



January 18, 2023

Marnie E. Chancey, E.I.T., Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau B
625 Broadway, 11th Floor
Albany, NY 12233-7020

*RE: Supplemental Remedial Investigation Work Plan
251 Douglas Street, Brooklyn, New York 11217
BCP Site No.: C224367*

Dear Ms. Chancey:

Impact Environmental Engineering and Geology, PLLC (IEEC) completed the New York State Department of Environmental Conservation (NYSDEC) approved Remedial Investigation Work Plan (RIWP) scope of work for 251 Douglas Street, Brooklyn, NY (the Site), between November and December 2022. In accordance with 6NYCRR Part 375-1.8 (e)(1) the remedial investigation must investigate and characterize the nature and extent of contamination at, or emanating from, the Site. The NYSDEC determined that the Remedial Investigation (RI) did not fully delineate the extent of grossly contaminated material (GCM) present beneath the Site that migrated from the off-Site Former Fulton Manufactured Gas Plant (MGP) Site as the Site uses does not indicate activities where coal tar contaminants would have been generated.

During the RI field work, six (6) soil borings, identified as SB-20, SB-21, SB-24, SB-25, SB-28 and GW-8, contained visual and olfactory signs of grossly contaminated material (GCM) consistent with coal tar. Refer to **Attachment 1** for soil boring locations and **Attachment 2** for the soil boring logs for SB-20, SB-21, SB-24, SB-25, SB-28 and GW-8. A letter from the NYSDEC, dated December 22, 2022, stated that "Soil borings shall be advanced 20 feet north, south, east, and west in the horizontal direction from all soil borings where GCM/NAPL has been observed." Refer to **Attachment 3** for the NYSDEC letter. Based on the NYSDEC directive, the following scope of work will be completed at the Site.

The NYSDEC provided the following details related to soil borings for delineation based on the detection of GCM:

- Step off delineation boring SB-24 will be advanced to a minimum of 115 feet below grade (fbg);
- Step off delineation borings for SB-21 & SB-25 will be advanced to a minimum depth of 80 fbg;
- Step off delineation borings for GW-8 will be advanced to a minimum depth of 100 fbg; and
- Step off delineation borings for SB-28 will be advanced to a minimum depth of 40 fbg.

GCM was also detected in soil boring SB-20 from 30 to 55 fbg in the form of coal tar blebs and/or sheen. In accordance with the on NYSDEC directive to advanced delineation soil borings 20 horizontal feet north, south, east

and west from all soil borings where GCM/NAPL has been observed, this scope of work also includes the step off delineation borings for SB-20 to 60 fbg.

IIEG proposes to install, at a minimum sixteen (16) borings on-Site to fully delineate the horizontal extent of coal tar contamination that has migrated from the off-site source. There are restrictions to the advancement of the delineation borings at the following locations:

- Delineation to the west of SB-20 would be off-Site, as such, this boring will be at the western property boundary;
- Delineation to the north of SB-25 by 20 feet to the north cannot be completed due to an existing building;
- Delineation to the north and east of SB-28 by 20 feet cannot be completed as to the north is off-Site and a building is located to the east; and
- Delineation to the north of GW-8 to the south would be off-Site.

Final soil boring depths will be determined based on field observations of GCM/NAPL using *Field Descriptions of Samples for Former Manufactured Gas Plant (MGP) Sites*, provided by the NYSDEC. If GCM/NAPL is not observed at the minimum required depth, no further advancement of the boring is required. If GCM/NAPL is observed in accordance with the *Field Descriptions of Samples for Former MGP Sites (Attachment 4)*, the borings will be advanced until vertical delineation of GCM/NAPL has been determined. For soil borings where GCM/NAPL has been observed, grab soil samples will be collected at and immediately below each distinct interval of GCM/NAPL and will be analyzed for the full suite TCL/TAL, plus cyanide analytes. If GCM is observed but the presence of NAPL is not readily determined, a shake test will be performed per the *Field Descriptions of Samples for MGP Sites*. All preliminary analytical results and draft soil boring logs will be submitted to the NYSDEC to facilitate review of delineation. Refer to Attachment 1 for the proposed step off delineation soil boring locations.

If GCM/NAPL is identified in step off delineation borings, additional investigation will be required to delineate the full extent of GCM/NAPL. Soil borings shall be advanced 20 feet north, south, east and west in the horizontal direction from soil borings where GCM/NAPL was observed. To ensure vertical delineation of GCM/NAPL, the required supplemental delineation soil borings will be advanced to a minimum depth of where GCM/NAPL was observed in the parent boring. Final soil boring depths will be determined based on field observations of GCM/NAPL using the *Field Descriptions of Samples for Former MGP Sites*. If GCM/NAPL is not observed in the bottom 10 feet of the soil boring and the minimum required depth is achieved, no further advancement of the boring is required. If GCM/NAPL is observed, the boring will be advanced until vertical delineation of GCM/NAPL has been determined, which is a minimum of 10 feet of material without evidence of GCM/NAPL. Delineation will only be determined if soil borings have a minimum recovery of 50%. For soil borings where GCM/NAPL has been observed, soil samples will be collected at and immediately below each distinct interval of GCM/NAPL and will be analyzed for the full suite TCL/TAL, plus cyanide analytes. All preliminary analytical results and draft soil boring logs will be submitted to the NYSDEC to facilitate review of supplemental delineation.

To delineate groundwater contamination associated with GCM/NAPL, monitoring wells will be installed at soil boring locations directly downgradient of where GCM/NAPL is observed. At each location, one monitoring well will be installed and screened at the groundwater interface and a second monitoring well will be installed and screened below the deepest observation of GCM/NAPL. Monitoring wells will be installed in accordance with the NYSDEC *Guidelines on Installation of Overburden Wells (Monitoring Wells) for Environmental Investigations (Attachment 5)*. Any observations of sheen, blebs, free-phase product/tar, staining or coating of the sampling equipment, odor, etc. made during sampling of groundwater will be included in the groundwater sample collection log. If NAPL is observed in these wells at the time of sampling, NAPL thickness will be documented in sampling logs and a sample of NAPL will be collected for TAL VOCs and TAL SVOCs. NAPL will then be removed prior to groundwater sample collection. Groundwater samples will be collected and analyzed for the full suite TCL/TAL, plus cyanide.

A synoptic groundwater elevation gauging event will be performed following the installation and development of groundwater monitoring wells. Monitoring well locations will be surveyed by a licensed surveyor and tied into the NAVD88 datum. Monitoring well construction data, groundwater elevation, and surveyed locations in NAVD88 will be submitted electronically to the NYSDEC EQuIS database. All preliminary analytical results and draft groundwater sampling logs will be submitted to NYSDEC as soon as they are available to facilitate review of delineation. Delineation will only be deemed completed upon receipt of NYSDEC approval.

If NAPL is identified in a soil boring by the presence of saturated material or free phase product, NAPL mobility will be assessed. To assess NAPL mobility, 2" PVC wells will be installed, screened over the impacted interval. The screen must be slotted 0.02-inches. Wells will have a minimum annular space of two inches around the entire monitoring well circumference, have a sand pack a minimum of 2-ft above the top of the monitoring well screen, and have a bentonite seal a minimum of 2-ft thick. A minimum of a five (5) foot sump will be installed below the screened interval. Wells will be monitored no sooner than 7 days post development for NAPL. Any observations of sheen, blebs, free-phase product, staining or coating of the sampling equipment, odor, etc. that are made during the sampling of groundwater will be included in a log. Monitoring well locations will be surveyed by a licensed surveyor and ties into the NAVD88 datum. Monitoring well construction data, and surveyed locations in NAVD88 will be submitted to the NYSDEC EQuIS database. NAPL mobility observations will be submitted to the NYSDEC in draft to facilitate review of the assessment.

Based on the findings of the Supplemental Remedial Investigation and NAPL mobility assessment, in areas where significant amounts of fill will be placed to raise the grade and/or building construction may result in significant loading and/or vibration to the subsurface, the NYSDEC may require NAPL monitoring (and provisions for NAPL collection and removal) throughout and beyond development to ensure NAPL isn't mobilized, nor migrates off-site. The mobility assessment will only be deemed completed upon receipt of NYSDEC concurrence and approval.


All work and sampling will be completed according to the approved *Remedial Investigation Work Plan, Quality Assurance Project Plan*, and the *Standard Operating Procedure (SOP) for Decontamination of Field Equipment and Vehicles that Enter/Exit the Site*. (**Attachment 6**). Procedures for containing all decontamination fluids from equipment as well as the well development groundwater, will be captured, contained and treated as investigation derived waste (IDW). Trucks and vehicles that “come into contact with impacted materials” during supplemental RI activities and the remedial action will be decontaminated on-site and debris and decontamination water will be captured, contained, and be treated as IDW.

The *Community Air Monitoring Plan (CAMP)* will be implemented during all ground intrusive work. The NYSDEC will be notified immediately of any exceedances. CAMP data will be included in daily field reports submitted to the NYSDEC project manager by noon the following day for this Supplemental Remedial Investigation. Refer to **Attachment 7** for CAMP monitoring details.

Please contact IEEG at (631) 269-8800 if you have questions or comments regarding this matter.

Sincerely,

IMPACT ENVIRONMENTAL ENGINEERING AND GEOLOGY, PLLC



Juliana de la Fuente, PG
Senior Project Manager

Enclosure

H. Dudek, C. Maycock, J. Andaloro – NYSDEC
M. Bogin, Sive Paget Riesel
P. Caporaso, Tavros Holdings LLC

Attachment 1

Soil Boring Location Map for the Delineation of Contamination From Off-Site Former Fulton MGP

Supplemental Remedial Investigation Report Work Plan
NYSDEC BCP #C224367



IMPACT ENVIRONMENTAL
170 Keyland Court
Bohemia, New York 11716
TEL: (631) 268-8800
FAX: (631) 269-1599

BUTLER STREET

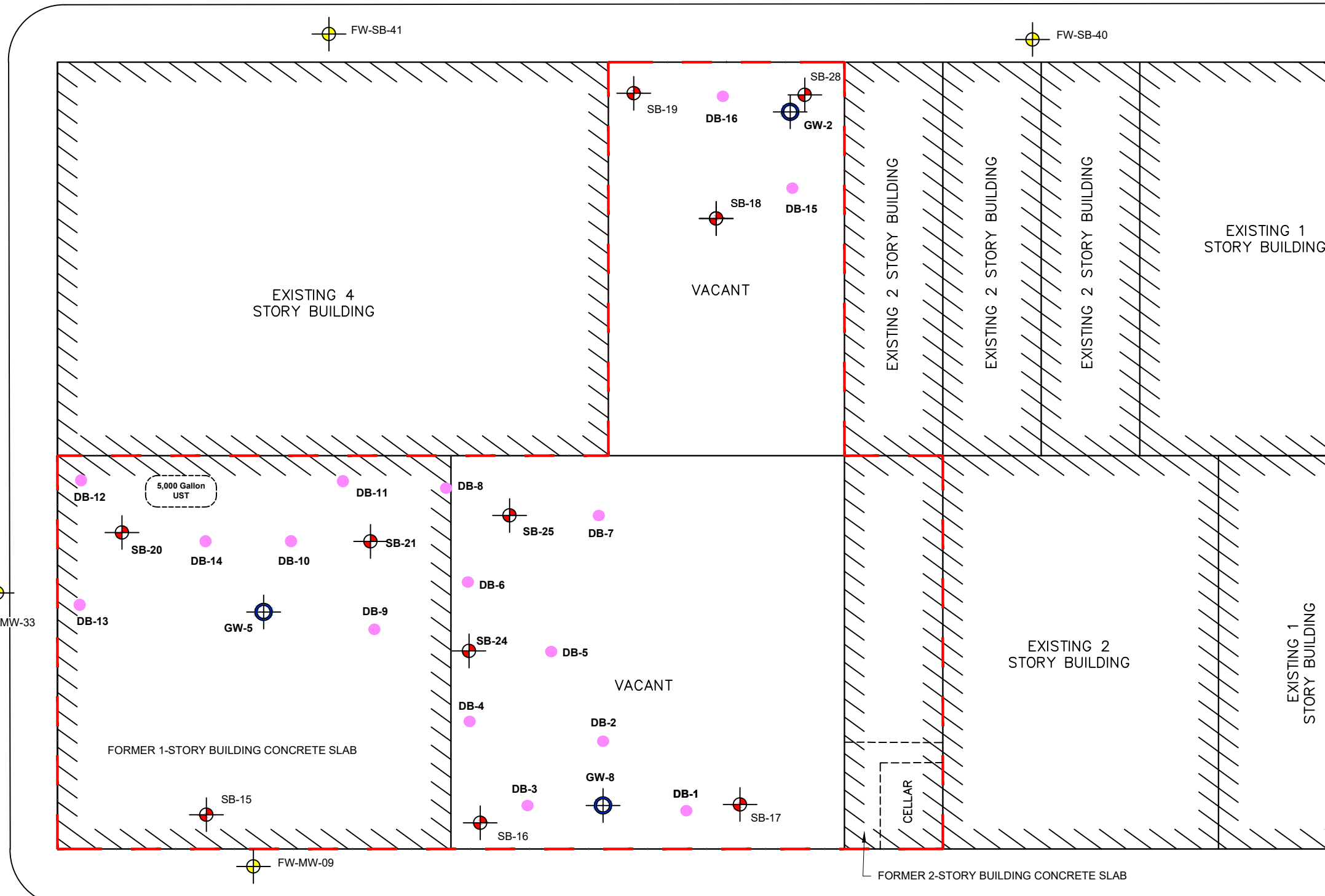


LEGEND

- PROPERTY LINE
- IEC SOIL BORING LOCATION
- OFF-SITE GEI OR USEPA SOIL BORING LOCATION
- IEC GROUNDWATER WELL LOCATION
- PROPOSED GCM DELINEATION BORING LOCATION

NOTES:

NEVINS STREET



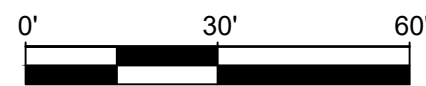
DELINEATION OF CONTAMINATION
MIGRATING FROM OFF-SITE
FORMER FULTON MGP

251 Douglas Street
Brooklyn, New York

Figure No: 01

PROJECT NO:	13028-01
DESIGNED BY:	AB
DRAWN BY:	AB
CHECKED BY:	DP
DATE:	11/22/2022
SCALE:	1" = 30'
REVISIONS	

DOUGLAS STREET



**IMPACT ENVIRONMENTAL
ENGINEERING AND
GEOLOGY, PLLC**

170 KEYLAND COURT
BOHEMIA, NEW YORK 11716
TEL (631) 269-8800
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Attachment 2

