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February 8, 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: Former Concrete Pad Investigation and Post-Excavation Sampling
Former Cibro Terminal Site ID: 130153
7 Washington Ave, Island Park NY 11558

Mr. Acampora,

This letter presents a summary of the remedial work associated with the removal of former concrete tank pads #11, #13, and #14. All work was completed in accord with the approved November 2017 Remedial Action Work Plan (RAWP).

The following work is summarized in this report:

- Former concrete tank pads #11, #13, and #14 were demolished and removed.
- Following the removal of the concrete pads, a test pit investigation was completed.
- Samples were collected from each test pit and analyzed for the site-specific parameters.
- All sample results were below the site-specific cleanup objectives except for one slight exceedance detected beneath former tank pad #14.
- The slight exceedance beneath tank pad #14 was excavated and five end-point post excavation samples were collected that were all below the site-specific cleanup standards.
- All test pitting and sampling work was overseen by the NYSDEC, ROUX Associates, and VHB.

PROJECT BACKGROUND

The project resumed in July 2018. Upon mobilization, four concrete tank pads remained on-site that required demolition and sampling in accord with the approved November 2017 RAWP.

During previous remedial investigations on June 7, 2007 and July 21, 2011, six samples were collected in the areas surrounding tank pads #11 and #13. The six samples from the June 2007 and July 2011 sampling were compiled with the current remedial investigation work to fully characterize the area around tank pads #11, #13, and #14.

Additional sampling is planned for beneath tank pad #12. However, tank pad #12 has not removed at this time as it has equipment staged on top of the pad. Once this equipment has been moved and the concrete pad has been demolished, the additional sampling will be scheduled.

SAMPLING METHODOLOGY:

In accord with NYSDEC's November 9, 2018 approval and on-site observations, sampling was conducted by test pitting with an excavator as an alternative to the direct-push macro-core sampling method specified in the RAWP.

- Test pits were terminated when the peat layer was encountered.
    - Peat was encountered between elevations -0.25' and -2' (NAVD88).
- Excavated soil from each of the test pits was field screened using visual, olfactory, and photo-ionization device (PID) observations.
- Soil samples were selected from the interval(s) exhibiting the highest potential for impacts.
- ROUX Associates, VHB, and the NYSDEC were present on-site on November 15, 2018 and December 6, 2018 to observe the test pit and post-excavation sampling work.

REMEDIAL INVESTIGATION WORK SUMMARY

Tank Pads #14 and #13

- Demolition of concrete tank pads #14 and #13 was completed on November 9 and November 14, 2018 respectively.
- Test pit sampling in the area of former concrete tank pads #14 and #13 was completed on November 15, 2018.
- Eight and six test pits were dug in the areas of tank pads #14 and #13 respectively.
    - One discrete sample for VOCs and SVOCs was collected from each test pit.
- The results from two historical test pits from July 2011 were compiled with the data from the November 2018 sampling in the area of tank pad #13.
- The location and analytical results summary of the tank pad #14 and #13 sampling are shown on Figures 2 and 3 respectively.

Tank Pad #11

- Demolition of concrete pad #11 was completed on November 29, 2018.
- Test pit sampling in the area of former tank pad #11 was completed December 6, 2018.
- Three test pits were dug in the areas of tank pad #11.
- The results from four historical test pits from July 2011 and June 2007 were compiled with the data from the December 2018 sampling in the area of tank pad #11.
- The location and analytical results summary of the tank pad #11 sampling are shown on Figures 4.

ANALYTICAL METHODS:

Samples were stored in laboratory provided ice-chilled coolers and were transported to the Test America Laboratories. Samples for VOCs and SVOCs were transported to the NYS ELAP-accredited laboratory in Edison, New Jersey. Samples were collected in accord with the approved RAWP; VOC samples were collected using laboratory-prepared Terra Core sampling kits. Samples were analyzed using the following methods:

- VOCs plus 10 TICs- EPA Method 8260C
- SVOCs plus 20 TICs- EPA Method 8270D

SAMPLING SUMMARY:

	# of Samples		
Sample Location	**6/7/07 and 7/21/11**	**11/15/18**	**12/6/18**
Beneath Pad 14	0	4	0
Surrounding Pad 14	0	4	0
Beneath Pad 13	0	4	0
Surrounding Pad 13	2	2	0
Beneath Pad 11	0	0	4
Surrounding Pad 11	4	0	1

SITE SPECIFIC SOIL CLEANUP OBJECTIVES (SSSCOs)

The SSSCOs for this project are as follows:

- VOCs and SVOCs below the Part 375-6.8(b) Restricted Use Cleanup Objectives for Restricted Residential Use
- Total of the top ten VOC TICs below 10 parts per million (ppm)
- Total of the top ten twenty SVOC TICs below 100 ppm

TEST PIT INVESTIGATION ANALYTICAL RESULT SUMMARY

Nineteen samples were collected in total for VOCs plus TICs and SVOCs plus TICs and compared against the SSSCOs. Category B deliverables will be uploaded to the NYSDEC file transfer system. The analytical results for VOCs plus TICs are summarized in Table 1. The results for SVOCs plus TICs are summarized in Table 2.

