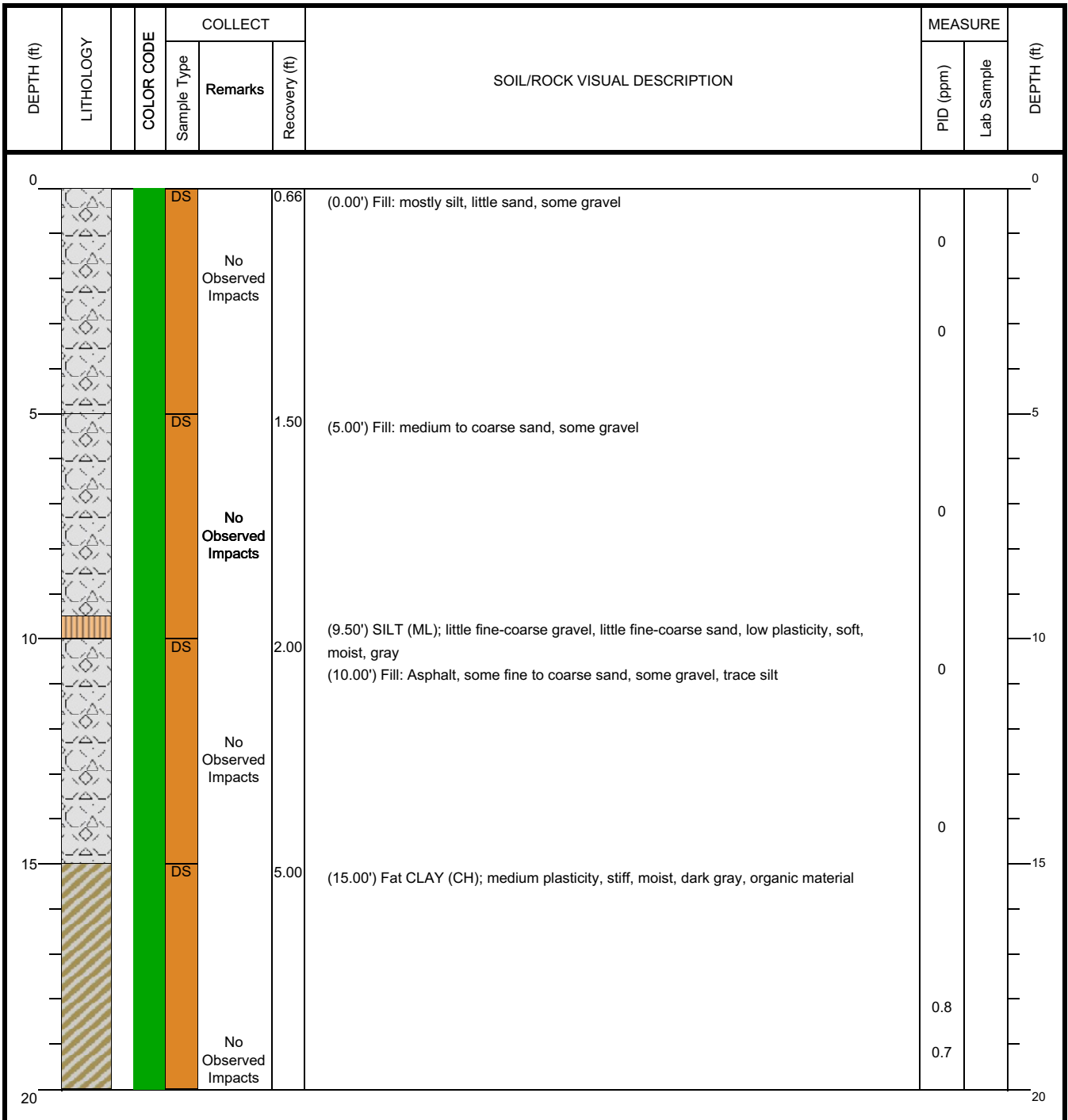


Boring Depth (ft):	50
Boring Diameter (in):	4.00
Sampling Method(s):	DS - Dedicated Plastic Sonic Sleeve


NOTES:

	Client:	2201 Union LLC	<b>PRELIMINARY BORING LOG</b>  Boring No. DB-12  Page: 1 of 3
	Project:	450 Union	
	Address:	450 Union Street, Brooklyn, NY	