Soil Boring Logs for SB-20, SB-21, SB-24,
SB-25, SB-28 and GW-8

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NYSDEC BCP # C224367



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SOIL BORING LOG

Depth (Feet)		PID (ppmv)	Sample ID	Depth (From To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
1		0.0	SB-20 (0-2) 9:40	0-5	Dry	40"	Fill/SM	0-4: Crushed brick and gravel pieces, brown silty sand 4-5: Dark brown silt with some gravel, petroleum odors	
2		0.0							
3		0.0							
4		997.0							
5		1058.0	SB-20 (4-6) 945	5-10'	Wet	45"	Fill/SM	Gray-dark brown silt with trace clay, petroleum odors	
6		1087.0							
7		568.3							
8		211.4							
9		90.5							
10		87.3							
11		81.7	10-15'	Wet	35"	Fill/SM	Gray silt with gravel, petroleum odors		
12		70.2							
13		40.8							
14		95.0							
15		106.0							
16		905.3							
17		1057.0	15-20'	Wet	35"	CL/PT	Gray clay with root fragments and black organic matter, sulfur odor		
18		1283.0							
19		2431.0							
20		3400.0							
21		15000+	20-25'	Wet	45"	CL/PL	20-23 Organic matter, with abundant roots, sulfur odor 23-25: Gray homogenous clay		
22		15000+							
23		15000+							
24		175.0							
25		457.0							



Impact Environmental Closures, Inc.
 170 Keyland Court
 Bohemia, NY 11716
 P. (631) 269-8800
 F. (631) 269-1599

Project #: 13928
 Site/Project Name: 251 Douglas Street
 Site Address: 251 Douglas Street
 Weather: Clear, 32
 Geologist: AK

Boring ID:
SB-20
 Total Depth: 100

Start Date: 11/21/22 Drilling Company: PG GW:
 Start Time: 9:35 Driller: Orlando
 Completion Date: 11/22/22 Drill Rig: 7822 DT GPS Coordinates:
 Completion Time: 11:00 Sampler Type/Len: Macro Core

SOIL BORING LOG

Depth (Feet)		PID (ppmv)	Sample ID	Depth (From-To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
25		228.7		25-30"	Wet	60"	CL	Brown to gray clay with trace silt	
26		439.4							
27		289.4							
28		141.3							
29		107.1							
30		347.0		30-35'	Wet	60"	CL/SM	Brown silty clay with coal tar and naphthalene odor	
31		810.0							
32		282.0							
33		191.0							
34		264.0							
35		82.4		35-40'	Wet	60"	SM	Brown silt, fine sand, trace sheen, naphthalene odor	
36		64.8							
37		127.1							
38		201.0							
39		157.0							
40		220.0		40-45'	Wet	60"	SP	Brown fine to medium sand, trace sheen, naphthalene odor	
41		173.7							
42		180.1							
43		137.5							
44		121.2							
45		231.3		45-50'	Wet	60"	SP	Brown fine to medium sand, coal tar blebs, naphthalene odor	
46		178.4							
47		95.3							
48		211.1							
49		142.7							
50									



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Project #: 13928
 Site/Project Name: 251 Douglas Street
 Site Address: 251 Douglas Street
 Weather: Clear, 32
 Geologist: AK

Boring ID:
SB-20
 Total Depth: 100

Start Date: 11/21/22 Drilling Company: PG GW:
 Start Time: 9:35 Driller: Orlando
 Completion Date: 11/22/22 Drill Rig: 7822 DT GPS Coordinates:
 Completion Time: 11:00 Sampler Type/Len: Macro Core

SOIL BORING LOG

Depth (Feet)		PID (ppmv)	Sample ID	Depth (From-To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
50		64.7		50-55'	Wet	60"	SP	brown fine to medium sand, trace sheen, trace naphthalene odor	
51		65.8							
52		58.5							
53		10.6							
54		12.8							
55		223.4		55-60'	Wet	60"	SP	brown fine to medium sand, naphthalene odor	
56		12.7							
57		29.5							
58		6.4							
59		14.9							
60		14.6		60-65'	Wet	60"	SP	brown fine to medium sand	
61		10.3							
62		8.7							
63		3.5							
64		4.1							
65		24.1		65-70'	Wet	60"	SP	brown fine to medium sand	
66		9.7							
67		4.0							
68		1.4							
69		1.0							
70		10.2		70-75'	Wet	60"	SP	brown fine to medium sand	
71		5.5							
72		10.0							
73		3.4							
74		2.7							
75		2.3							
76									




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Project #: 13928
 Site/Project Name: 251 Douglas Street
 Site Address: 251 Douglas Street
 Weather: Clear, 32
 Geologist: AK
 Drilling Company: PG
 Driller: Orlando
 Drill Rig: 7822 DT
 Sampler Type/Len: Macro Core


Boring ID:
SB-20
 Total Depth: 100
 GW:
 GPS Coordinates:

Start Date: 11/21/22
 Start Time: 9:35
 Completion Date: 11/22/22
 Completion Time: 11:00

SOIL BORING LOG

		Impact Environmental Closures, Inc. 170 Keyland Court Bohemia, NY 11716 P. (631) 269-8800 F. (631) 269-1599					Project #: 13928		Boring ID:
							Site/Project Name: 251 Douglas Street		
							Site Address: 251 Douglas Street		
							Weather: Clear, 32		
Start Date: 11/21/22		Drilling Company: PG					Total Depth: 100		
Start Time: 9:35		Driller: Orlando					GW:		
Completion Date: 11/22/22		Drill Rig: 7822 DT					GPS Coordinates:		
Completion Time: 11:00		Sampler Type/Len: Macro Core							
Depth (Feet)	PID (ppmv)	Sample ID	Depth (From To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes	
76	8.1		75-80'	Wet	60"	SP	brown fine to medium sand, trace naphthalene odor		
77	14.6								
78	7.5								
79	2.9								
80	9.2		80-85'	Wet	60"	SP	brown to gray fine to medium sand with some silt, trace naphthalene odor		
81	1.7								
82	1.4								
83	0.6								
84	1.2								
85	3.0		85-90'	Wet	60"	SP	brown to tan fine to medium sand		
86	2.9								
87	1.0								
88	2.7								
89	2.1								
90	1.0		90-95'	Wet	60"	SP	brown to gray fine to medium sand with trace silt		
91	3.0								
92	1.2								
93	2.0								
94	1.1								
95									

SOIL BORING LOG

 Impact Environmental Closures, Inc. 170 Keyland Court Bohemia, NY 11716 P. (631) 269-8800 F. (631) 269-1599		Project #: 13928					Boring ID:	
		Site/Project Name: 251 Douglas Street						
		Site Address: 251 Douglas Street					Total Depth: 100	
		Weather: Clear, 32						
Start Date: 11/21/22					Drilling Company: PG		GW:	
Start Time: 9:35					Driller: Orlando			
Completion Date: 11/22/22					Drill Rig: 7822 DT		GPS Coordinates:	
Completion Time: 11:00					Sampler Type/Len: Macro Core			
Depth (Feet)	PID (ppmv)	Sample ID	Depth (From To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
95	2.9		95-100'	Wet	60"	SP	brown to gray fine to medium sand with trace silt	
96	1.7							
97	0.6							
98	0.3	SB-20 (98-100) 13:30						
99	0.6							
100			End of boring at 100 feet					

TRACE = 1 - 10%

LITTLE = 11 - 20%

SOME = 21 - 35%

AND = 36 - 50 %

SOIL BORING LOG

Depth (Feet)		PID (ppmv)	Sample ID	Depth (From-To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
1		72.6	SB-21 (0-2) 8:40	0-5	Wet	20"	Fill/SM	5" Concrete Brown silty sand with trace gravel	
2		163.7							
3		120.9							
4		103.7							
5		65.4							
6		80.1	SB-21 (9-11) 10:00	5-10'	Wet	45"	Fill/SM	Brown silty sand with trace clay and gravel pieces	
7		14.5							
8		21.8							
9		23.8							
10		25.0	10-15'	Wet	50"	Fill/SM	Gray/dark brown silt with clay and gravel pieces		
11		48.7							
12		22.9							
13		26							
14		21.2							
15		18.4	15-20'	Wet	50"	CL/PL	Gray clay with organic matter, roots		
16		22.8							
17		25							
18		23.2							
19		18.9	20-25'	Wet	6"	SM/CL	Limited recovery. Gray silty clay		
20		17.3							
21		-							
22		-							
23		11.4							
24		-							
25		-							



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Project #: 13928
 Site/Project Name: 251 Douglas Street
 Site Address: 251 Douglas Street
 Weather: Cloudy, 37
 Geologist: AK

Boring ID:
SB-21
 Total Depth: 100'

Start Date: 11/17/22 Drilling Company: PG GW:
 Start Time: 7:30 Driller: Orlando
 Completion Date: Drill Rig: 7822 DT GPS Coordinates:
 Completion Time: Sampler Type/Len: Macro Core

SOIL BORING LOG

Depth (Feet)		PID (ppmv)	Sample ID	Depth (From-To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
25		680	SB-21 (25-27) 10:15	25-30"	Wet	60"	SP	25- 27' Brown medium to coarse sand 27-30' Gray silty sand and clay, naphthalene odor	
26		222.2							
27		85.2							
28		40							
29		28.7							
30		3,056	30-35'	Wet	45"	SP	<u>Coal tar saturated in liner</u> Matrix is Brown fine to medium sand, naphthalene odor		
31		873							
32		1,030							
33		1,300							
34		1,600							
35		2,500	35-40'	Wet	40"	SP	<u>Coal tar saturated liner</u> Matrix is brown to tan fine to medium sand, naphthalene odor		
36		745.7							
37		947.1							
38		873.2							
39		581.6							
40		1,900	40-45'	Wet	60"	SP	Brown to tan fine to medium sand, sheen, naphthalene odor		
41		2,900							
42		10,868							
43		15,000+							
44		1,045							
45		40.3	45-50'	Wet	60"	SP	Brown fine to medium sand, naphthalene odor		
46		54.2							
47		645.1							
48		705							
49		358							
50									




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Project #: 13928
Site/Project Name: 251 Douglas Street
Site Address: 251 Douglas Street
Weather: Cloudy, 37
Geologist: AK


Boring ID:
SB-21
Total Depth: 100'

Start Date: 11/17/22 Drilling Company: PG GW:
Start Time: 7:30 Driller: Orlando
Completion Date: Drill Rig: 7822 DT GPS Coordinates:
Completion Time: Sampler Type/Len: Macro Core


SOIL BORING LOG

 Impact Environmental Closures, Inc. 170 Keyland Court Bohemia, NY 11716 P. (631) 269-8800 F. (631) 269-1599		Project #: 13928					Boring ID:	
		Site/Project Name: 251 Douglas Street						
		Site Address: 251 Douglas Street					Total Depth: 100'	
		Weather: Cloudy, 37						
Geologist: AK					GW:			
Start Date: 11/17/22							Drilling Company: PG	
Start Time: 7:30					Driller: Orlando		GPS Coordinates:	
Completion Date:					Drill Rig: 7822 DT			
Completion Time:					Sampler Type/Len: Macro Core			
Depth (Feet)	PID (ppmv)	Sample ID	Depth (From-To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
50	104.4		50-55'	Wet	60"	SP	Brown fine to medium sand, sheen, naphthalene odor	
51	64							
52	94.6							
53	89.5							
54	81.3							
55	185.4		55-60'	Wet	60"	SP	Brown fine to medium sand, sheen, naphthalene odor	
56	515.7							
57	230							
58	56.4							
59	864							
60	3,337		60-65'	Wet	60"	SP	Brown fine to medium sand, trace silt	
61	2,359							
62	4,222							
63	3,861							
64	2,945							
65	388.3		65-70'	Wet	60"	SP	Brown fine to medium sand, sheen, naphthalene odor	
66	244.5							
67	80							
68	5.5							
69	34.2							
70	152.2		70-75'	Wet	60"	SP	Brown fine to medium sand, sheen, naphthalene odor	
71	16.7							
72	6.8							
73	10.4							
74	12.7							
75								

SOIL BORING LOG

 Impact Environmental Closures, Inc. 170 Keyland Court Bohemia, NY 11716 P. (631) 269-8800 F. (631) 269-1599		Project #: 13928					Boring ID:	
		Site/Project Name: 251 Douglas Street						
		Site Address: 251 Douglas Street					Total Depth: 100'	
		Weather: Cloudy, 37						
Geologist: AK					GPS Coordinates:			
Start Date: 11/17/22							Drilling Company: PG	
Start Time: 7:30					Driller: Orlando			
Completion Date:					Drill Rig: 7822 DT			
Completion Time:					Sampler Type/Len: Macro Core			
Depth (Feet)	PID (ppmv)	Sample ID	Depth (From To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
75	60.2		75-80'	Wet	60"	SP	Brown fine to medium sand, trace sheen, naphthalene odor	
76	138.6							
77	84.7							
78	96.5							
79	104							
80	95		80-85'	Wet	60"	SM	Gray silty sand	
81	56.4							
82	240.8							
83	6							
84	0							
85	72.2		85-90'	Wet	60"	SM	Gray silty sand, trace sheen, naphthalene odor	
86	105							
87	18.6							
88	24.1							
89	3.2							
90	0		90-95'	Wet	20"	SM	Gray silty sand, trace odors	
91	0							
92	0							
93	0							
94	0							
95	0							

SOIL BORING LOG

 Impact Environmental Closures, Inc. 170 Keyland Court Bohemia, NY 11716 P. (631) 269-8800 F. (631) 269-1599		Project #: 13928					Boring ID:	
		Site/Project Name: 251 Douglas Street						
		Site Address: 251 Douglas Street					Total Depth: 100'	
		Weather: Cloudy, 37						
Start Date: 11/17/22					Drilling Company: PG		GW:	
Start Time: 7:30					Driller: Orlando			
Completion Date:					Drill Rig: 7822 DT		GPS Coordinates:	
Completion Time:					Sampler Type/Len: Macro Core			
Depth (Feet)	PID (ppmv)	Sample ID	Depth (From To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
95	0		95-100'	Wet	60"	SM	Gray silty sand	
96	0							
97	0							
98	0							
99	0	SB-21 (98-100)						
100	0	9:50					End of boring at 100 feet	

