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February 21, 2019

Nick Acampora
Division of Environmental Remediation
New York State Department of Environmental Conservation
50 Circle Road, SUNY at Stony Brook
Stony Brook NY 11790-3409

Re: Revised Off Site Sediment Sampling
Former Cibro Terminal Site ID: 13015
7 Washington Ave, Island Park NY 11558

Mr. Acampora,

Based on comments received by NYSDEC on February 12th 2019, this letter report has been revised and supersedes the report issued on December 18, 2018.

This letter presents a summary of the sediment sampling results with respect to the existing off-site sediment conditions directly adjacent to the former Cibro Terminal site. All work was completed in accord with the approved November 2017 Remedial Work Plan (RWP) except for the sampling method noted herein.

There were no exceedances of the Part 375 Unrestricted Use for BTEX, PAHs, metals, and total organic carbon.

Based on NYSDEC comments, the September 2018 off-site sediment sampling analytical results were compared to the Department of Fish, Wildlife, and Marine Resources June 24th 2014 "Screening and Assessment of Contaminated Sediment" guidance document.

There were no exceedances detected of Class A guidance values for BTEX or total PAHs.

There was one slight exceedance of Class A guidance values for arsenic with a detected concentration of 9.1 ppm and a guidance value of 8.2 ppm. There were no other exceedances detected of Class A guidance values for metals.

PROJECT BACKGROUND

The project was mobilized for initial staging in July 2018. As part of the remediation scope of work, the approximately 1100' long timber bulkhead that borders the site on its eastern, southeastern, and southern sides will be replaced. Per the approved November 2017 RWP, sediment samples were collected at the locations shown on Figure #1. The purpose of the sediment sampling was to investigate potential impacts to the existing sediment before starting the bulkhead replacement.

At the project kick-off meeting on July 31st, 2018 between Posillico and NYSDEC, we discussed our bulkhead replacement strategy. Posillico indicated that a subcontractor would be used to install sheet piles in front and at a higher elevation than the existing bulkhead in accord with the NYSDEC Tidal Wetlands permit #1-2820-01252/00009. NYSDEC and Posillico agreed that the existing bulkhead should remain in place due to concern of potential impacts to the navigable waters during bulkhead removal. The approved RAWP provided for off-site sampling and analysis of existing sediment prior to commencing the bulkhead replacement.

SAMPLING SUMMARY:

Five sediment samples were collected in the locations shown on Figure #1.

Sampling Frequency:

Sample Location	#BTEX Samples	#PAHs Samples	#Metals/Mercury Samples	#TOC Samples
Q3	1	1	1	1
Q7	2	2	2	2
S12	2	2	2	2
R14	2	2	2	2
L15	2	2	2	2

Sampling Intervals:

Sample Location	Interval 1	Interval 2
Q3	0-10'	NA
Q7	0-0.5'	1-2'
S12	0-0.5'	5-10'
R14	0-0.5'	5-10'
L15	0-0.5'	5-10'

SAMPLING METHODS:

Posillico contracted AARCO Environmental to assist in the collection of the sediment samples on September 26 and September 27, 2018. Per the NYSDEC approval on July 31, 2018, samples were collected using direct-push pneumatically driven sampler in-lieu of using a Vibracore sampler. Sample cores were advanced to 10' below mudline in the five locations tabulated above and shown on Figure #1.

Sample cores were photographically logged prior to sample collection. The photographic sample log has been attached hereto. Sample cores were field screened using visual, olfactory, and photo-ionization device (PID) observations. Sample boring logs have been attached hereto.

Discrete samples for benzene, toluene, ethylbenzene and xylene (BTEX) were collected using laboratory-prepared Terra Core sampling kits from the core showing the highest potential for impacts, organic content, or highest silt content. Cores were then composited and samples for polycyclic aromatic hydrocarbons (PAHs), metals including mercury, total organic carbon (TOC), and grain size were collected from the composited volume.

The collected samples were stored in a laboratory provided ice-chilled coolers and were transported to the Test America Laboratories. Samples for BTEX, PAHs, metals, and TOC were transported to the NYS ELAP-accredited laboratory in Pittsburgh, Pennsylvania. Samples for grain size were transported to the NYS ELAP- accredited laboratory in Burlington, Vermont.

Samples were collected in accord with the approved RWP and were analyzed using the following methods:

- BTEX- EPA Method 8260C
- PAHs- EPA Method 8270D LL
- Metals- EPA Method 6020A
- Mercury- EPA Method 7471B
- Total Organic Carbon- EPA Lloyd Kahn

SAMPLING RESULTS SUMMARY

There were no exceedances of the part 375 Unrestricted Use for BTEX, PAHs, metals, and total organic carbon.