Tank Pad 11

- Based on field observations, two samples were collected from sample location TP11-1 and TP11-2.
- There were no exceedances detected for VOC or SVOC SSSCOs in the five samples collected from the tank pad #11 area.

Tank Pad 13

- There were no exceedances detected for VOC or SVOC SSSCOs in the six samples collected from the tank pad #13 area.

Tank Pad 14

- There were no exceedances detected for VOC or SVOC SSSCOs from seven out of eight samples collected from this area. This included the sample locations TP-1, TP-2, TP-4, TP-5, TP-6, TP-7, and TP-8.
- There were no exceedances detected for VOCs at sample location TP-3. Slight exceedances of SSSCOs were detected for three SVOC compounds at sample location TP-3:

Compound	Result	SSSCO
Benzo[a]anthracene	1.7 ppm	1 ppm
Benzo[a]pyrene	1.2 ppm	1 ppm
Benzo[b]fluoranthene	1.2 ppm	1 ppm

TANK PAD 14 EXCEEDANCE EXCAVATION

- The exceedances detected in sample location TP-3 were excavated on December 6, 2018.
- Excavation area is approximately 20 feet by 15 feet.
    - The extents of excavation are shown on Figure 5.
- Excavated soil was stockpiled on a 10-mil polyethylene tarp and covered.
- The bottom of the excavation was terminated at peat.
    - Peat was encountered at approximately 2'-3' below ground surface.
- The sidewalls were terminated based on visual, olfactory, and PID observations.
- Samples were taken at the northern, southern, eastern, and western sidewalls, as well as the bottom of the excavated area.

Sample Location	# of Sidewall Samples	# of Bottom Samples
Tank Pad #14: Post- Excavation	4	1

No exceedance of SSSCOs for VOCs or SVOCs were detected in the five post-excavation samples. Based on the post-excavation analytical results, no additional excavation is recommended. The results for VOCs and SVOCs are summarized in Tables 4 and 5 respectively.

Conclusions and Recommendations:

Based on the tank pad investigation samples and corresponding post-excavation samples, no additional remedial measures or investigations are recommended for the soils beneath and surrounding the former concrete pads #11, #13, and #14.

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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Table 1
Results for VOCs BY 8260C- Pads 11, 13, and 14