TRACE = 1 - 10%

LITTLE = 11 - 20%

SOME = 21 - 35%

AND = 36 - 50 %

SOIL BORING LOG

Depth (Feet)		PID (ppmv)	Sample ID	Depth (From To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
1		0.0	SB-21 (0-2) 8:40	0-5	Moist	60"	Fill/SM	Brown to dark brown silt with crushed brick, little gravel, trace sand	SB-21 (0-2") 835
2		0.0							
3		0.0							
4		0.0							
5		0.0							
6		0.0	5-10'	Wet	60"	Fill/SM	5-7': Crushed brick plastic pieces, some gravel 7-9': Brown fine to medium silty sand 9-10': Dark gray silt with trace sand		
7		0.0							
8		0.0							
9		0.0							
10		0.0							
11		0.0	10-15'	Wet	60"	SM/CL/PL	Dark brown silt and organic matter		
12		0.0							
13		0.0							
14		0.0							
15		0.0							
16		0.0	15-20'	Wet	60"	CL/SM/PL	Gray-dark gray clay with silt 19-20': shell pieces, organic matter		
17		0.0							
18		0.0							
19		0.0							
20		0.0							
21		0.0	20-25'	Wet	60"	CL	Gray clay		
22		0.0							
23		0.0							
24		0.0							
25		0.0							



Impact Environmental Closures, Inc.
170 Keyland Court
Bohemia, NY 11716
P. (631) 269-8800
F. (631) 269-1599

Project #: 13928
Site/Project Name: 251 Douglas Street
Site Address: 251 Douglas Street
Weather: Sunny, 45
Geologist: AK

Boring ID:
SB-24
Total Depth: 115'

Start Date: 11/15/22 Drilling Company: PG GW:
Start Time: 11:05 Driller: Orlando
Completion Date: 11/16/22 Drill Rig: 7822 DT GPS Coordinates:
Completion Time: 14:30 Sampler Type/Len: Macro Core

SOIL BORING LOG

Depth (Feet)		PID (ppmv)	Sample ID	Depth (From-To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
25		0.0		25-30"	Wet	60"	CL/SM	Brown to gray clay with some silt	
26		0.0							
27		0.0							
28		0.0							
29		3.6		30-35'	Wet	60"	SM	Brown fine to medium silt with sand	
30		30.8							
31		75.5							
32		134.2							
33		104.3	SB-24 (33-35) 11:50	35-40'	Wet	60"	SP	Gray-light brown fine to medium sand with trace silt, saturated coal tar, naphthalene odor	
34		722.0							
35		85.4							
36		191.6							
37		163.6		40-45'	Wet	60"	SP/SM	Brown fine to medium sand with silt, coal tar in liner, naphthalene odor	
38		397.8							
39		494.4							
40		64.5							
41		165.8		45-50'	Wet	60"	SP/SM	Brown fine to medium sand with silt, trace coal tar in liner, naphthalene odor	
42		340.0							
43		875.0							
44		104.6							
45		94.6		50					
46		64.3							
47		21.4							
48		68.2							
49		55.7							




Impact Environmental Closures, Inc.
 170 Keyland Court
 Bohemia, NY 11716
 P. (631) 269-8800
 F. (631) 269-1599

Project #: 13928
 Site/Project Name: 251 Douglas Street
 Site Address: 251 Douglas Street
 Weather: Sunny, 45
 Geologist: AK


Boring ID:
SB-24
 Total Depth: 115'

Start Date: 11/15/22 Drilling Company: PG GW:
 Start Time: 11:05 Driller: Orlando
 Completion Date: 11/16/22 Drill Rig: 7822 DT GPS Coordinates:
 Completion Time: 14:30 Sampler Type/Len: Macro Core


SOIL BORING LOG

 Impact Environmental Closures, Inc. 170 Keyland Court Bohemia, NY 11716 P. (631) 269-8800 F. (631) 269-1599		Project #: 13928					Boring ID:	
		Site/Project Name: 251 Douglas Street						
		Site Address: 251 Douglas Street					Total Depth: 115'	
		Weather: Sunny, 45						
Geologist: AK					GW:			
Start Date: 11/15/22					Drilling Company: PG			
Start Time: 11:05					Driller: Orlando			
Completion Date: 11/16/22					Drill Rig: 7822 DT			
Completion Time: 14:30					GPS Coordinates:			
Sampler Type/Len: Macro Core								
Depth (Feet)	PID (ppmv)	Sample ID	Depth (From To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
50	12.5		50-55'	Wet	60"	SP/SM	Brown fine to medium sand with silt	
51	11.8							
52	15.2							
53	17.0							
54	1.5							
55	171.5		55-60'	Wet	60"	SP	Brown fine to medium sand	
56	131.7							
57	104.2							
58	98.5							
59	251.8							
60	305.1		60-65'	Wet	60"	SP	Brown fine to medium sand, trace silt, sheen, naphthalene odor	
61	485.7							
62	349.9							
63	311.2							
64	51.5							
65	47.1		65-70'	Wet	60"	SP	Brown fine to medium sand, trace silt, naphthalene odor	
66	87.9							
67	95.0							
68	107.3							
69	263.4							
70	364.8		70-75'	Wet	60"	SP	Brown fine to medium sand, trace silt, coal tar blebs, naphthalene odor	
71	532.7							
72	408.2							
73	371.3							
74	435.5							
75								

SOIL BORING LOG

 Impact Environmental Closures, Inc. 170 Keyland Court Bohemia, NY 11716 P. (631) 269-8800 F. (631) 269-1599		Project #: 13928					Boring ID:	
		Site/Project Name: 251 Douglas Street						
		Site Address: 251 Douglas Street					Total Depth: 115'	
		Weather: Sunny, 45						
Geologist: AK					GPS Coordinates:			
Start Date: 11/15/22							Drilling Company: PG	
Start Time: 11:05					Driller: Orlando		GW:	
Completion Date: 11/16/22					Drill Rig: 7822 DT		GPS Coordinates:	
Completion Time: 14:30					Sampler Type/Len: Macro Core			
Depth (Feet)	PID (ppmv)	Sample ID	Depth (From To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
75	454.3		75-80'	Wet	60"	SP	Brown fine to medium sand, sheen **product coated on the outside of the liner**	
76	330.6							
77	374.5							
78	216.4							
79	280.7							
80	727.0		80-85'	Wet	60"	SP	Brown fine to medium sand, sheen, naphthalene odor	
81	219.4							
82	100.1							
83	115.3							
84	99.4							
85	35.7		85-90'	Wet	60"	SP	Light brown fine to medium sand	
86	33.5							
87	41.2							
88	54.6							
89	36.0							
90	40.1		90-95'	Wet	60"	SP	Light brown fine to medium sand	
91	285.0							
92	82.5							
93	35.6							
94	45.3							
95								

SOIL BORING LOG

		Impact Environmental Closures, Inc. 170 Keyland Court Bohemia, NY 11716 P. (631) 269-8800 F. (631) 269-1599					Project #: 13928		Boring ID:
							Site/Project Name: 251 Douglas Street		
							Site Address: 251 Douglas Street		
							Weather: Sunny, 45		
Start Date: 11/15/22		Drilling Company: PG					Total Depth: 115'		
Start Time: 11:05		Driller: Orlando					GW:		
Completion Date: 11/16/22		Drill Rig: 7822 DT					GPS Coordinates:		
Completion Time: 14:30		Sampler Type/Len: Macro Core							
Depth (Feet)	PID (ppmv)	Sample ID	Depth (From To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes	
95	45.7		95-100'	Wet	60"	SP	Light brown fine to medium sand, sheen, naphthalene odor		
96	80.9								
97	150.3								
98	67.3								
99	70.4								
100	254.0		100-105'	Wet	60"	SP	Brown fine to coarse sand, sheen, naphthalene odor		
101	21.8								
102	32.7								
103	23.5								
104	14.3								
105	*		105-110'	Wet	60"	SP	Brown fine to coarse sand	*no pid readings where saturated with water	
106	*								
107	*								
108	5.0								
109	0.0								
110	*		110-115'	Wet	60"	SP	Brown fine to coarse sand	*no pid readings where saturated with water	
111	*								
112	13.0								
113	15.0	SB-24 (113-115) 14:30							
114	25.0								
115							End of boring @ 115 Feet		


TRACE = 1 - 10%

LITTLE = 11 - 20%

SOME = 21 - 35%

AND = 36 - 50 %

SOIL BORING LOG

 Impact Environmental Closures, Inc. 170 Keyland Court Bohemia, NY 11716 P. (631) 269-8800 F. (631) 269-1599		Project #: 13928					Boring ID:	
		Site/Project Name: 251 Douglas Street						
		Site Address: 251 Douglas Street					Total Depth: 98	
		Weather: Sunny, 41						
Geologist: AK					GPS Coordinates:			
Start Date: 11/14/22							Drilling Company: PG	
Start Time: 9:00					Driller: Orlando			
Completion Date: 11/15/22					Drill Rig: 7822 DT			
Completion Time: 10:30					Sampler Type/Len: Macro Core			
Depth (Feet)	PID (ppmv)	Sample ID	Depth (From To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
1	0	SB-25 (0-2) 9:55	0-5	Moist	60"	Fill/SM	5" Gravel fill Brown-dark brown silty sand with trace gravel and crushed brick	SB-25 (0-2") 9:45
2	0							
3	0							
4	0							
5	0							
6	0		5-10'	Wet	60"	Fill/SM	Brown silty sand with trace to little clay 8-10' compact silt with trace crushed brick	
7	0							
8	0							
9	0							
10	0							
11	0		10-15'	Wet	60"	Fill/SM/CL	10-12': Brown silt with clay 12-15': Gray to dark brown silt with trace clay, some gravel 14.5-15': Dark brown organic silty clay with wood pieces	
12	0							
13	0							
14	0							
15	0							
16	0		15-20'	Wet	60"	SM/CL	Gray silt with some clay, transitions to gray clay	
17	0							
18	0							
19	0							
20	0							
21	0		20-25'	Wet	60"	CL	Gray homogeneous clay	
22	0							
23	0							
24	0							
25	0							

SOIL BORING LOG

Depth (Feet)		PID (ppmv)	Sample ID	Depth (From-To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
25		0		25-30"	Wet	60"	CL/SP	Gray clay with silt 29-30' Gray fine to medium sand	
26		0							
27		0							
28		0							
29		0							
30		84		30-35'	Wet	60"	CL	30-32': Gray clay with silt and sand Gray clay with some coal tar, naphthalene odor	
31		220							
32		112							
33		280	SB-25 (33-35) 11:00						
34		161							
35		134		35-40'	Wet	60"	CL	Saturated coal tar in a gray clay/silt matrix, odors	
36		230							
37		217							
38		191							
39		364							
40		*		40-45'	Wet	60"	SM/CL	Gray clay and silt, sheen and trace coal tar, naphthalene odor	*no PID readings, liner saturated with water
41		*							
42		532							
43		306							
44		311							
45		*		45-50'	Wet	60"	SM/CL	Gray brown clay and silt	*no PID readings, liner saturated with water
46		431							
47		60.7							
48		4.3							
49		5							
50									



Impact Environmental Closures, Inc.
 170 Keyland Court
 Bohemia, NY 11716
 P. (631) 269-8800
 F. (631) 269-1599

Project #: 13928
 Site/Project Name: 251 Douglas Street
 Site Address: 251 Douglas Street
 Weather: Sunny, 41
 Geologist: AK

Boring ID:
SB-25
 Total Depth: 98

Start Date: 11/14/22
 Start Time: 9:00
 Completion Date: 11/15/22
 Completion Time: 10:30

Drilling Company: PG
 Driller: Orlando
 Drill Rig: 7822 DT
 Sampler Type/Len: Macro Core

GW:
 GPS Coordinates:

SOIL BORING LOG

Depth (Feet)		PID (ppmv)	Sample ID	Depth (From To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
50		79.2		50-55'	Wet	60"	SP/SM	Brown fine to medium sand and silt, sheen, naphthalene odor	
51		52.3							
52		53.4							
53		22.7							
54		21.5							
55		32.6		55-60'	Wet	60"	SP	Gray fine to coarse sand, sheen and naphthalene odor at 55-57	
56		62.7							
57		52.2							
58		183.4							
59		164.1							
60		217		60-65'	Wet	60"	SP	Brown fine to coarse sand, sheen, naphthalene odor	
61		107							
62		499							
63		6							
64		6							
65		756.2		65-70'	Wet	60"	SP	Fully Saturated with coal tar Matrix is fine to coarse sand	
66		308.4							
67		307.6							
68		450.3							
69		411.7							
70		21.8		70-75'	Wet	60"	SP	Brown to tan fine to coarse sand, trace sheen, naphthalene odor	
71		160.4							
72		170.4							
73		33.4							
74		34							
75		32.1							
76									




Impact Environmental Closures, Inc.
 170 Keyland Court
 Bohemia, NY 11716
 P. (631) 269-8800
 F. (631) 269-1599

Project #: 13928
 Site/Project Name: 251 Douglas Street
 Site Address: 251 Douglas Street
 Weather: Sunny, 41
 Geologist: AK


Boring ID:
SB-25
 Total Depth: 98

Start Date: 11/14/22 Drilling Company: PG GW:
 Start Time: 9:00 Driller: Orlando
 Completion Date: 11/15/22 Drill Rig: 7822 DT GPS Coordinates:
 Completion Time: 10:30 Sampler Type/Len: Macro Core