Based on NYSDEC comments, the September 2018 off-site sediment sampling analytical results were compared to the Department of Fish, Wildlife, and Marine Resources June 24th 2014 "Screening and Assessment of Contaminated Sediment" guidance document.

There were no exceedances detected of Class A guidance values for BTEX or total PAHs.

There was one slight exceedance of Class A guidance values for arsenic with a detected concentration of 9.1 ppm at location L15 from 5-10' below the mudline. Although this concentration slightly exceeds the Class A guidance value of 8.2 ppm it falls on the low end of the Class B guidance range of 8.2-70. There were no other exceedances detected of Class A guidance values for metals.

The results for BTEX, PAHs, metals, and total organic carbon are summarized in Tables 1 through 4.

CONCLUSIONS AND RECOMMENDATIONS:

No remedial measures or additional investigations are recommended based on the September 2018 observations and analytical results for the off-site sediments.

The slight exceedance of Class A guidance values for arsenic is not considered indicative of an anthropogenic impact of the subject site. Based on the depth of the sample, the marginal nature of the exceedance, and review of the NYSDEC Screening and Assessment of Contaminated Sediment Guidance, the exceedance is not anticipated to pose a potential risk to aquatic organisms.

Feel free to reach out if you have any questions or concerns.

Regards,

James Smyth
Environmental Engineer

cc:
Wendy S. Kuehner, P.E., NYSDOH (email)
Charlotte M. Bethoney, NYSDOH (email)
Christopher Battista, P.G., Roux Associates (email)
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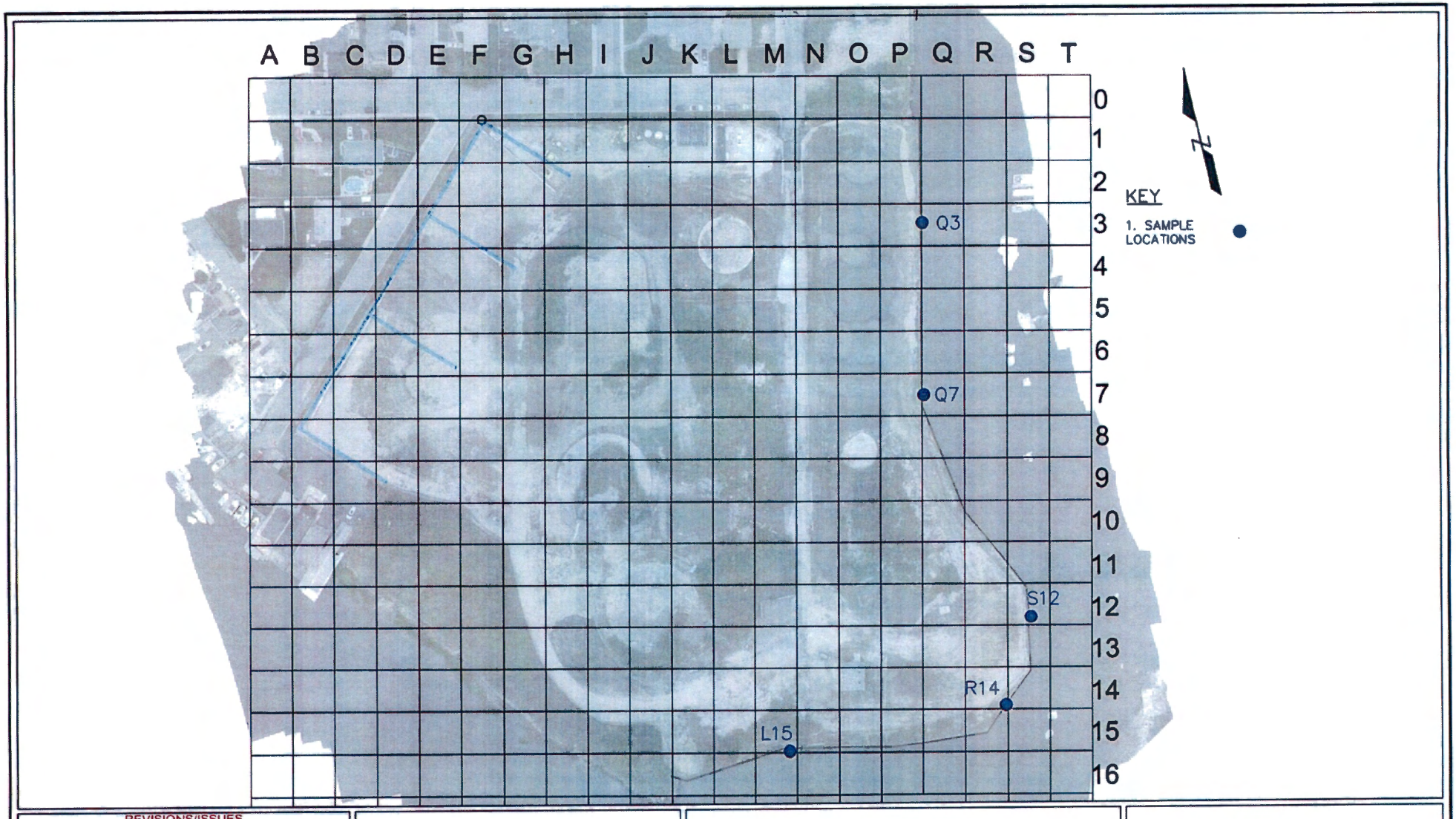