Sample ID	NY 375-6.8(b)	PDC-RI-TP1 (3)		PDC-RI-TP2 (3)		PDC-RI-TP3(2)		PDC-RI-TP-4 (2.5)		PDC-RI-TP-5 (6)		PDC-RI-TP-6 (5)		PDC-RI-TP-7 (5)		PDC-RI-TP-8 (6)		PDC-RI-TP-9 (6)		PDC-RI-TP-10 (6)	
Sampling Date	Restricted Residential	11/15/2018		11/15/2018		11/15/2018		11/15/2018		11/15/2018		11/15/2018		11/15/2018		11/15/2018		11/15/2018		11/15/2018	
Matrix	Soil Cleanup	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Dilution Factor	Criteria	1		1		1		1		1		1		1		1		1		1	
Unit	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
VOCs BY 8260C	Criteria	Result		Result		Result		Result		Result		Result		Result		Result		Result		Result	
1,1,1-Trichloroethane	100000	1	U	0.63	U	1.7	U *	1.0	U	0.99	U	0.90	U	1.2	U	0.87	U	0.90	U	0.90	U
1,1-Dichloroethane	26000	1.0	U	0.63	U	1.7	U	1.0	U	0.99	U	0.90	U	1.2	U	0.87	U	0.90	U	0.90	U
1,1-Dichloroethene	100000	1.0	U	0.63	U	1.7	U	1.0	U	0.99	U	0.90	U	1.2	U	0.87	U	0.90	U	0.90	U
1,2,4-Trimethylbenzene	52000	0.76	J	0.63	U	0.33	J	1.0	U	0.99	U	0.15	J	0.14	J	0.87	U	0.90	U	0.19	J
1,2-Dichlorobenzene	100000	1.0	U	0.63	U	1.7	U	1.0	U	0.99	U	0.90	U	1.2	U	0.87	U	0.90	U	0.90	U
1,2-Dichloroethane	3100	1.0	U	0.63	U *	1.7	U *	1.0	U *	0.99	U	0.90	U	1.2	U	0.87	U	0.90	U	0.90	U
1,3,5-Trimethylbenzene	NA	0.26	J	0.63	U	1.7	U	1.0	U	0.99	U	0.90	U	1.2	U	0.87	U	0.90	U	0.13	J
1,3-Dichlorobenzene	49000	1.0	U	0.63	U	1.7	U	1.0	U	0.99	U	0.90	U	1.2	U	0.87	U	0.90	U	0.90	U
1,4-Dichlorobenzene	13000	1.0	U	0.63	U	1.7	U	1.0	U	0.99	U	0.90	U	1.2	U	0.87	U	0.90	U	0.90	U
1,4-Dioxane	13000	20	U	13	U	35	U	20	U	20	U	18	U	24	U	17	U	18	U	18	U
2-Butanone (MEK)	NA	2.8	J	1.2	J	37		7.9		13		10		17		14		7.0		9.5	
Acetone	100000	24		6.6		190		62		77		72		150		72	*	60		65	
Benzene	4800	1.0	U	0.63	U	0.59	J	0.65	J	0.99	U	0.90	U	1.2	U	0.87	U	0.90	U	0.90	U
Carbon tetrachloride	2400	1.0	U	0.63	U	1.7	U	1.0	U	0.99	U	0.90	U	1.2	U	0.87	U	0.90	U	0.90	U
Chlorobenzene	100000	1.0	U	0.63	U	1.7	U	1.0	U	0.99	U	0.90	U	1.2	U	0.87	U	0.90	U	0.90	U
Chloroform	49000	1.0	U	0.63	U	1.7	U	1.0	U	0.99	U	0.90	U	1.2	U	0.87	U	0.90	U	0.90	U
cis-1,2-Dichloroethene	100000	1.0	U	0.63	U	1.7	U	1.0	U	0.99	U	0.90	U	1.2	U	0.87	U	0.90	U	0.90	U
Ethylbenzene	41000	1.0	U	0.63	U	1.7	U	1.0	U	0.99	U	0.21	J	0.27	J	0.49	J	0.90	U	0.90	U
Methyl tert-butyl ether	100000	1.0	U	0.63	U	1.7	U	1.0	U	0.99	U	0.90	U	1.2	U	0.87	U	0.90	U	0.90	U
Methylene Chloride	100000	2.2		0.17	J	2.9		4.4		1.7		0.42	J	0.55	J	1.2	B	0.29	J	0.65	J
n-Butylbenzene	100000	1.0	U	0.63	U	0.49	J	1.0	U	0.99	U	0.90	U	1.2	U	0.87	U	0.90	U	0.90	U
N-Propylbenzene	100000	1.0	U	0.63	U	0.48	J	1.0	U	0.99	U	0.90	U	0.25	J	0.87	U	0.90	U	0.90	U
sec-Butylbenzene	100000	0.11	J	0.63	U	0.53	J	0.13	J	0.99	U	0.90	U	0.85	J	0.87	U	0.90	U	0.094	J
tert-Butylbenzene	100000	1.0	U	0.63	U	1.7	U	1.0	U	0.99	U	0.90	U	1.2	U	0.87	U	0.90	U	0.17	J
Tetrachloroethene	19000	1.0	U	0.63	U	1.7	U	1.0	U	0.99	U	0.90	U	1.2	U	0.87	U	0.90	U	0.90	U
Toluene	100000	1.0	U	0.63	U	7.7		6.1		0.66	J	1.8		2.3		0.94		0.87	J	1.0	
trans-1,2-Dichloroethene	100000	1.0	U	0.63	U	1.7	U	1.0	U	0.99	U	0.90	U	1.2	U	0.87	U	0.90	U	0.90	U
Trichloroethene	21000	1.0	U	0.63	U	1.7	U	1.0	U	0.99	U	0.90	U	1.2	U	0.87	U	0.90	U	0.90	U
Vinyl chloride	900	1.0	U *	0.63	U	1.7	U	1.0	U	0.99	U *	0.90	U *	1.2	U	0.87	U	0.90	U *	0.90	U *
Xylenes, Total	100000	0.90	J	1.3	U	1.2	J	0.72	J	0.57	J	0.69	J	1.1	J	1.7	U	0.64	J	0.62	J
Total Conc	NA	31.03		7.97		241.22		81.9		92.93		85.27		172.46		88.63		68.8		77.354	
Total Estimated Conc. (TICs)	10000**	117.7		24.4		1144.0		128.5		0.0*T		123.9		1031.0		965.0		0.0*T		35.6	

** Site Specific Soil Cleanup Objective
*T There are no TICs reported for the sample
* : LCS or LCSD is outside acceptance limits.
B : The analyte was found in an associated blank, as well as in the sample.
J : Indicates an estimated value.
U : Analyzed for but not detected.