SOIL BORING LOG

 Impact Environmental Closures, Inc. 170 Keyland Court Bohemia, NY 11716 P. (631) 269-8800 F. (631) 269-1599		Project #: 13928					Boring ID:	
		Site/Project Name: 251 Douglas Street						
		Site Address: 251 Douglas Street					Total Depth: 98	
		Weather: Sunny, 41						
Geologist: AK					GW:			
Start Date: 11/14/22							Drilling Company: PG	
Start Time: 9:00					Driller: Orlando		GPS Coordinates:	
Completion Date: 11/15/22					Drill Rig: 7822 DT			
Completion Time: 10:30					Sampler Type/Len: Macro Core			
Depth (Feet)	PID (ppmv)	Sample ID	Depth (From To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
76	27.3		75-80'	Wet	60"	SP	Tan fine to coarse sand, naphthalene odor	
77	75.2							
78	16							
79	1.5							
80	5.1		80-85'	Wet	60"	SP	Tan fine to coarse sand	
81	0.5							
82	0.3							
83	0.1							
84	3.7							
85	1.2		85-90'	Wet	60"	SP	Tan fine to coarse sand	
86	0.9							
87	0							
88	0							
89	0							
90	0		90-95'	Wet	60"	SP	Tan fine to coarse sand	
91	0							
92	0							
93	0							
94	0							
95								

SOIL BORING LOG

 Impact Environmental Closures, Inc. 170 Keyland Court Bohemia, NY 11716 P. (631) 269-8800 F. (631) 269-1599		Project #: 13928					Boring ID:	
		Site/Project Name: 251 Douglas Street						
		Site Address: 251 Douglas Street					Total Depth: 98	
		Weather: Sunny, 41						
Geologist: AK					GPS Coordinates:			
Start Date: 11/14/22		Drilling Company: PG					GW:	
Start Time: 9:00		Driller: Orlando						
Completion Date: 11/15/22		Drill Rig: 7822 DT						
Completion Time: 10:30		Sampler Type/Len: Macro Core						
Depth (Feet)	PID (ppmv)	Sample ID	Depth (From To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
95	0							
96	0	SB-25 (96-98) 10:30	95-98'	Wet	60"	SP	Tan fine to coarse sand, refusal at 98. due to boulder	
97	0							
98	0							
End of boring at 98 feet								

TRACE = 1 - 10%

LITTLE = 11 - 20%

SOME = 21 - 35%

AND = 36 - 50 %

SOIL BORING LOG

Depth (Feet)		PID (ppmv)	Sample ID	Depth (From-To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
1		0.0		0-5'	Moist	40"	Fill/SM	Dark brown sand and crushed brick.	
2		0.0							
3		0.0							
4		0.0							
5		0.0							
6		0.0		5'-9'	Wet	60"	Fill/SM	5'-9': Crushed brick with trace poorly sorted sands 9-10': Gray silty-sand	
7		0.0							
8		0.0							
9		32.1							
10		842.0							
11		1132.0		10'-15'	Wet	50"	CL	Gray clay with trace silt, petroleum odor	
12		82.4							
13		22.4							
14		68.7							
15		22.4							
16		31.6		15'-20'	Wet	40"	Fill/SM	15'-19': Gravel and crushed brick, some gray silt 19'-20': Gray silt and clay	
17		22.7							
18		17.5							
19		13.1							
20		23.1							
21		4.1		20'-25'	Wet	8"	CL	Gray silt and clay. limited recovery	
22		7.7							
23		17.2							
24		4.0							
25		5.3							



Impact Environmental Closures, Inc.
 170 Keyland Court
 Bohemia, NY 11716
 P. (631) 269-8800
 F. (631) 269-1599

Project #: 13928
 Site/Project Name: 251 Douglas
 Site Address: 251 Douglas
 Weather: 37
 Geologist: AK

Boring ID:
SB-28
 Total Depth: 100

Start Date: 11-29-22 Drilling Company: PG GW:
 Start Time: 10:30 Driller: Orlando
 Completion Date: 11-30-33 Drill Rig: 7822 DT GPS Coordinates:
 Completion Time: 3:00 Sampler Type/Len: Dual Tube

SOIL BORING LOG

Depth (Feet)		PID (ppmv)	Sample ID	Depth (From-To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
25		4.8		25'-30'	Moist	50"	CL/PT	25'-26' :Dark gray silt and clay with meadow mat 26'-29':Dark grey compacted clay 29'-30': Light gray compact clay	
26		5.1							
27		13.7							
28		9.4							
29		7.5							
30		10.4		30'-35'	Wet	60"	SP/SM	30'-32': Gray sand and silt 32'-35': Brown moderately compact sand	
31		12.7							
32		31.4							
33		47.5							
34		63.1							
35		273.0		35'-40'	Wet	60"	SP/SM	35'-37.5': Brown fine sand and silt with coal tar blebs and naphalene odors	
36		425.0							
37		250.0					SP	37.5'-40': Brown medium sand, naphthalene odors	
38		175.0	SB-28 (38'-40') at 1135						
39		211.0							
40		4.2		40'-45'	Wet	60'	SP	Brown fine sand, homogenous	
41		8.7							
42		12.3							
43		11.1							
44		5.4							
45		0.0		45'-50'	Wet	60'	SM	Brown silt, homogenous	
46		0.0							
47		0.0							
48		0.0							
49		0.0							
50		0.0							




Impact Environmental Closures, Inc.
 170 Keyland Court
 Bohemia, NY 11716
 P. (631) 269-8800
 F. (631) 269-1599

Project #: 13928
 Site/Project Name: 251 Douglas
 Site Address: 251 Douglas
 Weather: 37
 Geologist: AK


Boring ID:
SB-28
 Total Depth: 100

Start Date: 11-29-22 Drilling Company: PG GW:
 Start Time: 10:30 Driller: Orlando
 Completion Date: 11-30-33 Drill Rig: 7822 DT GPS Coordinates:
 Completion Time: 3:00 Sampler Type/Len: Dual Tube


SOIL BORING LOG

 <p>Impact Environmental Closures, Inc. 170 Keyland Court Bohemia, NY 11716 P. (631) 269-8800 F. (631) 269-1599</p>	Project #: 13928		Boring ID:					
	Site/Project Name: 251 Douglas							
	Site Address: 251 Douglas		SB-28					
	Weather: 37							
	Geologist: AK		Total Depth: 100					
Start Date: 11-29-22		Drilling Company: PG		GW:				
Start Time: 10:30		Driller: Orlando						
Completion Date: 11-30-33		Drill Rig: 7822 DT		GPS Coordinates:				
Completion Time: 3:00		Sampler Type/Len: Dual Tube						
Depth (Feet)	PID (ppmv)	Sample ID	Depth (From-To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
50	0.0		50'-55'	Wet	60'	SM	Brown silt, homogenous.	
51	1.3							
52	2.0							
53	1.0							
54	0.0							
55	0.0		55'-60'	Wet	60'	SP	Brown fine-medium sand, homogenous.	
56	0.0							
57	0.0							
58	0.0							
59	0.0							
60	0.0		60'-65'	Wet	60'	SP	Brown fine-medium sand, homogenous.	
61	0.0							
62	0.0							
63	0.0							
64	0.0							
65	0.0							


SOIL BORING LOG

 <p>Impact Environmental Closures, Inc. 170 Keyland Court Bohemia, NY 11716 P. (631) 269-8800 F. (631) 269-1599</p>		Project #: 13928					Boring ID:	
		Site/Project Name: 251 Douglas						
		Site Address: 251 Douglas					SB-28 Total Depth: 100	
		Weather: 37						
		Geologist: AK						
Start Date: 11-29-22		Drilling Company: PG					GW:	
Start Time: 10:30		Driller: Orlando						
Completion Date: 11-30-33		Drill Rig: 7822 DT					GPS Coordinates:	
Completion Time: 3:00		Sampler Type/Len: Dual Tube						
Depth (Feet)	PID (ppmv)	Sample ID	Depth (From-To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
65	0.0		65'-70'	Wet	60'	SP	Brown fine-medium sand, homogenous.	
66	0.0							
67	0.0							
68	0.0							
69	0.0							
70	0.0		70'-75'	Wet	60'	SP	Brown fine-medium sand, homogenous.	
71	0.1							
72	0.3							
73	0.0							
74	0.0							
75	0.0		75'-80'	Wet	60'	SP	75'-79': Brown fine-medium sand, homogenous.	
76	0.0							
77	0.0							
78	0.0							
79	0.0							
80	0.0						79'-80': Brown fine sand with trace silt.	
81	0.0		80'-85'	Wet	60'	SP	Brown fine sand with silt	
82	0.0							
83	0.0							
84	0.0							
85	0.0							
86	0.0		85'-90'	Wet	60'	SP	Brown fine sand with silt	
87	0.0							
88	0.0							
89	0.0							
90	0.0							


SOIL BORING LOG

 <p>Impact Environmental Closures, Inc. 170 Keyland Court Bohemia, NY 11716 P. (631) 269-8800 F. (631) 269-1599</p>	Project #: 13928		Boring ID:					
	Site/Project Name: 251 Douglas							
	Site Address: 251 Douglas		SB-28					
	Weather: 37							
	Geologist: AK		Total Depth: 100					
Start Date: 11-29-22		Drilling Company: PG		GW:				
Start Time: 10:30		Driller: Orlando						
Completion Date: 11-30-33		Drill Rig: 7822 DT		GPS Coordinates:				
Completion Time: 3:00		Sampler Type/Len: Dual Tube						
Depth (Feet)	PID (ppmv)	Sample ID	Depth (From-To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
91	0.0		90'-95"	Wet	60'	SP	Brown fine sand with silt	
92	0.0							
93	0.0							
94	0.0							
95	0.0							
96	0.0		95'-100'	Wet	60'	SP	Brown fine sand	
97	0.0							
98	0.0							
99	0.0							
##	0.0							
							End of boring at 100 feet	


SOIL BORING LOG

 <p>Impact Environmental Closures, Inc. 170 Keyland Court Bohemia, NY 11716 P. (631) 269-8800 F. (631) 269-1599</p>		Project #: 13928					Boring ID: GW-8	
		Site/Project Name: 351 Douglas						
		Site Address: 351 Douglas					Total Depth: 110	
		Weather: Clear 37 - W 13mph					Geologist: AK	
Start Date: 12-1-22		Drilling Company: PG					GW:	
Start Time: 7:00		Driller: Orlando						
Completion Date: 14:00		Drill Rig: 7822 DT					GPS Coordinates:	
Completion Time: 12/2/2022		Sampler Type/Len: Dual Tube						
Depth (Feet)	PID (ppmv)	Sample ID	Depth (From-To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
1	0.0		0-5'	Dry	50"	Fill/SM	Brown-dark brown silty sand with brick and gravel	
2	0.0							
3	0.0							
4	0.0							
5	0.0							
6	0.0		5-10'	Wet	55"	Fill/SM	Tan to dark brown silty sand with gravel and trace brick	
7	0.0							
8	0.0							
9	0.0							
10	0.0							
11	0.0		10-15'	Wet	30"	SM	Dark gray silty sand with trace gravel	
12	0.0							
13	0.0							
14	0.0							
15	0.0							
16	0.0		15-20'	Wet	60"	CL	Gray clay, low plasticity, homogenous	
17	0.0							
18	0.0							
19	0.0							
20	0.0							
21	0.0		20-25'	Wet	24"	CL	Gray clay with trace sand, homogenous	
22	0.0							
23	0.0							
24	0.0							
25	0.0							


SOIL BORING LOG

 <p>Impact Environmental Closures, Inc. 170 Keyland Court Bohemia, NY 11716 P. (631) 269-8800 F. (631) 269-1599</p>	Project #: 13928						Boring ID: GW-8	
	Site/Project Name: 351 Douglas							
	Site Address: 351 Douglas							
	Weather: Clear 37 - W 13mph							
	Geologist: AK							
Start Date: 12-1-22			Drilling Company: PG			Total Depth: 110		
Start Time: 7:00			Driller: Orlando			GW:		
Completion Date: 14:00			Drill Rig: 7822 DT			GPS Coordinates:		
Completion Time: 12/2/2022			Sampler Type/Len: Dual Tube					
Depth (Feet)	PID (ppmv)	Sample ID	Depth (From-To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
25	0.0		25-30"	Wet	60"	CL	25-28': Gray clay 28'-29': Roots	
26	0.0							
27	0.5							
28	1.2							
29	3.8							
30	-		30-35'	Wet	60"	SP	Brown fine sand, homogeneous	30-33 was too saturated to obtain PID readings
31	-							
32	-							
33	6.8							
34	7.3							
35	650.0		35-40'	Wet	60"	SP/SM	Brown fine sand and silt with coal tar	
36	475.0							
37	173.0							
38	211.0							
39	195.0							
40	774.0		40-45'	Wet	60"	SP	Brown fine sand with coal tar, liner saturated with product from 40'-42'	
41	900.0							
42	890.0							
43	564.0							
44	683.0							
45	25.0		45-50'	Wet	20"	SP	Brown fine sand with silt, trace blebs	
46	47.1							
47	15.3							
48	8.2							
49	12.9							
50								

SOIL BORING LOG

 Impact Environmental Closures, Inc. 170 Keyland Court Bohemia, NY 11716 P. (631) 269-8800 F. (631) 269-1599		Project #: 13928					Boring ID:	
		Site/Project Name: 351 Douglas						
		Site Address: 351 Douglas					GW-8	
		Weather: Clear 37 - W 13mph						
Geologist: AK					Total Depth: 110			
Start Date: 12-1-22					Drilling Company: PG			
Start Time: 7:00					Driller: Orlando			
Completion Date: 14:00					Drill Rig: 7822 DT			
Completion Time: 12/2/2022					Sampler Type/Len: Dual Tube			
GPS Coordinates:								
Depth (Feet)	PID (ppmv)	Sample ID	Depth (From-To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
50	1.5		50-55'	Wet	60"	SP	Fine brown sand	
51	-							
52	0.7							
53	-							
54	2.1							
55	19.8		55-60'	Wet	60"	SP	55'-59': Brown fine sand with sheen and naphthalene odor 59'-60': Some coal tar and trace naphthalene odors	
56	23.7							
57	20.4							
58	30.1							
59	173.2							
60	5.6		60-65'	Wet	60"	SP	Brown fine sand	
61	3.2							
62	4.2							
63	4.7							
64	6.8							
65	45.3		65-70'	Wet	60"	SP	Brown poorly graded sand, trace naphthalene odors	
66	37.6							
67	20.1							
68	23.2							
69	7.8							
70								