REVISIONS/ISSUES			
NO.	DATE	BY	DESCRIPTION
0	12/17/2018	MB	SEDIMENT SAMPLE LOCATIONS (ORIGINAL)

PDC AT HARBOR ISLE
7 WASHINGTON AVE, ISLAND PARK, NY 11558

DRAWN BY: MB | CHECKED BY: JS | DATE: 12/17/2018

Posillico | We know how.™

Posillico Engineering Services
1750 New Highway
Farmingdale, New York 11735
(631) 249-1872

November 2018
Former Cibro Petroleum Terminal Site
Brownfield Cleanup Site C130153
Island Park, New York

Table 1
Results for BTEX BY 8260C

Sample ID	NY 375-6.8(a)	Department of Fish, Wildlife, and Marine Resources	Department of Fish, Wildlife, and Marine Resources	POS-SED-Q7-S1 (0-0.5')		POS-SED-Q7 S1 (1'2')		POS-SED-Q3-S2 (0-5)		POS-SED-S12-S1 (0-0.5')		POS-SED-S12-S2 (5'-10')		POS-SED-R14-S1 (0-0.5')		POS-SED-R14-S2 (5'-10')		POS-SED-L15-S1 (0-0.5')		POS-SED-L15-S2 (5'-10')	
Sampling Date	Unrestricted	Sediment	Sediment	9/26/2018		9/26/2018		9/26/2018		9/26/2018		9/26/2018		9/26/2018		9/26/2018		9/26/2018		9/26/2018	
Matrix	Use Soil	Screening	Screening	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Dilution Factor	Soil Cleanup	Class A	Class B	1		1		1		1		1		1		1		1		1	
Units	ug/kg	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
BTEX BY 8260C	Criteria	Criteria	Criteria	Result		Result		Result		Result		Result		Result		Result		Result		Result	
Benzene	60	460	460-1400	2.6	U	2.4	U	2.8	U	0.40	U	3.0	U	3.1	U	3.4	U	2.8	U	4.2	U
Ethylbenzene	5500	110	110-750	2.9	U	2.7	U	3.0	U	0.44	U	3.3	U	3.4	U	3.7	U	3.0	U	4.6	U
m-Xylene & p-Xylene (1,3-Xylene & 1,4-Xylene)	NA	210 & 57	210-1500 & 57-400	2.5	U	2.3	U	2.6	U	0.38	U	2.9	U	2.9	U	3.2	U	2.6	U	4.0	U
o-Xylene (1,2-Xylene)	NA	63	63-440	3.3	U	3.0	U	3.4	U	0.50	U	3.7	U	3.8	U	4.2	U	3.4	U	5.2	U
Toluene	1500	800	800-3300	2.3	U	2.1	U	2.4	U	0.34	U	2.6	U	2.6	U	2.9	U	2.4	U	3.6	U
Xylenes, Total	1200	91	91-640	5.8	U	5.4	U	6.0	U	0.88	U	6.6	U	6.8	U	7.4	U	6.1	U	9.2	U
Total Conc	NA	NA	NA	0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	

U : Indicates the analyte was analyzed for but not detected.

November 2018
Former Cibro Petroleum Terminal Site
Brownfield Cleanup Site C130153
Island Park, New York