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Table 1 (Continued)
Results for VOCs BY 8260C- Pads 11, 13, and 14

Sample ID	NY 375-6.8(b)	PDC-RI-TP11 (3)		PDC-RI-TP12 (3)		PDC-RI-TP13 (3)		PDC-RI-TP14 (3)		PDC-RI-TP11-1-AP(3)		PDC-RI-TP11-1-BP(4.5)		PDC-RI-TP11-2-AP(5)		PDC-RI-TP11-3(4-6)		PDC-RI-TP11-3Peat(6.5)	
Sampling Date	Restricted Residential	11/15/2018		11/15/2018		11/15/2018		11/15/2018		12/6/2018		12/6/2018		12/6/2018		12/6/2018		12/6/2018	
Matrix	Soil Cleanup	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Dilution Factor	Criteria	1		1		1		1		1		1		1		1		1	
Unit	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
VOCs BY 8260C	Criteria	Result		Result		Result		Result		Result		Result		Result		Result		Result	
1,1,1-Trichloroethane	100000	0.94	U	0.94	U	0.90	U	0.91		1.0	U	4.7	U	1.1	U	1.2	U	3.9	U
1,1-Dichloroethane	26000	0.94	U	0.94	U	0.90	U	0.91		1.0	U	4.7	U	1.1	U	1.2	U	3.9	U
1,1-Dichloroethene	100000	0.94	U	0.94	U	0.90	U	0.91		1.0	U	4.7	U	1.1	U	1.2	U	3.9	U
1,2,4-Trimethylbenzene	52000	0.94	U	0.94	U	0.24	J	0.91		1.3		4.1	J	1.1	U	1.2	U	3.9	U
1,2-Dichlorobenzene	100000	0.94	U	0.94	U	0.90	U	0.91		1.0	U	4.7	U	1.1	U	1.2	U	3.9	U
1,2-Dichloroethane	3100	0.94	U	0.94	U	0.90	U *	0.91		1.0	U	4.7	U	1.1	U	1.2	U	3.9	U
1,3,5-Trimethylbenzene	NA	0.94	U	0.94	U	0.90	U	0.91		1.0	U	2.4	J	1.1	U	1.2	U	3.9	U
1,3-Dichlorobenzene	49000	0.94	U	0.94	U	0.90	U	0.91		1.0	U	4.7	U	1.1	U	1.2	U	3.9	U
1,4-Dichlorobenzene	13000	0.94	U	0.94	U	0.90	U	0.91		1.0	U	4.7	U	1.1	U	1.2	U	3.9	U
1,4-Dioxane	13000	19	U	19	U	18	U	18		21	U	95	U	23	U	24	U	77	U
2-Butanone (MEK)	NA	4.7	U	7.4		20		8.0		4.5	J	6.6	J	1.3	J	6.0	U	6.4	J
Acetone	100000	9.7		70		110		60		45		130	B	35		19	B	71	B
Benzene	4800	0.94	U	0.94	U	0.37	J	0.91		1.0	U	4.7	U	1.0	J	1.2	U	3.9	U
Carbon tetrachloride	2400	0.94	U	0.94	U	0.90	U	0.91		1.0	U	4.7	U	1.1	U	1.2	U	3.9	U
Chlorobenzene	100000	0.94	U	0.94	U	0.90	U	0.91		1.0	U	4.7	U	1.1	U	1.2	U	3.9	U
Chloroform	49000	0.94	U	0.94	U	0.90	U	0.91		1.0	U	4.7	U	1.1	U	1.2	U	3.9	U
cis-1,2-Dichloroethene	100000	0.94	U	0.94	U	0.90	U	0.91		1.0	U	4.7	U	1.1	U	1.2	U	3.9	U
Ethylbenzene	41000	0.94	U	0.94	U	0.20	J	0.91		0.31	J	2.1	J	0.69	J	1.2	U	2.9	J
Methyl tert-butyl ether	100000	0.94	U	0.94	U	0.90	U	0.91		1.0	U	4.7	U	1.1	U	1.2	U	3.9	U
Methylene Chloride	100000	0.62	J	0.24	J	0.91		0.61		0.33	J	4.7	U	1.4		0.75	J B	2.0	J B
n-Butylbenzene	100000	0.94	U	0.94	U	0.90	U	0.91		6.0		4.7	U	1.1	U	1.2	U	3.9	U
N-Propylbenzene	100000	0.94	U	0.94	U	0.90	U	0.91		1.9		4.7	U	1.1	U	1.2	U	3.9	U
sec-Butylbenzene	100000	0.94	U	0.94	U	0.17	J	0.91		6.5		4.7	U	0.31	J	1.2	U	3.9	U
tert-Butylbenzene	100000	0.94	U	0.94	U	0.20	J	0.91		2.0		4.7	U	1.1	U	1.2	U	3.9	U
Tetrachloroethene	19000	0.94	U	0.94	U	0.90	U	0.91		1.0	U	4.7	U	1.1	U	1.2	U	3.9	U
Toluene	100000	0.94	U	1.2		3.7		0.62		2.7		95		14		0.76	J	38	
trans-1,2-Dichloroethene	100000	0.94	U	0.94	U	0.90	U	0.91		1.0	U	4.7	U	1.1	U	1.2	U	3.9	U
Trichloroethene	21000	0.94	U	0.94	U	0.90	U	0.91		1.0	U	4.7	U	1.1	U	1.2	U	3.9	U
Vinyl chloride	900	0.94	U	0.94	U *	0.90	U	0.91		1.0	U	4.7	U	1.1	U	1.2	U	3.9	U
Xylenes, Total	100000	0.27	J	0.67	J	0.92	J	0.68		1.3	J	3.5	J	1.9	J	2.4	U	1.3	J
Total Conc	NA	10.59		79.51		136.71		69.91		71.84		243.7		55.6		20.51		121.6	
Total Estimated Conc. (TICs)	10000**	0.0*T		43.9		867.0		9.2		1867.0		26.0		742.0		0.0*T		0.0*T	