SOIL BORING LOG

 <p>Impact Environmental Closures, Inc. 170 Keyland Court Bohemia, NY 11716 P. (631) 269-8800 F. (631) 269-1599</p>	Project #: 13928						Boring ID: GW-8	
	Site/Project Name: 351 Douglas							
	Site Address: 351 Douglas							
	Weather: Clear 37 - W 13mph							
	Geologist: AK						Total Depth: 110	
Start Date: 12-1-22						Drilling Company: PG		
Start Time: 7:00						Driller: Orlando		
Completion Date: 14:00						Drill Rig: 7822 DT		
Completion Time: 12/2/2022						Sampler Type/Len: Dual Tube		
Depth (Feet)	PID (ppmv)	Sample ID	Depth (From-To)	Moisture Content	Recovery (Inches)	USCS Symbol	Soil Description	Notes
95	0.0		95-100'	Wet	60"	SP	Brown fine to medium sand	GW-8 95'-97' @ 11:35
96	1.1							
97	2.3							
98	0.7							
99	2.5							
100	2.1		100-105'	Wet	60"	SP	Brown fine to medium sand	
101	18.2							
102	13.7							
103	7.1							
104	12.8							
105	6.7		105-110'	Wet	60"	SP	Brown coarse sand	
106	0.0							
107	0.1							
108	0.3							
109	0.2							
110							End of boring at 110 feet	

Attachment 3

NYSDEC January 5, 2023 Letter

Supplemental Remedial Investigation Report Work Plan
NYSDEC BCP # C224367



IMPACT ENVIRONMENTAL
170 Keyland Court
Bohemia, New York 11716
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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau B
625 Broadway, 12th Floor, Albany, NY 12233-7016
P: (518) 402-9767 | F: (518) 402-9773
www.dec.ny.gov

January 5, 2022

Transmitted Via E-mail ONLY

Impact Environmental Engineering & Geology, PLLC
Attn: Juliana de la Fuente, P.G.
107 Keyland Court
Bohemia, NY 11716

**Re: Supplemental Remedial Investigation Work Plan
251 Douglass Street
Brooklyn, New York 11217
NYSDEC Site No.: C224367**

Dear Juliana de la Fuente:

The New York state Department of Environmental Conservation (DEC) has reviewed the Supplemental Remedial Investigation Work Plan (SRIWP) dated December 30, 2022, submitted by Impact Environmental Engineering and Geology on behalf of Gowanus Douglass Street LLC. Based on review of the document, the following comments are provided:

1. Pg. 1, first paragraph: Please add the following language before the second sentence of this paragraph: "In accordance with 6NYCRR Part 375-1.8 (e)(1) the remedial investigation must investigate and characterize the nature and extent of contamination at, or emanating from, the site. "
2. Upon internal consultation with senior geologists within DEC, the guidance previously provided has been modified. Please update the SRIWP with the following language:

Delineation of Contamination in Soil:

Soil borings shall be advanced 20 feet north, south, east, and west in the horizontal direction from all soil borings where GCM/NAPL has been observed. To ensure vertical delineation of GCM/NAPL, the new borings will be advanced to a minimum depth of where GCM/NAPL was observed in borings performed in the initial investigation. Soil borings delineating contamination identified in SB-24 will be advanced to a minimum of 115 ft. bgs. Soil borings delineating contamination identified in SB-21 & SB-25 will be advanced to a minimum depth of 80 ft. bgs. Soil boring delineating contamination identified in GW-8 will be advanced to a minimum depth of 100 ft. bgs. Soil boring delineating contamination identified in SB-28 will be advanced to a minimum depth of 40 ft. bgs. For soil borings where GCM/NAPL has been observed, grab soil samples will be collected at and immediately below each distinct interval of GCM/NAPL and will be analyzed for the full suite TCL/TAL, plus cyanide. If GCM is observed but the presence of NAPL is not readily determined, a shake test will be performed per the Field Descriptions of Samples for Former Manufactured Gas Plant (MGP) Sites (attached). Final soil boring depths will

be determined based on field observations of GCM/NAPL using the Field Descriptions of Samples for Former Manufactured Gas Plant (MGP) Sites (attached). If GCM/NAPL is not observed in the bottom 10 feet of the soil boring and the minimum required depth is achieved, no further advancement of the boring is required. If GCM/NAPL is observed in accordance with the Field Descriptions of Samples for Former Manufactured Gas Plant (MGP) Sites (attached), the boring will be advanced until vertical delineation of GCM/NAPL has been completed, which is a minimum of 10 feet of material without evidence of GCM/NAPL. Final vertical delineation can only be determined if soil borings have a minimum recovery of 50%.

If GCM/NAPL is identified in soil borings noted above, additional investigation will be required to delineate the full extent of GCM/NAPL. Soil borings shall be advanced 20 feet north, south, east, and west in the horizontal direction from soil borings where GCM/NAPL was observed. To ensure vertical delineation of GCM/NAPL, the new borings will be advanced to a minimum depth of where GCM/NAPL was observed in the parent boring. Final soil boring depths will be determined based on field observations of GCM/NAPL using the attached *Field Descriptions of Samples for Former Manufactured Gas Plant (MGP) Sites* (attached). If GCM/NAPL is not observed in the final 10 feet of the soil boring and the minimum required depth is achieved, no further advancement of the boring is required. If GCM/NAPL is observed, the boring will be advanced until vertical delineation of GCM/NAPL has been determined, which is a minimum of 10 feet of material without evidence of GCM/NAPL. For soil borings where GCM/NAPL has been observed, soil samples will be collected at and immediately below each distinct interval of GCM/NAPL and will be analyzed for the full suite TCL/TAL, plus cyanide. All preliminary analytical results and draft soil boring logs will be submitted to NYSDEC to facilitate review of delineation. Delineation will only be deemed completed upon receipt of NYSDEC concurrence and approval.

Delineation of Contamination in Groundwater:

To delineate groundwater contamination associated with GCM/NAPL, monitoring wells will be installed at soil boring locations directly downgradient of where GCM/NAPL is observed. At each location, one monitoring wells will be installed and screened at the groundwater interface and a second monitoring well will be installed and screened below the deepest observation of GCM/NAPL. Monitoring wells will be installed in accordance with the NYSDEC Guidelines on Installation of Overburden Wells (Monitoring Wells) for Environmental Investigations (attached). Any observations of sheen, blebs, free-phase product/tar, staining or coating of the sampling equipment, odor, etc. made during sampling of groundwater are to be included in the groundwater sample collection log. If NAPL is observed in the well at the time of sampling, NAPL thickness will be documented in sampling logs and a sample of the NAPL will be collected for TAL VOCs and TAL SVOCs. NAPL will then be removed prior to groundwater sample collection. Groundwater samples will be collected for full suite TCL/TAL, plus cyanide.

A synoptic groundwater elevation gauging event will be performed following the installation and development of groundwater monitoring wells. Monitoring well locations will be surveyed by a licensed surveyor and tied into the NAVD88 datum. Monitoring well construction data, groundwater elevation, and surveyed locations in NAVD88 will be submitted electronically to the NYSDEC EQUIS database. All preliminary analytical results and draft groundwater sampling logs will be submitted to NYSDEC as soon as they are available to facilitate a timely review of delineation. Delineation will only be deemed completed upon receipt of NYSDEC approval.

Non-Aqueous Phase Liquid (NAPL) Mobility Assessment:

If NAPL is identified in a soil boring by the presence of saturated material or free phase product, NAPL mobility will be assessed. To assess NAPL mobility, 2" PVC wells will be installed screened over the impacted interval. The screen must be slotted 0.02-inches. Wells will have minimum annular space of two inches around the entire monitoring well circumference, have a sand pack a minimum of 2-ft above the top of the monitoring well screen, and have a bentonite seal a minimum of 2-ft thick. A minimum of a five (5) foot sump will be installed below the screened interval. Wells will be monitored no sooner than 7 days post development for NAPL. Any observations of sheen, blebs, free-phase product, staining or coating of the sampling equipment, odor, etc. that are made during sampling of groundwater will be included in a log. Monitoring well locations will be surveyed by a licensed surveyor and tied into the NAVD88 datum. Monitoring well construction data, and surveyed locations in NAVD88 will be submitted to the NYSDEC EQUIS database. NAPL mobility observations will be submitted to NYSDEC in draft to facilitate review of assessment. In areas where significant amounts of fill will be placed to raise the grade and/or building construction may result in significant loading and/or vibration to the subsurface, NAPL monitoring (and provisions for NAPL collection and removal) must be implemented throughout and beyond development to ensure NAPL isn't mobilized, nor migrates off-site. The mobility assessment will only be deemed completed upon receipt of NYSDEC concurrence and approval.

3. **Attachment 2:** Understanding the restrictions for the horizontal delineation of SB-20 which does not allow a boring location to the west due to the property boundary, please shift the location of DB-13 west to the property boundary. Should NAPL/GCM be observed at this location, additional horizontal delineation to the south and east will be required using the procedure outlined above in comment 2.
4. **Attachment 6:** Section 3.0 Procedure, please add a sentence that clearly states, "All decontamination fluids will be captured, contained and treated at IDW."
5. Please ensure CAMP is being implemented during all ground intrusive work. The DEC must be notified immediately of any exceedances. CAMP data must be included in daily field reports submitted to the DEC by noon the following day.

Please submit the updated SRIWP to the Department by **January 31st, 2023**. Should you have any questions, please contact me at Marnie.Chancey@dec.ny.gov or 518-402-3262.

Sincerely,



Marnie E. Chancey, E.I.T.
Project Manager
Division of Environmental Remediation

Enclosure: Field Descriptions of Samples for Former Manufactured Gas Plant (MGP) Sites
NYSDEC Guidelines on Installation of Overburden Wells (Monitoring Wells) for
Environmental Investigations

ec:

H. Dudek, NYSDEC

C. Maycock, NYSDEC Region 2

J. O'Connell, NYSDEC Region 2

J. Sullivan, NYSDOH

S. McLaughlin, NYSDOH

D. Posten – Impact Environmental

Attachment 4

Field Descriptions of Samples for Former Manufactured Gas Plant Sites

Supplemental Remedial Investigation Report Work Plan
NYSDEC BCP # C224367



IMPACT ENVIRONMENTAL
170 Keyland Court
Bohemia, New York 11716
TEL: (631) 268-8800
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Field Descriptions of Samples for Former Manufactured Gas Plant (MGP) Sites

SOIL SAMPLE DESCRIPTIONS

It is important that descriptive qualifiers are consistently used to characterize degree and nature of contaminant impacts and visual-manual soil classification. The following presents some examples of descriptive qualifiers.

SOIL LOGGING

- All soils are to be logged using the **Unified Soil Classification** (ASTM D 2488 field descriptions)
- **PID or FID** used to screen all soil samples (Jar Headspace method) – maximum readings should be recorded and included on the logs. The PID/FID should be calibrated daily at a minimum
- **Moisture terms** are: Dry, Moist, and Wet
- **Color terms** - use geotechnical color charts - colors may be combined: e.g. red-brown. Color terms should be used to describe the “natural color” of the sample as opposed to staining caused by contamination (see below)
- **Log of each sample interval** should be prepared as follows:

[Coarse Grained Example] NARROWLY GRADED SAND (SP); mostly fine sand; <5% fines; red-brown, moist, environmental/depositional/geologic descriptions.

[Fine Grained Example] SANDY SILT (ML); heterogeneous till structure, nonplastic, ~30% fine to coarse, subangular sand; ~10% subangular fine gravel, max. size ~ 10 mm; brown; environmental/depositional/geologic descriptions.

- **Representativeness** – Soil logs should include particular notes if the field representative believes that there is a possibility that the soil sample being described is not representative of the interval sampled.
- **Intervals for Description** – if using a 2’ (split spoon) or 4’ (Macro-core) long sampler – the field description should not necessarily be for the entire sample interval. It is important to look for, identify, and describe small-scale units and changes within each sample interval.

DESCRIPTION OF CONTAMINANTS

Visible Contamination Descriptors

- **Sheen** - iridescent petroleum-like sheen. Not to be used to describe a “bacterial sheen”, which can be distinguished by its tendency to break up on the water surface at angles, whereas a petroleum sheen will be continuous and will not break up. A field test for sheen is to put a soil sample in a jar of water and shake the sample (jar shake test), then observe the presence/absence of sheen on the surface of the water in the jar.
- **Stained** - used w/ color (i.e. black or brown stained) to indicate that the soil matrix is stained a color other than the natural (unimpacted) color of the soil.
- **Coated** - soil grains are coated with tar/free product – there is not sufficient free-phase material present to saturate the pore spaces. The degree of coating should be described as light, moderate, or heavy.
- **Blebs** - observed discrete sphericals of tar/free product - but for the most part the soil matrix was not visibly contaminated or saturated. Typically this is residual product. The estimated size and number of blebs should be reported.
- **Saturated** - the entirety of the pore space for a sample is saturated with the tar/free product. Care should be taken to ensure that you’re not observing water saturating the pore spaces if you use this term. Depending on viscosity, tar/free-phase saturated materials may freely drain from a soil sample.
- **Oil** - Used to characterize free and/or residual product that exhibits a distinct fuel oil or diesel fuel like odor; distinctly different from MGP-related odors/impacts.
- **Tar** - Used to describe free and/or residual product that exhibits a distinct “coal tar” type odor (e.g. naphthalene-like odor). Colors of product can be brown, black, reddish-brown, or gold.
- **Solid Tar** - Used to describe product that is solid or semi-solid phase. The magnitude of the observed solid tar should be described (e.g. discrete granules or a solid layer).
- **Purifier Material** - Purifier material is commonly brown/rust or blue/green wood chips or granular material. It is typically associated with a distinctive sulfur-like odor. Other colors may be present.

Olfactory Descriptors

- Use terms such as “tar-like odor” or “naphthalene-like odor” or “fuel oil-like odor” that provide a qualitative description (opinion) as to the possible source of the odor.
- Use modifiers such as strong, moderate, faint to indicate intensity of the observed odor.

DNAPL/LNAPL

- A jar shake test should be performed to identify and determine whether observed tar/free phase product is either denser or lighter than water. In addition, MGP residues can include both light and dense phases - this test can help determine if both light and dense phase materials are present at a particular location.