Table 2
Results for PAHs BY 8270D LL

Sample ID	NY 375-6.8(a)	Department of Fish, Wildlife, and Marine Resources	Department of Fish, Wildlife, and Marine Resources	POS-SED-Q7-S1 (0-0.5')		POS-SED-Q7 S1 (1'2')		POS-SED-Q8-S2 (0-5)		POS-SED-S12-S1 (0-0.5')		POS-SED-S12-S2 (5'-10')		POS-SED-R14-S1 (0-0.5')		POS-SED-R14-S2 (5'-10')		POS-SED-L15-S1 (0-0.5')		POS-SED-L15-S2 (5'-10')	
Sampling Date	Unrestricted	Sediment	Sediment	9/26/2018		9/26/2018		9/26/2018		9/26/2018		9/26/2018		9/26/2018		9/26/2018		9/26/2018		9/26/2018	
Matrix	Use Soil	Screening	Screening	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
Dilution Factor	Soil Cleanup	Class A	Class B	3		25		2		4		5		10		4		10		5	
Units	ug/kg	ug/kg	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
PAHs by 8270D LL	Criteria	Criteria	Criteria	Result		Result		Result		Result		Result		Result		Result		Result		Result	
Acenaphthene	20000	NA	NA	3.4	U	28	U	2.3	U	11	J	31		13	U	5.5	U	21	J	8.8	J
Acenaphthylene	100000	NA	NA	3.2	J	24	J	1.9	J	8.1	J	15	J	19	J	4.2	U	35	J	12	J
Anthracene	100000	NA	NA	7.0	J	48	J	3.0	J	34		97		29	J	5.2	J	69		24	J
Benzo[a]anthracene	1000	NA	NA	18		130		11		37		130		86		15	J	240		68	
Benzo[a]pyrene	1000	NA	NA	26		150		13		42		110		95		15	J	280		75	
Benzo[b]fluoranthene	1000	NA	NA	29		200		18		54		150		120		22		360		100	
Benzo[g,h,i]perylene	100000	NA	NA	24		130		11		34		75		80		12	J	230		56	
Benzo[k]fluoranthene	800	NA	NA	14		100		9.4		26		50		48		10	J	140		49	
Chrysene	1000	NA	NA	23		220		15		63		210		93		17	J	300		88	
Dibenz(a,h)anthracene	330	NA	NA	4.3	J	37	J	2.8	J	9.0	J	18	J	12	J	4.2	U	65		17	J
Fluoranthene	100000	NA	NA	29		340		23		81		290		160		35		570		160	
Fluorene	30000	NA	NA	2.3	U	19	U	1.6	U	6.4	J	26		10	J	3.7	U	16	J	8.7	J
Indeno[1,2,3-cd]pyrene	500	NA	NA	21		89	J	9.2		26		72		59		12	J	190		49	
Naphthalene	12000	NA	NA	6.0	J	19	U	1.8	J	29		28		13	J	3.7	U	7.9	U	5.5	J
Phenanthrene	100000	NA	NA	17		94	J	7.5	J	36		310		70		16	J	200		110	
Pyrene	100000	NA	NA	62		330		23		89		240		210		36		440		190	
Total Conc	NA	4000	4000-45000	283.5		1892.0		149.6		585.5		1852.0		1104.0		195.2		3156.0		1021.0	

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U : Indicates the analyte was analyzed for but not detected.

November 2018
Former Cibro Petroleum Terminal Site
Brownfield Cleanup Site C130153
Island Park, New York

Table 3
Results for Metals by 6010A (MG/KG) and Mercury 7471B (MG/KG)

Sample ID	NY 375-6.8(a)	Department of Fish, Wildlife, and Marine Resources	Department of Fish, Wildlife, and Marine Resources	POS-SED-Q7-S1 (0-0.5')		POS-SED-Q7-S1 (1-2')		POS-SED-Q8-S2 (0-5)		POS-SED-S12-S1 (0-0.5')		POS-SED-S12-S2 (5'-10')		POS-SED-R14-S1 (0-0.5')		POS-SED-R14-S2 (5'-10')		POS-SED-L15-S1 (0-0.5')		POS-SED-L15-S2 (5'-10')	
Sampling Date	Unrestricted	Sediment	Sediment	9/26/2018		9/26/2018		9/26/2018		9/26/2018		9/26/2018		9/26/2018		9/26/2018		9/26/2018		9/26/2018	
Matrix	Use Soil	Screening	Screening	Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment		Sediment	
	Soil Cleanup	Class A	Class B																		
Units	mg/kg	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Metals by 6010A (MG/KG)	Criteria	Criteria	Criteria	Result		Result		Result		Result		Result		Result		Result		Result		Result	
Arsenic	13	8.2	8.2-70	1.3		1.4		1.0		1.5		2.7		1.9		4.3		1.6		9.1	
Cadmium	2.5	1.2	1.2-9.6	0.075		0.13		0.038	J	0.074		0.12		0.10		0.29		0.17		0.49	
Chromium	NA	81	81-370	4.8		6.2		3.2		6.5		12.6		7.6		17.7		7.4		31.0	
Copper	50	34	34-270	3.3		6.0		1.4		6.8		7.1		7.1		7.3		15.5		20.0	
Lead	63	47	47-220	6.1		11.4		2.0		13.3		8.1		20.7		7.3		46.2		22.1	
Nickel	30	21	21-52	1.8		3.1		1.3		3.3		5.4		3.6		9.2		4.9		15.0	
Silver	2	1	1.0-3.7	0.035	J	0.12		0.0092	J	0.047	J	0.074		0.093		0.040	J	0.14		0.22	
Zinc	109	150	150-410	9.8		20.5		4.2		89.5		16.5		21.3		25.6		41.1		56.9	
Mercury by 7471B (MG/KG)																					
Mercury	0.18	0.15	0.15-0.71	0.018	J	0.017	J	0.0044	U	0.017	J	0.048	U	0.033		0.0084	J	0.026		0.15	

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U : Indicates the analyte was analyzed for but not detected.