**Site Specific Soil Cleanup Objective
*T There are no TICs reported for the sample
* : LCS or LCSD is outside acceptance limits.
B : The analyte was found in an associated blank, as well as in the sample.
J : Indicates an estimated value.
U : Analyzed for but not detected.

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Table 2
Results for SVOCs BY 8270D- Pads 11, 13, and 14

Sample ID	NY 375-6.8(b)	PDC-RI-TP1(3)		PDC-RI-TP2 (3)		PDC-RI-TP3(2)		PDC-RI-TP-4 (2.5)		PDC-RI-TP-5 (6)		PDC-RI-TP-6 (5)		PDC-RI-TP-7 (5)		PDC-RI-TP-8 (6)		PDC-RI-9 (6)		PDC-RI-TP-10 (6)	
Sampling Date	Restricted Residential	11/15/2018		11/15/2018		11/15/2018		11/15/2018		11/15/2018		11/15/2018		11/15/2018		11/15/2018		11/15/2018		11/15/2018	
Matrix	Soil Cleanup	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Dilution Factor	Criteria	1		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	
SVOCs by 8270D	Criteria	Result		Result		Result		Result		Result		Result		Result		Result		Result		Result	
2-Methylphenol	100000	420	U	390	U	700	U	430	U	400	U	390	U	500	U	370	U	380	U	390	U
3 & 4 Methylphenol	NA	420	U	390	U	700	U	430	U	400	U	390	U	500	U	370	U	380	U	390	U
Acenaphthene	100000	420	U	390	U	170	J	44	J	120	J	390	U	500	U	370	U	380	U	33	J
Acenaphthylene	100000	420	U	390	U	76	J	33	J	13	J	390	U	500	U	21	J	380	U	390	U
Anthracene	100000	26	J	80	J	580	J	140	J	110	J	44	J	500	U	370	U	380	U	54	J
Benzo[a]anthracene	1000	100		160		1700		610		290		110		51		140		31	J	100	
Benzo[a]pyrene	1000	76		120		1200		430		220		81		48	J	160		26	J	94	
Benzo[b]fluoranthene	1000	68		150		1200		440		260		81		67		220		36	J	130	
Benzo[g,h,i]perylene	100000	44	J	67	J	590	J	230	J	130	J	49	J	34	J	95	J	17	J	56	J
Benzo[k]fluoranthene	3900	26	J	63		560		200		77		51		32	J	120		14	J	55	
Chrysene	3900	110	J	150	J	1700		700		310	J	110	J	51	J	140	J	34	J	110	J
Dibenz(a,h)anthracene	330	42	U	23	J	190		65		36	J	39	U	50	U	32	J	38	U	20	J
Dibenzofuran	59000	420	U	17	J	88	J	15	J	140	J	12	J	500	U	370	U	380	U	33	J
Fluoranthene	100000	130	J	330	J	2600		1100		500		160	J	90	J	150	J	63	J	240	J
Fluorene	100000	14	J	29	J	300	J	45	J	210	J	21	J	500	U	11	J	380	U	43	J
Hexachlorobenzene	1200	42	U	39	U	70	U	43	U	40	U	39	U	50	U	37	U	38	U	39	U
Indeno[1,2,3-cd]pyrene	500	39	J	67		570		220		120		48		34	J	110		18	J	64	
Naphthalene	100000	420	U	12	J	75	J	15	J	33	J	10	J	21	J	370	U	380	U	36	J
Pentachlorophenol	6700	340	U	310	U	560	U	350	U	320	U	320	U	400	U	300	U	310	U	310	U
Phenanthrene	100000	150	J	260	J	3100		570		590		140	J	41	J	42	J	38	J	190	J
Phenol	100000	420	U	390	U	700	U	430	U	400	U	390	U	500	U	370	U	380	U	390	U
Pyrene	100000	220	J	350	J	3500		1600		650		230	J	87	J	150	J	60	J	220	J
Total Conc	NA	1003.0		1878.0		18199.0		6457.0		3809.0		1147.0		556.0		1391.0		337.0		1478.0	
Total Estimated Conc. (TICs)	100000**	3710.0		4100.0		64800.0		6100.0		3620.0		5030.0		7890.0		8160.0		3800.0		9280.0	