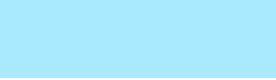


Viscosity of Free-Phase Product – If free-phase product/tar is present a qualitative description of viscosity should be made. Use descriptors such as:

- Highly viscous (e.g. taffy-like)
- Viscous (e.g. No. 6 fuel oil or bunker crude like)
- Low viscosity (e.g. No. 2 fuel oil like)

GROUNDWATER SAMPLING OBSERVATIONS

- Any observations of sheen, blebs, free-phase product/tar, staining or coating of the sampling equipment, odor, etc. that made during sampling of groundwater are to be included in the groundwater sample collection log.

Standard Colors for Reporting MGP Impacts

		RGB Color	Auto Cad Index
	TAR SATURATED	255,0,0	10
	COATED MATERIAL, LENSES	255,0,255	210
	HARDENED TAR	129,64,0	34
	BLEBS, GLOBS, SHEEN	255,191,0	40
	STAINING, ODOR	255,255,0	50
	PETROLEUM IMPACTS SATURATION & SHEENS	0,191,255	140
	PETROLEUM IMPACTS STAINING & ODORS	170,234,255	141
	PURIFIER WASTE AND ODOR	0,0,255	170
	NO OBSERVED IMPACTS	0,165,0	92

Attachment 5

Guidance on Installation of Overburden Wells (Monitoring Wells) for Environmental Investigations

Supplemental Remedial Investigation Report Work Plan
NYSDEC BCP # C224367



IMPACT ENVIRONMENTAL
170 Keyland Court
Bohemia, New York 11716
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GUIDELINES ON INSTALLATION OF OVERBURDEN WELLS (MONITORING WELLS) FOR ENVIRONMENTAL INVESTIGATIONS

Contents

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Introduction:

The New York State Department of Environmental Conservation Division of Environmental Remediation (the Department) utilizes the US EPA *Design and Installation of Monitoring Wells Guidance* and ASTM D5092, *Standard Practice for Design and Installation of Groundwater Monitoring Wells*, as standards for the design and installation of overburden monitoring wells (monitoring wells) for remedial investigations. Using these documents as a basis, the Department has developed the following which serves to standardize the design and construction of monitoring wells so that the environmental data and samples that are collected accurately represent the actual site conditions and can be relied upon when evaluating nature and extent of groundwater contamination and remedial alternatives.

This document does not address other types of wells or shallow groundwater conditions and may not be appropriate for various site-specific conditions or applications. For these other types of groundwater monitoring wells, the Department Project Manager (PM) will require a detailed site-specific plan be submitted in writing for review.

Purpose and Scope:

The purpose of this document is to provide standard construction requirements for the design and installation of groundwater monitoring wells installed during investigations performed pursuant subject to 6-NYCRR Part 375 and conducted under Department's Spills Program. This document is based on, and in general conformance with, US EPA Design and Installation of Monitoring Wells Guidance and ASTM D5092, Standard Practice for Design and Installation of Groundwater Monitoring Wells. The Department's standardization of monitoring well design and construction installation will:

- 1) Improve environmental work plan consistency throughout the regulated community;
- 2) Standardize and streamline the remedial investigation work plan process;
- 3) Limit the threat of contamination migration and surficial infiltration;
- 4) Improve the accuracy and precision of groundwater quality sample results; and
- 5) Provide a fixed monitoring points to ensure groundwater elevations can be accurately gauged with a high degree of reliability.

This document does not address the collection of borehole logging data, soil classification, screen interval placement, soil sampling procedures, drilling health and safety, decontamination, nor monitoring well decommissioning. NYSDEC's DER-10 Guidance and Commissioner's Policy 43 provide information relative to these activities.

Applicability:

Monitoring wells are utilized to access and observe groundwater conditions in the saturated water-bearing zone in unconsolidated material beneath the ground surface, in a specific location, at a known elevation, and over extended periods of time. Data collected from monitoring wells routinely includes the elevation of the water table, water quality parameter measurements, and representative groundwater samples for contaminant analysis. Monitoring wells are often accessed repeatedly throughout the course of an environmental project to obtain data to develop statistical trends and monitor the groundwater.

The following is a partial list of applications for the installation of groundwater monitoring wells in which this document applies:

- Site characterization;
- Remedial investigations;
- Determining the groundwater elevations;
- Determining the presence of non-aqueous phase liquid (NAPL);
- Long-term groundwater elevations and quality monitoring;
- Groundwater protection decision making; and
- Post-remedial Site Management groundwater monitoring.

This document does not apply to the following uses:

- Temporary wells;
- Pre-packed sand pack wells;
- Bedrock investigations;
- Groundwater less than five feet below the ground surface;
- Groundwater sample collection where the static head is above the well screen;

- Multi-cased wells;
- Dense non-aqueous phase liquid (DNAPL) gauging;
- NAPL or groundwater recovery;
- Multi-cased wells;
- Pump tests, bail-down tests, groundwater extraction, or construction dewatering;
- Chemical or biological injections points; and

For the above listed uses, designs shall be in conformance with industry standards and with consultation with the Department Project Manager (PM).

Drilling Considerations:

Several drilling methods are routinely employed in the installation of groundwater monitoring wells for various site conditions; therefore, the method of drilling the borehole will be proposed by the qualified environmental professional and approved by the Department's site PM. A qualified environmental professional, as recognized in New York State Department of Environmental Conservation (NYSDEC) DER-10, can be a: 1) Professional Engineer (PE) 2) Professional Geologist, or 3) recognized Qualified Environmental Professional (QEP) as defined in NYCRR-375-1.2(ak).

The chosen drilling method must produce a borehole sufficient in diameter to allow for the construction of the permanent groundwater monitoring well including a minimum annular space of two inches around the entire monitoring well circumference. For example, installation of a 2-inch monitoring well would require a minimum 6 3/8-inch borehole. The borehole diameter may be increased by the qualified environmental professional based on predicted, observed, or known subsurface soil characteristics (e.g., fine-grained soil) and need for a larger sand pack without approval by the Department.

Vertical over-drilling the borehole will be required to allow for the installation of an approximately six-inch thick sand pack that extends beneath the bottom of the monitoring well screen.

Monitoring well installation procedures may require changes during field activities due to unforeseen subsurface conditions. Deviations from the approved work plan must be discussed with the Department's PM/field representative prior to implementation and must be documented in monitoring well construction logs, boring logs, daily field logs, and in the final report.

Figures 1 and 2 depict typical construction details for flush mounted and stick-up type monitoring wells.

Screen and Casing Pipe:

The inside diameter of the monitoring well screen and riser pipe must be either two-inches or four-inches in diameter and installed straight and plumb to allow for the insertion of equipment for gauging, monitoring, and sampling. It may be necessary to install well centralizers on the screen and riser pipe to ensure a uniform filter pack. A permanent mark will be placed on the north side of the casing as a reference point for horizontal and vertical control and for groundwater measurements. Monitoring well construction materials must be comprised of either schedule 40 PVC, schedule 80 PVC, or stainless steel. Materials must be free of contaminants prior to installation. All joints are to be secured by flush-jointed threads. All caps and end plugs must be secured by either flush or jointed threads. If there is no information regarding the formation in which the well is to be installed, the monitoring well screen slot size shall be factory manufactured and 0.010-inches, unless approved by the Department PM.

Occasionally, during the extraction of the drilling equipment from the borehole, the monitoring well casing may be unintentionally drawn up within the borehole. If this occurs, the groundwater monitoring well should not be forced or driven back into the borehole. Instead, if conditions warrant, the qualified environmental professional may elect to shorten the length of the riser, or the borehole can be re-drilled and the well reset. If the original borehole needs to be abandoned, the abandonment will be in accordance with NYSDEC Commissioners Policy (CP) -43 *Groundwater Monitoring Well Decommissioning Policy*, and a replacement borehole drilled in a different location with approval from the Department's PM.

For monitoring wells designed to intersect the groundwater interface, the top of the monitoring well screen should be installed approximately two to three feet above the observed water table to account for seasonal fluctuations of the water table elevation. The maximum screen length shall be 15 feet and should not penetrate a lower aquitard. The qualified environmental professional will determine the lengths of monitoring well screen and riser along with the placement of the sand filter pack and bentonite seal in the field based on the observed groundwater elevation.

Sand Filter Pack:

A sand filter pack (aka filter pack) will be placed in the annular space around the monitoring well screen to perform as a filter between the formation material and the monitoring well screen. The sand filter pack must be compatible with the screen size; therefore, in the context of this document, the filter pack material must be:

- inert silica sand that is compatible with the formation material;
- has been manufactured as a filter sand; and
- has been certified as chemically clean by the manufacturer.

Prior to installing the monitoring well screen, an approximately six-inch thick bedding layer of sand must be installed in the bottom of the borehole. The annular space will allow for the uniform deposition of monitoring well materials around the screen and riser and for the passage of tremie pipes and monitoring well materials. The sand filter pack must fill the entire annular space over the entire length of the monitoring well screen and extend a minimum of 2-ft above the top of the monitoring well screen. The sand filter pack shall not extend higher than 5-ft below ground surface (bgs) to allow space for placement of the bentonite seal and protective casing.

A larger borehole with a wider sand pack should be considered if high levels of turbidity are expected that may result in the collection of groundwater samples that are not representative of dissolved conditions (i.e., inaccurately elevated metals and semi-volatile concentrations). The Department will allow the qualified environmental professional to advance a larger borehole without review or comment.

At sites where known or suspected contaminants are not compatible with PVC, or where NAPL may not pass through 0.010-inch slotted screen, the qualified environmental professional must consult the Department PM regarding the construction details of the monitoring well and provide proposed alternatives in a work plan for review and approval.

It may be advantageous to place a 6-inch layer of fine-grained sand above the filter pack prior to installing the bentonite seal. This layer improves the seal and prevents the bentonite from migrating into the filter pack well screen zone.

Bentonite Seal:

A bentonite seal will be placed immediately above the sand filter pack. The bentonite seal must be composed of commercially available pellets, granules, or chips and must be a minimum of 2-ft measured immediately after placement, without allowance for swelling. Following placement of the bentonite pellets or chips, water from a public water supply source or a potable private water supply, which has been verified to meet public water supplier standards/maximum contaminant levels for Per- and polyfluoroalkyl substances (PFAS), shall be poured into the annular space to hydrate the bentonite. The bentonite seal shall not be placed higher than 2-ft bgs to allow space for placement of the protective casing with cement or cement-bentonite grout. A minimum of eight hours or the manufacturer's recommended hydration time, whichever is longer, should be allotted for the hydration of the bentonite after placement in the borehole and before the remaining annular space is sealed.

Remaining Annular Space Above the Bentonite Seal:

The annular space above the bentonite seal must be sealed from surface infiltration with a cement-bentonite mixture. On certain occasions when there is 10 or more linear feet of remaining annular space to be sealed, or when the qualified environmental professional determines it is appropriate, a tremie pipe shall be used to install the cement-bentonite mixture. In these instances, installation shall start with the tremie pipe initially located within 1-ft above the top of the bentonite seal. To ensure proper gelling and low permeability, the bentonite grout must have a minimum density of 10 lbs./gallon of water. Water must be from a public water supply source or a potable private water supply, which has been verified to meet public water supplier standards/maximum contaminant levels for Per- and polyfluoroalkyl substances (PFAS). The tremie pipe shall be placed in the annulus between the drilling equipment or temporary steel casing and the riser pipe. Drill casing shall be removed from the borehole as the annular seal is installed to ensure the borehole remains stable. The grout shall be pumped through the tremie pipe to the bottom of the open annulus until a continuous, undiluted column of grout is formed from the bentonite seal to the frost line below the ground surface.

Alternatively, soil cuttings collected during the borehole advancement may be reused to fill the annular space from the top of the bentonite seal to the surface seal provided that the cuttings both: 1) exhibit no detectable photoionization detector (PID) measurements, and 2) are free of grossly contaminated material per NYCRR-375-1.2(u).

Concrete Surface Seal (Pad) and Outer Protective Casing:

At the time the surface seal is installed, a protective steel casing that is at least two-inches larger than the diameter of the monitoring well riser casing shall be installed. The protective casing must also be installed with adequate vertical space to allow for a locking well plug. A concrete surface seal (concrete pad) must then be installed around each monitoring well. Concrete shall be placed in the borehole (on top of the grout) to form a contiguous unit. The design must take into consideration pedestrian and/or vehicular traffic and must be sufficient to last the entire life cycle of the project. For two-inch or four-inch diameter monitoring wells, the Department will require a monitoring well pad that shall be 2-ft X 2-ft X 6-inches. The finished pad will be slightly sloped away from the protective steel casing to reduce the potential for surface water infiltration. In addition, the concrete must meet or exceed the minimum compressive strength required of the surrounding sidewalk flags as per local codes and permits.

The protective steel casing can be either flush mounted or a stick-up design. Flush mounted protective casings will have lids that are bolted in place while stick-up casings will have locking lids. Bollards will be

emplaced to protect against damage, as needed. If the protective casing is flush mounted, a layer of sand should be installed across the bottom of the casing to allow water to drain from around the riser pipe. For stick-up design casings, a small hole should be drilled in the side of the pipe to enable accumulated water to drain. The diameter of the hole should be small enough to discourage wasps from entering.

The materials used in the construction of the seal will be of sufficient quality that the longevity of the concrete and outer protective casing will surpass the likely duration of the project. In instances where these items fail, the Department will require repair or replacement of the monitoring well pad and outer seal for public safety and monitoring well integrity.

Locking Well Plug:

All groundwater monitoring wells shall have chemical resistant gripper plugs that effectively seal the monitoring well by creating a watertight seal. Each well plug shall be outfitted with a lock that prohibits unauthorized access to the monitoring well. The lock shall be in kept good working condition.

Well Development:

Monitoring wells will be developed after the grout seal has sufficiently cured to remove water which may have been introduced during the drilling process and to ensure the collection of representative groundwater samples and water level measurements. Groundwater monitoring wells must be developed in accordance with ASTM D5521. Groundwater monitoring wells shall be developed until the monitoring well has reached equilibrium and turbidity of the purge water is measured to 50 nephelometric turbidity units (NTUs) or less.