November 2018
Former Cibro Petroleum Terminal Site
Brownfield Cleanup Site C130153
Island Park, New York

Table 4
Results Summary for Total Organic Carbon by Lloyd Kahn

Sample ID	NY 375-6.8(a)	Department of Fish, Wildlife, and Marine Resources	Department of Fish, Wildlife, and Marine Resources	POS-SED-Q7-S1 (0-0.5')	POS-SED-Q7 S1 (1'2')	POS-SED-Q3-S2 (0-5)	POS-SED-S12-S1 (0-0.5')	POS-SED-S12-S2 (5'-10')	POS-SED-R14-S1 (0-0.5')	POS-SED-R14-S2 (5'-10')	POS-SED-L15-S1 (0-0.5')	POS-SED-L15-S2 (5'-10')
Sampling Date	Unrestricted	Sediment	Sediment	9/26/2018	9/26/2018	9/26/2018	9/26/2018	9/26/2018	9/26/2018	9/26/2018	9/26/2018	9/26/2018
Matrix	Use Soil	Screening	Screening	Sediment	Sediment	Sedient	Sediment	Sediment	Sedient	Sediment	Sediment	Sedient
	Soil Cleanup	Class A	Class A									
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total Organic Carbn byLloyd Kahn	Criteria	Criteria	Criteria	Result	Result	Result	Result	Result	Result	Result	Result	Result
Total Organic Carbon - Duplicates (mg/kg)	NA	NA	NA	1770	2860	901	2180	3050	5060	9530	2640	12300

U : Indicates the analyte was analyzed for but not detected.

PHOTO LOG – Former Cibro Terminal Site

PROJECT NO.:	BCP #C130153	**DATE:**	9/26/2018- 9/27/2018
PROJECT:	Former Cibro Terminal Site	**Owner:**	Posillico Development @ Harbor Isle.