Highlighted Concentrations shownin fold type face exceed limits
**Site Specific Soil Cleanup Objectives
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Brownfield Cleanup Site C130153
Former Cibro Petroleum Terminal Site, Island Park, New York
February, 2019

Table 2 (Continued)
Results for SVOCs BY 8270D- Pads 11, 13, and 14

Sample ID	NY 375-6.8(b)	PDC-RI-TP11(3)		PDC-RI-TP12 (3)		PDC-RI-TP13 (3)		PDC-RI-TP14 (3)		PDC-RI-TP11-1-AP(3)		PDC-RI-TP11-1-BP(4.5)		PDC-RI-TP11-2-AP(5)		PDC-RI-TP11-3(4-6)		PDC-RI-TP11-3Peat(6.5)	
Sampling Date	Restricted Residential	11/15/2018		11/15/2018		11/15/2018		11/15/2018		12/6/2018		12/6/2018		12/6/2018		12/6/2018		12/6/2018	
Matrix	Soil Cleanup	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Dilution Factor	Criteria	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	
SVOCs by 8270D	Criteria	Result		Result		Result		Result		Result		Result		Result		Result		Result	
2-Methylphenol	100000	400	U	410	U	400	U	410		390	U	1200	U	400	U	400	U	1000	U
3 & 4 Methylphenol	NA	400	U	410	U	400	U	410		390	U	1200	U	400	U	400	U	32	J
Acenaphthene	100000	400	U	410	U	190	J	410		390	U	1200	U	400	U	400	U	1000	U
Acenaphthylene	100000	400	U	410	U	18	J	410		390	U	1200	U	400	U	400	U	1000	U
Anthracene	100000	400	U	410	U	230	J	410		390	U	1200	U	400	U	400	U	1000	U
Benzo[a]anthracene	1000	40	U	60		430		90		18	J	120	U	14	J	40	U	100	U
Benzo[a]pyrene	1000	40	U	51		440		85		39	U	120	U	40	U	40	U	100	U
Benzo[b]fluoranthene	1000	40	U	69		480		110		39	U	120	U	40	U	40	U	100	U
Benzo[g,h,i]perylene	100000	400	U	33	J	260	J	59		390	U	1200	U	400	U	400	U	1000	U
Benzo[k]fluoranthene	3900	40	U	27	J	350		71		39	U *	120	U *	40	U *	40	U *	100	U
Chrysene	3900	400	U	66	J	460		88		390	U	1200	U	400	U	400	U	1000	U
Dibenz(a,h)anthracene	330	40	U	41	U	85		19		39	U	120	U	40	U	40	U	100	U
Dibenzofuran	59000	400	U	410	U	200	J	410		390	U	1200	U	400	U	400	U	1000	U
Fluoranthene	100000	400	U	110	J	910		180		390	U	1200	U	22	J	400	U	1000	U
Fluorene	100000	400	U	19	J	320	J	16		13	J	1200	U	400	U	400	U	1000	U
Hexachlorobenzene	1200	40	U	41	U	40	U	41		39	U	120	U	40	U	40	U	100	U
Indeno[1,2,3-cd]pyrene	500	40	U	37	J	290		65		39	U	120	U	40	U	40	U	100	U
Naphthalene	100000	58	J	21	J	540		12		390	U	1200	U	400	U	400	U	24	J
Pentachlorophenol	6700	320	U	330	U	320	U	330		310	U	960	U	320	U	330	U	840	U
Phenanthrene	100000	400	U	79	J	920		100		16	J	1200	U	400	U	400	U	1000	U
Phenol	100000	400	U	410	U	400	U	410		390	U	1200	U	400	U	400	U	60	J
Pyrene	100000	400	U	110	J	860		170		22	J	1200	U	31	J	400	U	1000	U
Total Conc	NA	58.0		682.0		6983.0		1065.0		69.0		0.0		67.0		0.0		116.0	
Total Estimated Conc. (TICs)	100000**	1300.0		0.0*T		14790.0		3150.0		7840.0		316000.0		12430.0		2200.0		160000.0	

**Site Specific Soil Cleanup Objectives

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Brownfield Cleanup Site C130153
Former Cibro Petroleum Terminal Site, Island Park, New York
February, 2019