Drilling Start Date: 6/16/2023 Drilling End Date: 6/16/2023 Drilling Company: Costal Environmental Solutions Drilling Method: Sonic Drilling Equipment: CRS XL 140 DUO Driller: Patrick Slavin Logged By: Peter Rathack	Boring Depth (ft): 50 Boring Diameter (in): 4.00 Sampling Method(s): DS - Dedicated Plastic Sonic Sleeve
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NOTES:


	Client:	2201 Union LLC	<b>PRELIMINARY BORING LOG</b>  Boring No. DB-12  Page: 2 of 3
	Project:	450 Union	
	Address:	450 Union Street, Brooklyn, NY	

Drilling Start Date: <b>6/16/2023</b> Drilling End Date: <b>6/16/2023</b> Drilling Company: <b>Costal Environmental Solutions</b> Drilling Method: <b>Sonic</b> Drilling Equipment: <b>CRS XL 140 DUO</b> Driller: <b>Patrick Slavin</b> Logged By: <b>Peter Rathsack</b>	Boring Depth (ft): <b>50</b> Boring Diameter (in): <b>4.00</b> Sampling Method(s): <b>DS - Dedicated Plastic Sonic Sleeve</b>
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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	3.50	(15.00') Fat CLAY (CH); medium plasticity, stiff, moist, dark gray, organic material	0.4		20
						(23.50') Poorly graded SAND with silt (SP-SM)	0		
25			DS	No Observed Impacts	3.25	(25.00') SILT (ML); little fine-coarse gravel, low plasticity, soft, moist, gray, little organic material	0		25
						(27.00') SILT (ML); some fine sand, medium plasticity, stiff, moist, gray	0		
30			DS	No Observed Impacts	5.00	(30.00') Fat CLAY (CH); few fine-medium sand, little silt, medium plasticity, medium stiff, moist, dark gray	0		30
							0		
35				No Observed Impacts			0		35
							0		
40				No Observed Impacts					40

NOTES:



	Client:	2201 Union LLC	<b>PRELIMINARY BORING LOG</b>  Boring No. DB-12 Page: 3 of 3
	Project:	450 Union	
	Address:	450 Union Street, Brooklyn, NY	