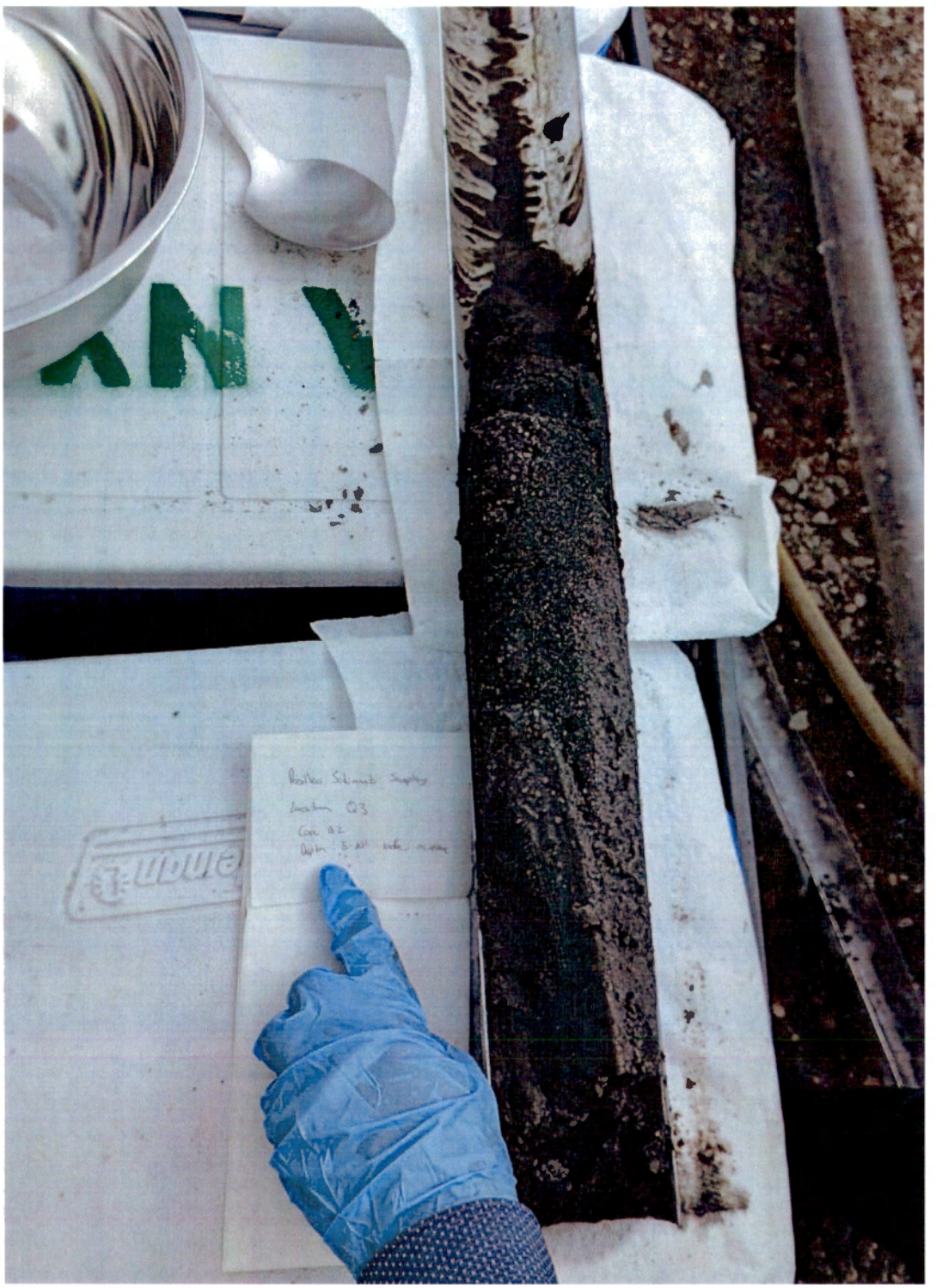
PHOTO TAKEN SEPTEMBER 26, 2018

Sample Location Q3 Core #1- 0'-5'

PHOTO LOG – Former Cibro Terminal Site

PROJECT NO.:	BCP #C130153	**DATE:**	9/26/2018- 9/27/2018
PROJECT:	Former Cibro Terminal Site	**Owner:**	Posillico Development @ Harbor Isle.

PHOTO TAKEN SEPTEMBER 26, 2018



Sample Location Q3 Core #2- 5'-10'

PHOTO LOG – Former Cibro Terminal Site

PROJECT NO.:	BCP #C130153	**DATE:**	9/26/2018- 9/27/2018
PROJECT:	Former Cibro Terminal Site	**Owner:**	Posillico Development @ Harbor Isle.

PHOTO TAKEN SEPTEMBER 26, 2018

Sample Location Q7 Core #1- 0'-5'

PHOTO LOG – Former Cibro Terminal Site

PROJECT NO.:	BCP #C130153	**DATE:**	9/26/2018- 9/27/2018
PROJECT:	Former Cibro Terminal Site	**Owner:**	Posillico Development @ Harbor Isle.

PHOTO TAKEN SEPTEMBER 26, 2018

Sample Location Q7 Core #2- 5-'10'

PHOTO LOG – Former Cibro Terminal Site

PROJECT NO.:	BCP #C130153	**DATE:**	9/26/2018- 9/27/2018
PROJECT:	Former Cibro Terminal Site	**Owner:**	Posillico Development @ Harbor Isle.

PHOTO TAKEN SEPTEMBER 27, 2018

Sample Location S12 Core #1- 0'-5'

PHOTO LOG – Former Cibro Terminal Site

PROJECT NO.:	BCP #C130153	**DATE:**	9/26/2018- 9/27/2018
PROJECT:	Former Cibro Terminal Site	**Owner:**	Posillico Development @ Harbor Isle.

PHOTO TAKEN SEPTEMBER 27, 2018

Sample Location S12 Core #2- 5'-10'

PHOTO LOG – Former Cibro Terminal Site

PROJECT NO.:	BCP #C130153	**DATE:**	9/26/2018- 9/27/2018
PROJECT:	Former Cibro Terminal Site	**Owner:**	Posillico Development @ Harbor Isle.

PHOTO TAKEN SEPTEMBER 27, 2018

Sample Location R14 Core #1- 0'-5'

PHOTO LOG – Former Cibro Terminal Site

PROJECT NO.:	BCP #C130153	**DATE:**	9/26/2018- 9/27/2018
PROJECT:	Former Cibro Terminal Site	**Owner:**	Posillico Development @ Harbor Isle.

PHOTO TAKEN SEPTEMBER 27, 2018

Sample Location R14 Core #2- 5'-10'

PHOTO LOG – Former Cibro Terminal Site

PROJECT NO.:	BCP #C130153	**DATE:**	9/26/2018- 9/27/2018
PROJECT:	Former Cibro Terminal Site	**Owner:**	Posillico Development @ Harbor Isle.

PHOTO TAKEN SEPTEMBER 27, 2018

Sample Location L15 Core #1- 0'-5'

PHOTO LOG – Former Cibro Terminal Site

PROJECT NO.:	BCP #C130153	**DATE:**	9/26/2018- 9/27/2018
PROJECT:	Former Cibro Terminal Site	**Owner:**	Posillico Development @ Harbor Isle.