Table 3
Results for VOCs BY 8260C- TP3 Post-Excavation

Sample ID	NY 375-6.8(b)	PDC-PX-TP3-1		PDC-PX-TP3-2		PDC-PX-TP3-3		PDC-PX-TP3-4		PDC-PX-TP3-5		PDC-SP-TP3-1	
Sampling Date	Restricted Residential	12/6/2018		12/6/2018		12/6/2018		12/6/2018		12/6/2018		12/6/2018	
Matrix	Soil Cleanup	Soil		Soil		Soil		Soil		Soil		Soil	
Dilution Factor	Criteria	1		1		1		1		1		1	
Units	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
VOCs BY 8260C	Criteria	Result		Result		Result		Result		Result		Result	
1,1,1-Trichloroethane	100000	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
1,1-Dichloroethane	26000	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
1,1-Dichloroethene	100000	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
1,2,4-Trimethylbenzene	52000	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
1,2-Dichlorobenzene	100000	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
1,2-Dichloroethane	3100	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
1,3,5-Trimethylbenzene	NA	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
1,3-Dichlorobenzene	49000	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
1,4-Dichlorobenzene	13000	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
1,4-Dioxane	13000	90	U	20	U	20	U	25	U	23	U	27	U
2-Butanone (MEK)	NA	10	J	3.7	J	1.7	J	1.9	J	5.7	J	4.7	J
Acetone	100000	150		56		24		59		48		62	
Benzene	4800	4.5	U	0.48	J	0.98	U	1.3	U	0.72	J	0.88	J
Carbon tetrachloride	2400	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
Chlorobenzene	100000	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
Chloroform	49000	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
cis-1,2-Dichloroethene	100000	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
Ethylbenzene	41000	4.5	U	1.0	U	0.98	U	1.3	U	0.44	J	0.31	J
Methyl tert-butyl ether	100000	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
Methylene Chloride	100000	1.1	J	1.8		1.5		0.32	J	0.55	J	0.44	J
n-Butylbenzene	100000	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
N-Propylbenzene	100000	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
sec-Butylbenzene	100000	4.5	U	1.0	U	0.98	U	1.3	U	0.27	J	1.3	U
tert-Butylbenzene	100000	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
Tetrachloroethene	19000	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
Toluene	100000	7.9		2.9		0.62	J	0.79	J	7.3		7.2	
trans-1,2-Dichloroethene	100000	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
Trichloroethene	21000	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
Vinyl chloride	900	4.5	U	1.0	U	0.98	U	1.3	U	1.2	U	1.3	U
Xylenes, Total	100000	1.8	J	2.0	U	0.59	J	1.0	J	0.89	J	1.0	J
Total Conc	NA	170.8		64.88		28.41		63.01		63.87		76.53	
Total Estimated Conc. (TICs)	10000**	36.0		17.1		0.0*T		35.2		0.0*T		269.3	

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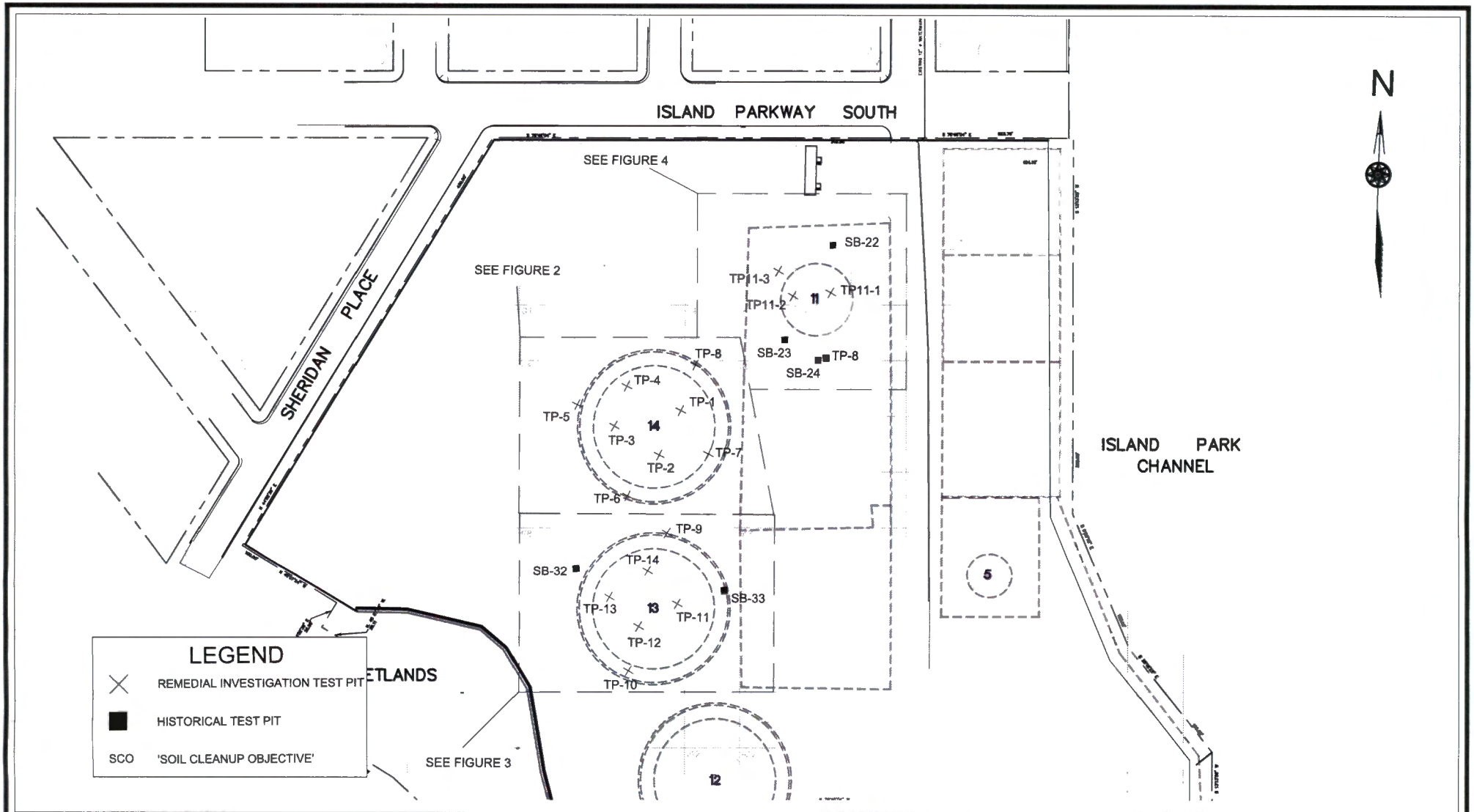
Brownfield Cleanup Site C130153
Former Cibro Petroleum Terminal Site, Island Park, New York
February, 2019