Drilling Start Date: <b>6/16/2023</b> Drilling End Date: <b>6/16/2023</b> Drilling Company: <b>Costal Environmental Solutions</b> Drilling Method: <b>Sonic</b> Drilling Equipment: <b>CRS XL 140 DUO</b> Driller: <b>Patrick Slavin</b> Logged By: <b>Peter Rathsack</b>	Boring Depth (ft): <b>50</b> Boring Diameter (in): <b>4.00</b> Sampling Method(s): <b>DS - Dedicated Plastic Sonic Sleeve</b>
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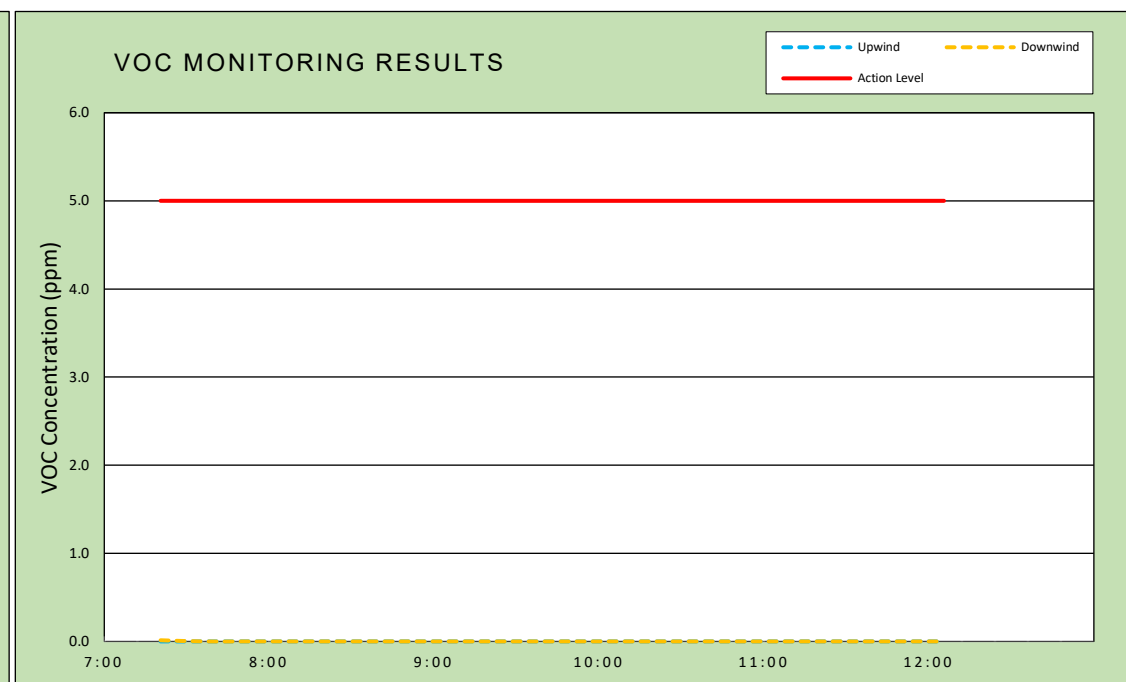
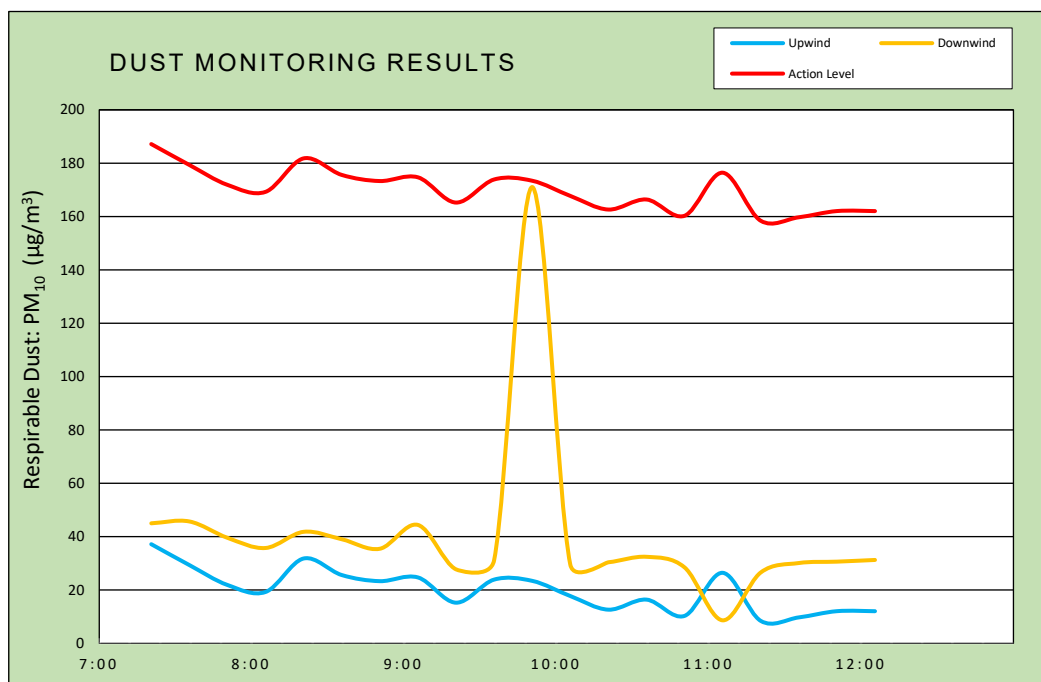
DEPTH (ft)	LITHOLOGY	COLOR CODE	COLLECT			SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
			Sample Type	Remarks	Recovery (ft)		PID (ppm)	Lab Sample	
40			DS	No Observed Impacts	3.20	(40.00') SILT with sand (ML); little fine-medium sand, little clay, low plasticity, soft, moist, gray	0		40
45			DS	No Observed Impacts	2.70	(45.00') Poorly graded SAND (SP); fine-coarse grained, trace fine gravel, little silt, medium dense, moist, gray	0	D-12 (45'-47') HOLD	45
50						(50.00') Boring terminated	0		50
55									55
60									60

NOTES:

vEktor consultants	<b>DAILY AIR MONITORING REPORT</b> <b>450 Union Street</b> <b>Brooklyn, New York</b>					06/16/2023	
						Rev. No. 0	Page 1 of 2
						Project Number:	
						Dust Action Level	150 $\mu\text{g}/\text{m}^3$
37 W. 37th St, 6th Floor - New York, NY						VOC Action Level	5 ppm