PHOTO TAKEN SEPTEMBER 27, 2018

Sample Location L15 Core #2- 5'-10'

SAMPLE LOG

SHEET 1 OF 5

PDC AT HARBOR ISLE	PROJECT NO: BCP #C130153	WORK AREAS: Q2-Q8	TEST PIT/BORING LOCATION: Q7
ADDRESS 7 WASHINGTON AVE ISLAND PARK NY 11558		ELEVATION/DATUM NAVD 88	
DRILLING CONTRACTOR (IF APPLIC) AARCO		JOBSITE SUPERVISOR James Smyth	
DRILLING RIG (IF APPLIC) DIRECT PUSH	START DATE + TIME 9/26/2018 8:30	END DATE + TIME 9/26/18 11:00	SAMPLE TYPE BTEX, PAHs, Metals, Total Orcanic Carbon (TOC)

SAMPLE			DESCRIPTION OF SOILS	REMARKS
Soil Appearance	DEPTH (ft)	PID (ppm)	(SAA = Same As Above) f - fine m - medium c - coarse lt - light dk - dark tr - trace ltl - little	(PID, STAINING, ODORS, ETC.) (Sample Name) N/S = No Staining N/O = No odors
	6"	NA	First 6": Dk silty sand, tr organics, tr shells	N/O ; N/S ; Sample ID: POS-SED-Q7-S1 (0-0.5') BTEX: 0.0 PPM ; PAHs: 0.3 PPM ; Metals: 0.0 PPM ; TOC: 1.8 PPM
	1'		6"-1': Dk m-f sand, tr silt	
	5	NA	Dk c-m sand, tr silt*	N/O ; N/S Sample ID: POS-SED-Q7-S1 (1-2') BTEX: 0.0 PPM ; PAHs: 1.9 PPM Metals: 0.02 PPM ; TOC: 2.9 PPM
	7'	NA	Dk c-m sand, tr gravel, tr silt	N/O ; N/S
	10'	NA	Dk m-f sand, ltl silt*	N/O ; N/S ; Dk to black sediment

NA- no significant PID readings

* Extrapolated lithology due to limited recovery intervals

SAMPLE LOG

PDC AT HARBOR ISLE	PROJECT NO: BCP #C130153	WORK AREAS: Q2-Q8	TEST PIT/BORING LOCATION: Q3
ADDRESS 7 WASHINGTON AVE ISLAND PARK NY 11558		ELEVATION/DATUM NAVD 88	
DRILLING CONTRACTOR (IF APPLIC) AARCO		JOBSITE SUPERVISOR James Smyth	
DRILLING RIG (IF APPLIC) DIRECT PUSH	START DATE + TIME 9/26/2018 11:00	END DATE + TIME 9/26/18 13:00	SAMPLE TYPE BTEX, PAHs, Metals, Total Orcanic Carbon (TOC)

SAMPLE			DESCRIPTION OF SOILS	REMARKS
Soil Appearance	DEPTH (ft)	PID (ppm)	(SAA = Same As Above) f - fine m - medium c - coarse lt - light dk - dark tr - trace ltl - little	(PID, STAINING, ODORS, ETC.) (Sample Name) N/S = No Staining N/O = No odors
	6"	NA	First 6": Grey silty sand	N/O ; N/S ; Sample ID: POS-SED-Q3-S2 (0-5') BTEX: 0.0 PPM ; PAHs: 0.2 PPM ; Metals: 0.01 PPM ; TOC: 0.9 PPM
	1'		6"-1': Dk m-f sand, tr silt, tr shells	
		NA		
	5'		Dk m-f sand, tr silt*	N/O ; N/S ; Dk to black sand with more silt towards the bottom
		NA	Dk m-f sand, tr silt*	N/O ; N/S
	10'			

NA- no significant PID readings

* Extrapolated lithology due to limited recovery intervals

SAMPLE LOG

PDC AT HARBOR ISLE	PROJECT NO: BCP #C130153	WORK AREAS: K15-S11	TEST PIT/BORING LOCATION: S12
ADDRESS 7 WASHINGTON AVE ISLAND PARK NY 11558		ELEVATION/DATUM NAVD 88	
DRILLING CONTRACTOR (IF APPLIC) AARCO		JOBSITE SUPERVISOR James Smyth	
DRILLING RIG (IF APPLIC) DIRECT PUSH	START DATE + TIME 9/27/2018 8:00	END DATE + TIME 9/27/18 10:00	SAMPLE TYPE BTEX, PAHs, Metals, Total Orcanic Carbon (TOC)