(FIGURES ATTACHED)

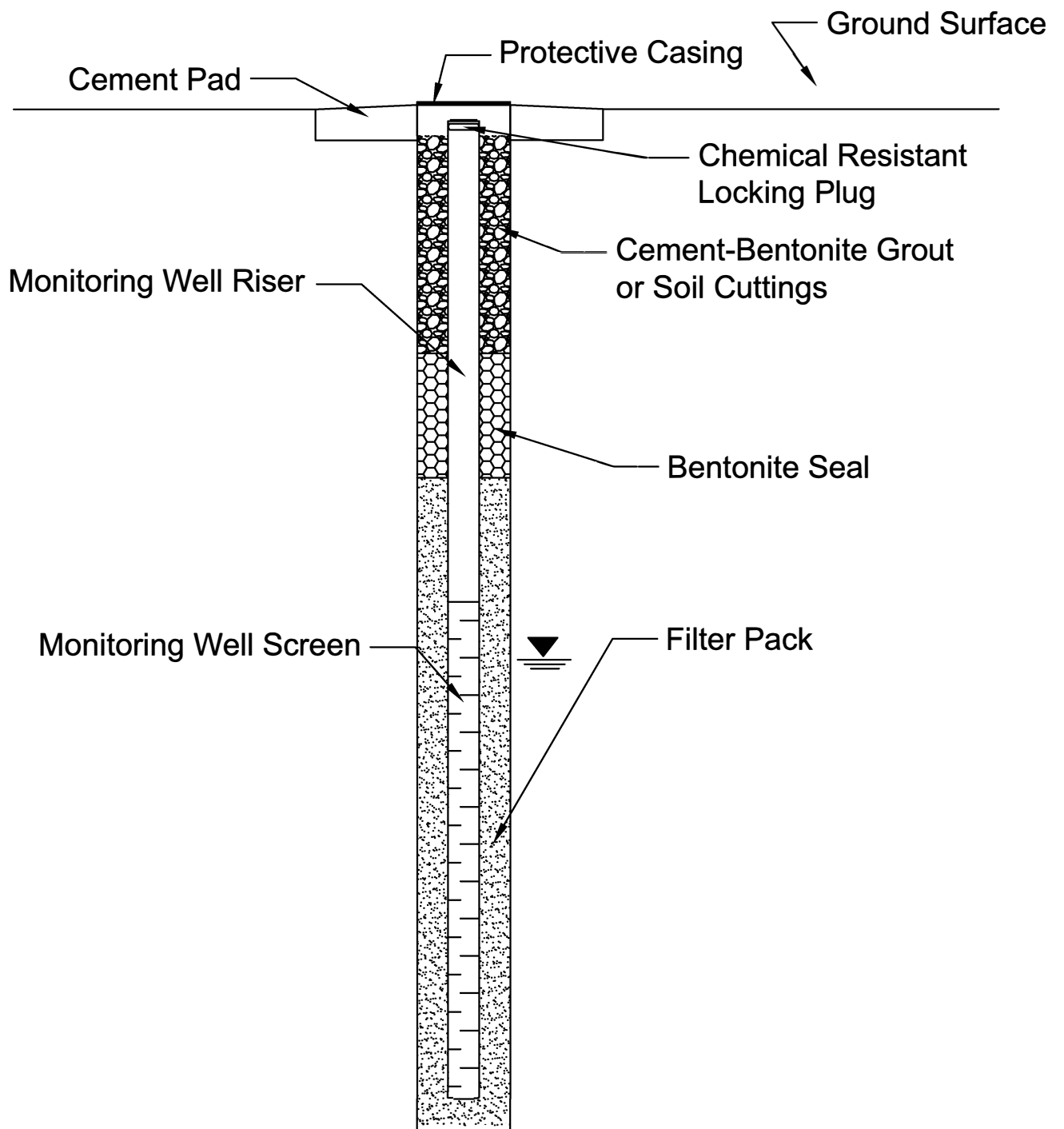


Figure 1: Flush Mounted Monitoring Well

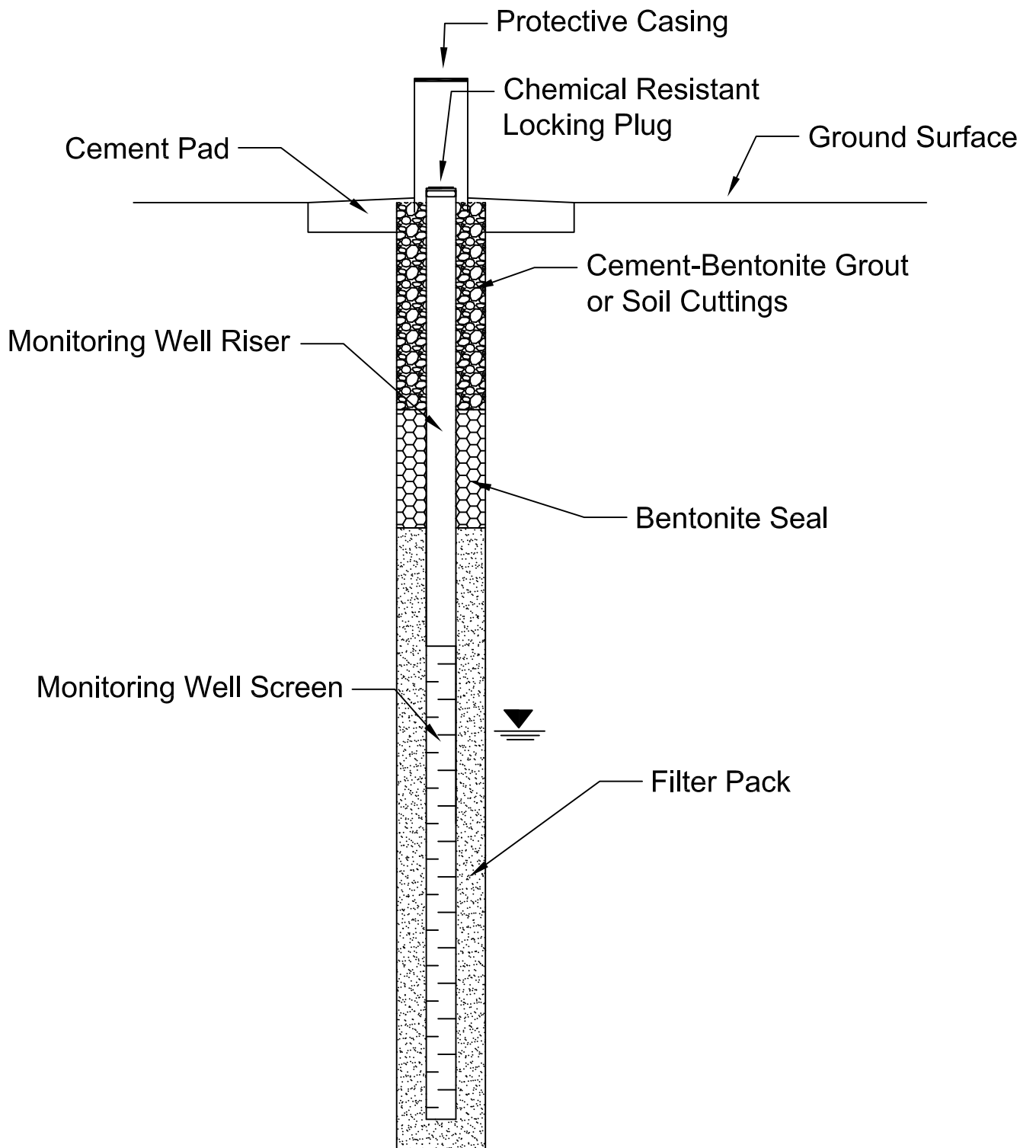


Figure 2: Stick-up Monitoring Well

Attachment 6

Equipment Decontamination and Vehicle Entrance/Exit Standard Operating Procedure

Supplemental Remedial Investigation Report Work Plan
NYSDEC BCP # C224367



IMPACT ENVIRONMENTAL
170 Keyland Court
Bohemia, New York 11716
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EQUIPMENT DECONTAMINATION AND VEHICLE ENTRANCE/EXIT STANDARD OPERATING PROCEDURE

1.0 Purpose

The purpose of this standard operating procedure (SOP) is to provide the step-by-step procedures for field decontamination of environmental sampling equipment and personal protective equipment (PPE). Decontamination of equipment and PPE is designed to ensure that sample cross-contamination, human-health exposure, and contamination transport are minimized.

2.0 Scope

This procedure applies to all IEEG personnel and subcontractors engaged in collecting environmental samples or operating in environments in which hazardous or contaminating substances are expected to be present.

3.0 Procedure

Decontaminate all non-disposable sampling equipment used at the site both before activities begin and after each sample is collected. Decontaminate all drilling and excavation equipment both before activities begin and between each investigation location. Take care that materials and solutions used for decontamination procedures are themselves not hazardous or could potentially contaminate samples (that is, are acids and solvents).

3.1 Decontamination Area

A localized decontamination area for drill rigs and other sampling equipment will be identified on-Site. The decontamination area will be selected so that decontamination fluids and soil wastes can be managed in a controlled area with minimal risk to the surrounding environment. The decontamination area will be large enough to allow temporary storage of cleaned equipment and materials before use, as well as to stage drums of decontamination investigation-derived waste (IDW). Due to the nature of work to be performed and type of equipment required, the decontamination area will be lined with a heavy-gauge polyethylene sheeting (4-mil minimum) and include a collection system designed to capture potential decontamination IDW. Decontamination areas will be laid out in such a way as to prevent overspray while performing equipment and personnel decontamination.

Smaller decontamination tasks, such as surface water and sediment equipment decontamination, may take place at the sampling locations. In this case, all required decontamination supplies, and equipment must be mobilized to the site and smaller decontamination areas for personnel and portable equipment will be provided as necessary. These locations will include basins or tubs to capture decontamination IDW, which will be transferred to larger containers (drums) as necessary.

3.2 Decontamination Equipment

The following is a list of equipment and materials that may be needed to perform decontamination:

- Plastic sheeting/membrane to serve as secondary containment for liquids
- Drill rig mud-pad

- Brushes and flat-bladed scrapers
- Garden-type water sprayers (without oil-lubricated, moving parts)
- High-pressure washer
- Portable steam cleaner
- Sump or collection system for contaminated liquid
- Wash basins and buckets
- Spray and rinse bottles
- Potable water, deionized water, and laboratory-grade detergent (Liquinox, Alconox, or similar)
- Plastic waste bags
- Leak-tight liquid waste containers (55-gallon drums or similar)

3.3 Decontamination Procedures

3.3.2 General Sampling Equipment

Conduct consistent decontamination of sampling equipment to ensure the quality of the samples collected. Decontaminate all equipment that comes into contact with potentially contaminated samples. Disposable equipment intended for one-time use that is factory wrapped generally does not need to be decontaminated before use, unless evidence of contamination is present. Disposable equipment, such as disposable bailers, spoons, TerraCore® or Encore® VOC samplers, is preferred over reusable equipment; use wherever appropriate. Decontaminate sampling equipment, including split-barrel samplers, hand- augers, reusable bailers, spoons, trowels, shovels, and pumps used to collect samples for chemical analyses before each use and before sampling at a new sampling location.

Take the following steps to decontaminate non-dedicated sampling equipment:

- Decontamination personnel will wear the appropriate PPE.
- The sequence of actual decontamination will be as follows:
 1. Remove as much gross contamination (such as pieces of soil) as possible off equipment at the sampling site.
 2. Wash water-resistant equipment thoroughly and vigorously with potable water containing non-phosphate laboratory-grade detergent such as Liquinox, Alconox, or equivalent, and using a bristle brush or similar utensil to remove any remaining residual contamination.
 3. Rinse equipment thoroughly with potable water (1st rinse).
 4. Rinse equipment thoroughly with portable water (2nd rinse).
 5. Air dry at a location where dust or other fugitive contaminants may not contact the sample equipment. Alternatively, wet equipment maybe dried with a clean, disposable paper towel to assist the drying process. All equipment should be dry before reuse.

- If the equipment is not used soon after decontamination, it should be covered or wrapped in new, oil-free aluminum foil or new, unused plastic bags to protect the decontaminated equipment from fugitive contaminants before reuse.
- Store decontaminated equipment at a secure, unexposed location out of the weather and any potential contaminant exposure.
- Wash water or rinsate solutions will be containerized and poured into a 55-gallon drum.

3.3.3 Groundwater Sampling Equipment

Proper decontamination between wells is essential to avoid introducing contaminants from the sampling equipment. For sampling with a submersible, bladder, or similar pump in which mechanisms of the pump come in direct contact with contaminated water, or sampling with a reusable stainless steel bailer, decontaminate the pump or bailer. The following steps will be used for pumps and bailers contaminated with dissolved phase contamination only:

- Wash the exterior of the pump or bailer and any associated cable thoroughly and vigorously with potable water containing non-phosphate laboratory-grade detergent such as Liquinox, Alconox, or equivalent, and using a dedicated wash bristle brush or similar brush.
- Place the pump into a potable water wash basin/reservoir containing non-phosphate laboratory-grade detergent making sure that the pump intake is fully submerged and the pump outlet is allowed to flow directly back into the wash reservoir. Set the pump to a very low flow rate and turn the pump on, allowing the wash water to recirculate through the pump mechanism for a minimum of 5 minutes. Disregard this step for reusable bailers.
- Initially, rinse the pump or bailer by repeating Steps 1 and 2 using potable water, a dedicated rinse bristle brush, and a rinse basin/reservoir containing only potable water (1st rinse).
- Final rinse the pump or bailer by duplicating Step 3 using potable water (2nd rinse).
- Dry off any excess water with a clean, disposable paper towel and allow to air dry at a location where dust or other fugitive contaminants may not contact the sample pump or bailer.
- Wash water collected within the rinse reservoir will be containerized and poured into a 55-gallon drum.

3.3.4 Measurement Devices and Monitoring Equipment

For water quality instruments, oil-water interface indicators, water level indicators, continuous water level dataloggers, and other field instruments that have the potential to come into contact with site media, at a minimum, wash with dilute laboratory-grade detergent (Liquinox or similar) and double rinse with potable and distilled/deionized water before and after each use using a similar procedure as discussed in Section 3.3.2.