Weather Data Range for Work Day		Wind Direction	W	Relative Humidity (%)	34.0 - 73.0	Daily Rain Total (in)	0.00	Readings in the summary table and graphs below are the reported downwind concentrations.
Temperature (°F)	66.0 - 82.0	Wind Speed (MPH)	0.5 - 2.9	Barometer (inHg)	29.70 - 29.80	Avg. Dew Point Temp (°F)	54.2	

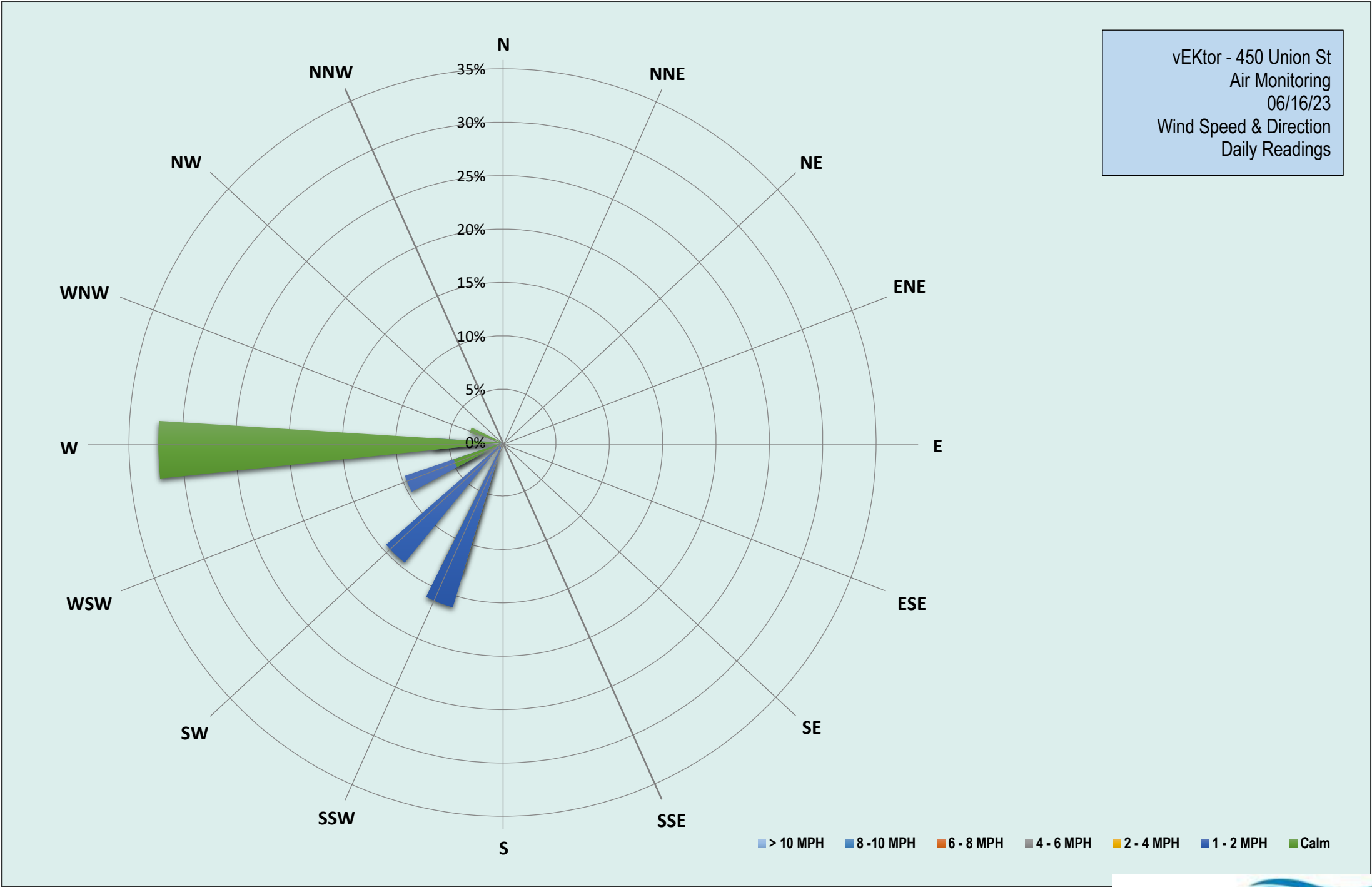
Station Location	Daily Avg. Dust Concentration ( $\mu\text{g}/\text{m}^3$ )	Max 15-Min Dust Concentration ( $\mu\text{g}/\text{m}^3$ )	Time of Max Dust Reading	Daily Avg. VOC Concentration (ppm)	Max 15-Min VOC Concentration (ppm)	Time of Max VOC Reading
Upwind	20.2	62.7	7:10	0.0	0.0	7:07
Downwind	39.6	171.1	9:52	0.0	0.0	7:38