SAMPLE			DESCRIPTION OF SOILS	REMARKS
Soil Appearance	DEPTH (ft)	PID (ppm)	(SAA = Same As Above) f - fine m - medium c - coarse lt - light dk - dark tr - trace ltl - little	(PID, STAINING, ODORS, ETC.) (Sample Name) N/S = No Staining N/O = No odors
	4"	NA	First 4": Dk m-f sand, tr silt, tr shells	N/O ; N/S ; Sample ID: POS-SED-S12-S1 (0-0.5') ; BTEX: 0.0 PPM ; PAHs: 0.6 PPM ; Metals: 0.09 PPM ; TOC: 2.2 PPM
	2'		4"-1': Dk f sand, ltl silt	N/O ; N/S ; more fine sand as compared to above
	6'		Dk m-f sand, tr silt*	N/O ; N/S
	7'	NA	Grey to brown f sand, ltl silt, tr gravel	N/O ; N/S Sample ID: POS-SED-S12-S2 (5-10') BTEX: 0.0 PPM ; PAHs: 1.9 PPM Metals: 0.02 PPM ; TOC: 3.1 PPM
	10'		Dk f sand, ltl silt*	N/O ; N/S

NA- no significant PID readings

* Extrapolated lithology due to limited recovery intervals

SAMPLE LOG

PDC AT HARBOR ISLE	PROJECT NO: BCP #C130153	WORK AREAS: K15-S11	TEST PIT/BORING LOCATION: R14
ADDRESS 7 WASHINGTON AVE ISLAND PARK NY 11558		ELEVATION/DATUM NAVD 88	
DRILLING CONTRACTOR (IF APPLIC) AARCO		JOBSITE SUPERVISOR James Smyth	
DRILLING RIG (IF APPLIC) DIRECT PUSH	START DATE + TIME 9/27/2018 10:00	END DATE + TIME 9/27/18 13:00	SAMPLE TYPE BTEX, PAHs, Metals, Total Orcanic Carbon (TOC)

SAMPLE			DESCRIPTION OF SOILS	REMARKS
Soil Appearance	DEPTH (ft)	PID (ppm)	(SAA = Same As Above) f - fine m - medium c - coarse lt - light dk - dark tr - trace ltl - little	(PID, STAINING, ODORS, ETC.) (Sample Name) N/S = No Staining N/O = No odors
	6"	NA	Black c-m sand, ltl gravel, tr silt, tr shells	N/O ; N/S ; Sample ID: POS-SED-R14-S1 (0-0.5') BTEX: 0.0 PPM ; PAHs: 1.1 PPM ; Metals: 0.02 PPM ; TOC: 5.1 PPM
	2'		Grey to Dk m-f sand, ltl silt	
	6'		Dk m-f sand, tr silt*	N/O ; N/S ; Dk but not black sand, silty towards 5'
	7'	NA	Grey to brown f sand, ltl silt, tr gravel	N/O ; N/S Sample ID: POS-SED-R14-S2 (5-10') BTEX: 0.0 PPM ; PAHs: 0.2 PPM Metals: 0.03 PPM ; TOC: 9.5 PPM
	10'		Dk f sand, ltl silt	N/O ; N/S

NA- no significant PID readings

* Extrapolated lithology due to limited recovery intervals

SAMPLE LOG

PDC AT HARBOR ISLE	PROJECT NO: BCP #C130153	WORK AREAS: K15-S11	TEST PIT/BORING LOCATION: L15
ADDRESS 7 WASHINGTON AVE ISLAND PARK NY 11558		ELEVATION/DATUM NAVD 88	
DRILLING CONTRACTOR (IF APPLIC) AARCO		JOBSITE SUPERVISOR James Smyth	
DRILLING RIG (IF APPLIC) DIRECT PUSH	START DATE + TIME 9/27/2018 13:00	END DATE + TIME 9/26/18 15:30	SAMPLE TYPE BTEX, PAHs, Metals, Total Orcanic Carbon (TOC)

SAMPLE			DESCRIPTION OF SOILS	REMARKS
Soil Appearance	DEPTH (ft)	PID (ppm)	(SAA = Same As Above) f - fine m - medium c - coarse lt - light dk - dark tr - trace ltl - little	(PID, STAINING, ODORS, ETC.) (Sample Name) N/S = No Staining N/O = No odors
	1'	NA	Brown c-m gravelly sand, tr silt	N/O ; N/S Sample ID: POS-SED-L15-S1 (0-0.5') BTEX: 0.0 PPM ; PAHs: 3.2 PPM Metals: 0.05 PPM ; TOC: 2.6 PPM
	6'	NA	Black m-f sand, ltl silt, ltl gravel Black c-m sand, ltl gravel	N/O ; N/S ; less gravel, more silt towards 2'
	10'	NA	Black m-f sand, ltl silt	N/O ; N/S Sample ID: POS-SED-L15-S2 (5-10') BTEX: 0.0 PPM ; PAHs: 1.0 PPM Metals: 0.06 PPM ; TOC: 12.3 PPM

NA- no significant PID readings

* Extrapolated lithology