3.3.5 Drilling and Subsurface Soil Sampling Equipment

Drilling equipment and associated materials will be decontaminated by the drilling contractor within the decontamination area prior to any drilling operations and between borings. Decontaminate tools used for soil sampling (for example, split spoon samplers) before and between collecting any analytical samples, as outlined in

Section 3.3.2. Thoroughly clean external and internal surfaces of drilling equipment (that is, drill bits, auger, drilling stem, and hand tools) before beginning any drilling operations and between borings using the following basic sequence:

- Remove as much gross contamination as possible off equipment at the sampling site.
- Wash equipment thoroughly and vigorously with high-temperature potable water using a high-pressure washer and/or steam cleaner. A bristle brush is also suggested to remove any persistent gross contamination.
- Rinse equipment twice thoroughly with potable water (1st and 2nd rinse).
- Air dry at a location where dust or other fugitive contaminants may not contact the sample equipment. All equipment should be dry before reuse.
- Store decontaminated equipment at a location away from any potential exposure from fugitive contamination.
- Wash water or rinsate solutions will be collected and poured into a 55-gallon drum.

4.0 Stabilized Construction Entrance(s)

Steps will be taken to ensure that vehicles departing the site will not track soil, fill or debris off-Site. Such actions may include use of temporary asphalt, concrete or stone pads or other aggregate-based egress paths between the Site and the property exit. The aggregate-based pad will be pitched back toward the Site for containment and prevention of water leaving the Site. Measures will be taken to ensure that adjacent roadways will be kept clean of project related soils, fill and debris. An outbound-vehicle inspection station will be set up close to the Site exit. Before exiting the Site, vehicles will be required to stop at the inspection station and will be examined for evidence of contaminated soil on the undercarriage, body, and wheels. Soil and debris will be removed. Brooms, shovels and clean water will be utilized for the removal of soil from vehicles and equipment, as necessary.

5.0 Investigation-Derived Wastes

All decontamination fluids will be captured, contained and treated as investigation derived wastes and will be accumulated in 55-gallon drums and subsequently transported to a waste storage area designated by the client prior to being properly disposed of off-site.

Attachment 7

Community Air Monitoring Plan Supplemental Remedial Investigation Report Work Plan NYSDEC BCP # C224367



IMPACT ENVIRONMENTAL
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TEL: (631) 268-8800
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NYSDEC BROWNFIELD CLEANUP PROGRAM

Community Air Monitoring Plan – BCP # C224367

January 18, 2023

conducted at:

**251 Douglass Street
Brooklyn, New York
County Tax Map Designation: Block 412; Lot 50**

Submitted to:

**Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, New York, 12233-7020**

Prepared For:

**Gowanus Douglass Street LLC
19 West 24th Street, 12th Floor
New York, NY, 10010**

IEC Project # 13928



IMPACT ENVIRONMENTAL | 170 Keyland Court | Bohemia | New York | 11716 | 631.269.8800

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LIST OF ACRONYMS

Acronym	Definition
DER	Division of Environmental Remediation
CAMP	Community Air Monitoring Unit
Mcg/m ³	Micrograms Per Cubic Meter
NYS DEC	New York State Department of Environmental Conservation
NYS DOH	New York State Department of Health
PID	Photoionization Detector
PM-10	Particulate Matter Less Than 10 Micrometers in Size
PPM	Parts Per Million
VOC	Volatile Organic Compound

CERTIFICATION

I, Xin Yuan am a Professional Engineer (PE) as defined in §43-140. I have primary direct responsibility for implementation of the Community Air Management Plan (CAMP) for the (251 Douglass Street, Brooklyn, NY) Site (DEC Site # [C224367](#)).

I certify that the CAMP has a plan for handling the prevention of exposure to the public from potential contaminant releases resulting from on-site investigative or remedial activities.

Xin Yuan, P.E.

Name



Signature

1/18/2023

Date

1 INTRODUCTION

Impact Environmental Closures, Inc (IEC) prepared this Community Air Monitoring Plan (CAMP) to protect the community from any potential airborne releases that could result from field activities associated with construction activities for development (foundation installations, support of excavation, etc.) or remediation activities (remedial investigations or remedial action) at the property located at 251 Douglass Street, Brooklyn, New York, herein referred to as the "Site". This work is being performed under the auspices of the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program, DEC Project # C224367. This document has been prepared in accordance with the NYSDEC Program Policy Division of Environmental Remediation (DER)-10/Technical Guidance for Site Investigation and Remediation, dated May 3, 2010.

The CAMP is intended to protect off-site receptors and those not directly involved with remedial activities from potential airborne contaminant releases that result directly from investigative or remedial activities.

1.1 Objectives

The overall objectives of this document are as follows:

- Prevent exposure to the public from potential contaminant releases resulting from on-site investigative or remedial activities;
- Specify monitoring and documentation requirements; and
- Provide contingency details.

2 MONITORING

2.1 Community Air Monitoring Plan

Real-time air monitoring for volatile organic compounds (VOCs) and particulate levels with instrumentation and visual monitoring of fugitive dust migration will be performed at the perimeter of the exclusion zone or work area. Continuous monitoring will be performed for all ground intrusive activities and during the handling of contaminated or potentially contaminated media. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pit excavation or trenching, the installation of soil borings or monitoring wells and demolition of contaminated or potentially contaminated structures.

Periodic monitoring for VOCs will be performed during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. Periodic monitoring during sample collection, for instance, will consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well bailing/purging, and taking a reading prior to leaving a sample location. Depending upon the proximity of potentially exposed individuals, continuous monitoring may be performed during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence. Exceedances of action levels observed during performance of the CAMP will be reported to the DEC Project Manager and included in the Daily Report.

2.1.1 Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals

Continuous monitoring for VOCs will be performed during all ground intrusive activities such as the advancement of soil borings, soil vapor or sub-slab points and monitoring well installation for the collection of soil, soil vapor and/or groundwater samples. Continuous monitoring during sample collection of potentially exposed individuals will take place where all ground intrusive work will take place along the property boundary to Douglass and Nevins Street. In these areas, CAMP will be performed prior to all ground intrusive work for sample collection, while the subsurface intrusive work is taking place and prior to leaving a sample location. Depending upon the proximity of potentially exposed individuals, continuous monitoring may be performed during sampling activities.

2.2 VOC Monitoring, Response Levels, and Actions

VOCs will be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis during invasive work. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work will be performed using a photoionization detector (PID). The PID will be calibrated at least daily for the contaminant(s) of concern or for an

appropriate surrogate. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities will resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shutdown.

All 15-minute readings must be recorded and be available for DEC personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.

2.3 Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m³) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work will continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m³ above the upwind level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m³ above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m³ of the upwind level and in preventing visible dust migration.

2.4 Meteorological Monitoring

Meteorological monitoring will take place on a daily basis. It will consist of temperature, wind direction, and general atmospheric conditions (i.e. rain, snow, etc.). These parameters will be evaluated each morning and recorded in the field notebook. Wind direction should be monitored throughout the day so that upwind and downwind sampling locations can be adjusted if necessary.

All readings will be recorded and be available for DEC personnel to review.

3 DOCUMENTATION

During the implementation of the CAMP, the following information will be recorded and maintained:

- Climatological conditions including temperature wind direction, and other atmospheric conditions along with the date and time of observations;
- Calibration of field instruments;
- VOC 15-min readings as well as instantaneous readings, if necessary; All particulate readings; and
- Any exceedances to the response levels and the respective corrective actions.

VOC 1-min readings will be available for review by the State (NEYDEC and NYSDOH) if requested and included in each *Daily Field Report*. Additionally, the DEC will be notified immediately of any exceedances.

APPENDICES

251 Douglass Street, Brooklyn, New York



APPENDIX A
CAMP Daily Status Report Sheet

251 Douglass Street, Brooklyn, New York





DAILY STATUS REPORT

WEATHER	Snow	Rain	Overcast	Partly Cloudy	Bright Sun
TEMP.	< 32	32-50	50-70	70-85	> 85

Prepared by: _____

DEC Project. No.	DEC Site No.	Date:
Project Name:		

Environmental Consultant: Impact Environmental Closures, Inc 170 Keyland Court Bohemia, NY 11716.	Environmental Safety Officer:
General Contractor:	Site Manager/ Supervisor:

Work Activities Performed (Since Last Report)

Working In Area:

Samples Collected (Since Last Report):

Air Monitoring (Since Last Report):
 Prestart Conditions – PID = __0.0__ ppm, Dust = _____ mg/m³@
 High Conditions – PID = __0.0__ ppm @ Dust = __mg/m³ @

Problems Encountered:

Planned Activities for the Next Day/ Week:

SOIL DISPOSAL INFORMATION

Facility #: Name/ Location: Type of Waste:	Facility:		Facility:		Facility:	
	Trucks	Cu. Yds.	Trucks	Cu. Yds.	Trucks	Cu. Yds.
(# of Trucks, # of Cu.Yds.)						
Today						
Weekly Total						
Total to Date						

SOIL IMPORTED INFORMATION

Facility #: Name/ Location: Type of Import:	Facility:		Facility:		Facility:	
	Trucks	Cu. Yds.	Trucks	Cu. Yds.	Trucks	Cu. Yds.
(# of Trucks, # of Cu.Yds.)						
Today						
Weekly Total						
Total to Date						

Site Grid Map

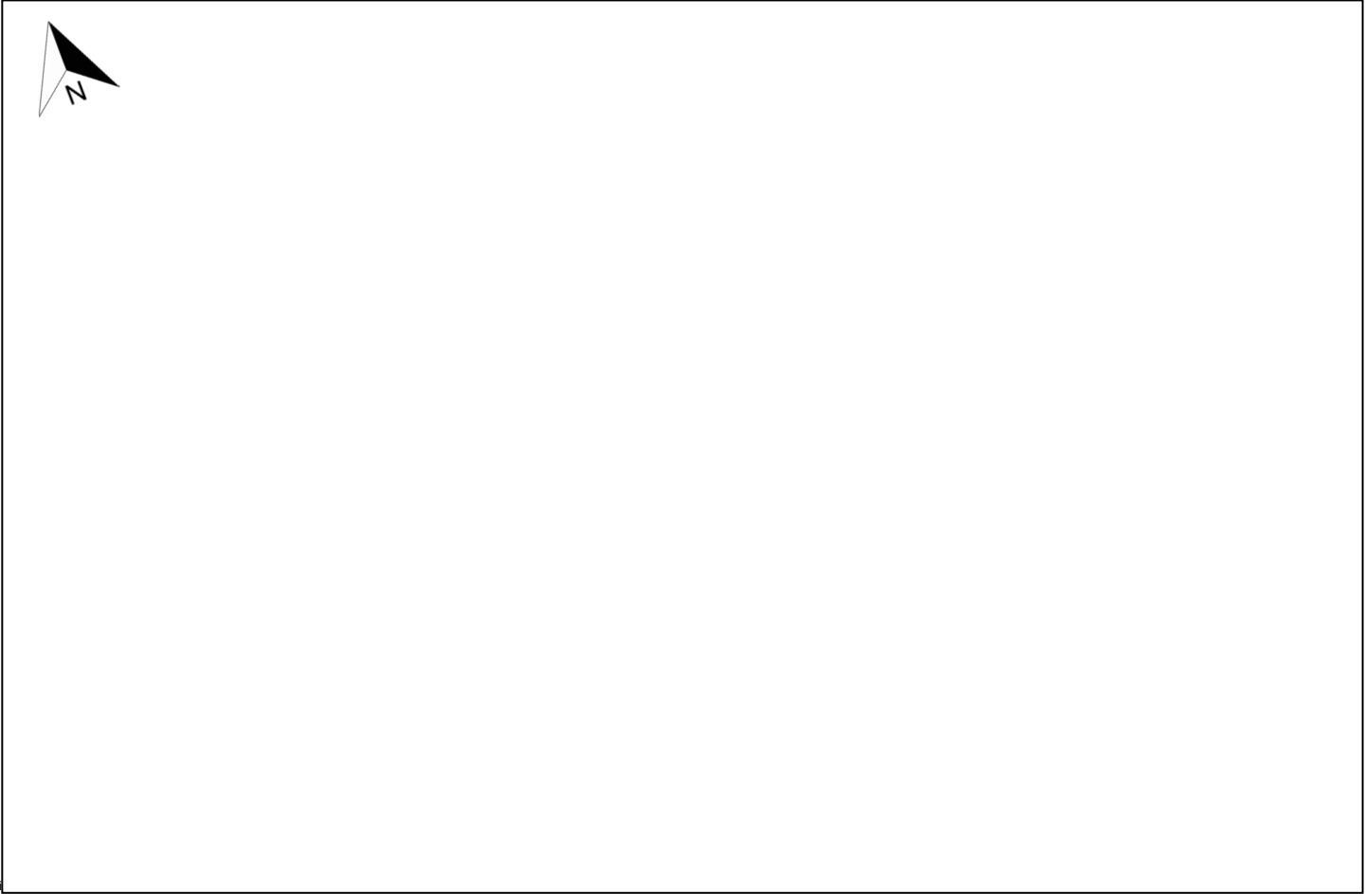


Photo Log

Photo 1 –

Photo 2-

Photo 3 –

APPENDIX B
On-site Dust and Volatile Organic Vapor Monitoring
Log
251 Douglass Street, Brooklyn, New York



On- Site Dust and Volatile Organic Vapor Monitoring

Project: _____	Job No.: _____	
Location: _____	On-site Personnel: _____	
Day & Date: _____	Weather: _____	
AM	PM	Sample Interval: 15 minutes
Wind Direction		Background Reading (particulates) mg/m³
Temperature Range:	°F	Background Reading (organic vapors) ppm
Calibration Dates:	Particulate Meters: _____	Photoionization Detector: _____
Action	Organic vapors: > 5ppm above background levels/ 15 minute readings	
Level/Response:	Particulates: 0.100 mg/m ³ above up wind reading/15 minute period	

Time	Particulate levels:		ORGANIC VAPOR LEVELS (ppm)	NOTES
	UPWIND (mg/m ³)	DOWNWIND (mg/m ³)		
0700				
0715				
0730				
0745				
0800				
0815				
0830				
0845				
0900				
0915				
0930				
0945				
1000				
1015				
1030				
1045				
1100				
1115				
1130				
1145				
1200				

Project: _____

Job No.: _____

Location: _____

Day & Date: _____

Time	Particulate levels:		ORGANIC VAPOR LEVELS (ppm)	NOTES
	UPWIND (mg/m ³)	DOWNWIND (mg/m ³)		
1215				
1230				
1245				
1300				
1315				
1330				
1345				
1400				
1415				
1430				
1445				
1500				
1515				
1530				
1545				
1600				
1615				
1630				
1645				
1700				