Table 4
Results for SVOCs BY 8270D- TP3 Post-Excavation

Sample ID	NY 375-6.8(b)	PDC-PX-TP3-1		PDC-PX-TP3-2		PDC-PX-TP3-3		PDC-PX-TP3-4		PDC-PX-TP3-5		PDC-SP-TP3-1	
Sampling Date	Restricted Residential	12/6/2018		12/6/2018		12/6/2018		12/6/2018		12/6/2018		12/6/2018	
Matrix	Soil Cleanup	Soil		Soil		Soil		Soil		Soil		Soil	
Dilution Factor	Criteria	1		1		1		1		1		1	
Units	ug/kg	ug/kg		ug/kg		ug/kg		ug/kg		ug/kg		ug/kg	
SVOCs BY 8270D	Criteria	Result		Result		Result		Result		Result		Result	
2-Methylphenol	100000	1100	U	400	U	400	U	500	U	410	U	460	U
3 & 4 Methylphenol	NA	1100	U	400	U	400	U	64	J	410	U	460	U
Acenaphthene	100000	1100	U	64	J	400	U	500	U	410	U	460	U
Acenaphthylene	100000	1100	U	19	J	400	U	500	U	410	U	14	J
Anthracene	100000	1100	U	240	J	400	U	52	J	410	U	57	J
Benzo[a]anthracene	1000	110	U	940		27	J	150		66		240	
Benzo[a]pyrene	1000	110	U	740		40	U	110		56		190	
Benzo[b]fluoranthene	1000	110	U	620		28	J	180		85		230	
Benzo[g,h,i]perylene	100000	1100	U	390	J	12	J	83	J	37	J	110	J
Benzo[k]fluoranthene	3900	110	U	250	*	13	J *	45	J *	41	U *	51	*
Chrysene	3900	1100	U	1100		27	J	220	J	59	J	270	J
Dibenz(a,h)anthracene	330	110	U	130		40	U	50	U	41	U	37	J
Dibenzofuran	59000	1100	U	400	U	400	U	26	J	410	U	460	U
Fluoranthene	100000	1100	U	1000		32	J	260	J	99	J	340	J
Fluorene	100000	1100	U	73	J	400	U	35	J	410	U	32	J
Hexachlorobenzene	1200	110	U	40	U	40	U	50	U	41	U	46	U
Indeno[1,2,3-cd]pyrene	500	110	U	340		40	U	76		37	J	110	
Naphthalene	100000	1100	U	400	U	400	U	27	J	410	U	460	U
Pentachlorophenol	6700	850	U	320	U	320	U	400	U	330	U	370	U
Phenanthrene	100000	48	J	1400		28	J	280	J	73	J	250	J
Phenol	100000	1100	U	400	U	400	U	500	U	410	U	460	U
Pyrene	100000	1100	U	2000		48	J	350	J	120	J	500	
Total Conc	NA	48.0		9306.0		215.0		1958.0		632.0		2431.0	
Total Estimated Conc. (TICs)	100000**	93100.0		17870.0		6670.0		31530.0		510.0		21560.0	

**Site Specific Soil Cleanup Objectives
* : LCS or LCSD is outside acceptance limits.
J : Indicates an estimated value.
U : Analyzed for but not detected.



REVISIONS/ISSUES			
NO.	DATE	BY	DESCRIPTION

PDC HARBOR ISLE
7 WASHINGTON AVE
ISLAND PARK, NY 11558
FIGURE 1: REMEDIAL TEST PIT LOCATIONS

DRAWN BY: MB	CHECKED BY: JRS	DATE: 02/04/2019

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