**Air Monitoring Notes:**

**Weather Notes:**

vEKtor - 450 Union St  
Air Monitoring  
06/16/23  
Wind Speed & Direction  
Daily Readings





Friday, June 16, 2023				
Number of Instances Where Downwind Particulates				0
Number of Comparable Data Points =				20
Start Time:				7:21
End Time:				12:06
PARTICULATE DATA				
Upwind		Downwind		Exceeds Particulate Alarm Limit
Time	15-Min Avg Concentration (ug/m <sup>3</sup> )	Time	15-Min Avg Concentration (ug/m <sup>3</sup> )	
7:21	37.2	7:21	45.0	-
7:36	29.3	7:36	45.7	-
7:51	21.9	7:51	39.6	-
8:06	19.3	8:06	35.7	-
8:21	31.8	8:21	41.8	-
8:36	25.6	8:36	39.0	-
8:51	23.3	8:51	35.5	-
9:06	24.7	9:06	44.4	-
9:21	15.2	9:21	27.7	-
9:36	23.9	9:36	31.1	-
9:51	23.4	9:51	171.1	-
10:06	17.7	10:06	29.6	-
10:21	12.6	10:21	30.4	-
10:36	16.4	10:36	32.4	-
10:51	10.3	10:51	28.5	-
11:06	26.4	11:06	8.6	-
11:21	8.4	11:21	26.6	-
11:36	9.7	11:36	30.1	-
11:51	12.1	11:51	30.6	-
12:06	12.0	12:06	31.3	-

Exceedance  
Level

187.2  
179.3  
171.9  
169.3  
181.8  
175.6  
173.3  
174.7  
165.2  
173.9  
173.4  
167.7  
162.6  
166.4  
160.3  
176.4  
158.4  
159.7  
162.1  
162.0

Upwind DustTrak Data Summary		
Daily Maximum	245.8	ug/m <sup>3</sup>
Daily Minimum	7.0	ug/m <sup>3</sup>
Daily Average	20.2	ug/m <sup>3</sup>
Maximum 15-Minute Average	37.2	ug/m <sup>3</sup>

Downwind DustTrak Data Summary		
Daily Maximum	2048.5	ug/m <sup>3</sup>
Daily Minimum	7.8	ug/m <sup>3</sup>
Daily Average	39.6	ug/m <sup>3</sup>
Maximum 15-Minute Average	171.1	ug/m <sup>3</sup>

Friday, June 16, 2023				
Number of Instances Where Downwind VOCs Exceeds				0
Number of Comparable Data Points =				0
Start Time:				7:21
End Time:				12:06
PID DATA				
Upwind		Downwind		Exceeds VOC Alarm Limit
Time	15-Min Avg Concentration (ppm)	Time	15-Min Avg Concentration (ppm)	
7:21	0.0	7:21	0.0	-
7:36	0.0	7:36	0.0	-
7:51	0.0	7:51	0.0	-
8:06	0.0	8:06	0.0	-
8:21	0.0	8:21	0.0	-
8:36	0.0	8:36	0.0	-
8:51	0.0	8:51	0.0	-
9:06	0.0	9:06	0.0	-
9:21	0.0	9:21	0.0	-
9:36	0.0	9:36	0.0	-
9:51	0.0	9:51	0.0	-
10:06	0.0	10:06	0.0	-
10:21	0.0	10:21	0.0	-
10:36	0.0	10:36	0.0	-
10:51	0.0	10:51	0.0	-
11:06	0.0	11:06	0.0	-
11:21	0.0	11:21	0.0	-
11:36	0.0	11:36	0.0	-
11:51	0.0	11:51	0.0	-
12:06	0.0	12:06	0.0	-

Exceedance Level

5.0  
5.0  
5.0  
5.0  
5.0  
5.0  
5.0  
5.0  
5.0  
5.0  
5.0  
5.0  
5.0  
5.0  
5.0  
5.0  
5.0  
5.0  
5.0  
5.0  
5.0

Upwind 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

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