



Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

US Route 6 (Westbound) IDOT STA 46+30 to 49+50 (ISGS Site 2696V-4)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-405-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a):

Soil from borings B01, B02, and B03 were sampled adjacent to ISGS Site No 2696V-4.  
See Exhibits 6, 6A, 7, 7A, and Table 7 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136607-4.  
Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

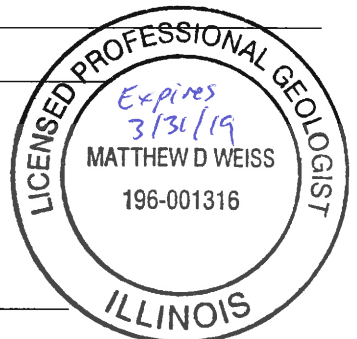
**Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))**

Company Name: Terracon Consultants, Inc  
 Street Address: 135 Ambassador Drive  
 City: Naperville State: IL Zip Code: 60540  
 Phone: 630-717-4263

Matt Weiss  
Printed Name:

[Signature]  
Licensed Professional Engineer or  
Licensed Professional Geologist Signature:

7/24/18  
Date:



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-4)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 1 of 4

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-4-B01 (0-5)	2696V-4-B02 (0-5)
				CCDD	Sample Depth (feet)	(0-5)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	10/31/2017	10/31/2017
<b>Volatile Organic Analytical Parameters</b>							
Acetone	mg/kg	---	---	25		<0.016	0.093
2-Butanone	mg/kg	---	---	17		<0.0041	0.012
<b>Semivolatile Organic Analytical Parameters</b>							
Anthracene	mg/kg	0.25	0.4	12000		<0.039	0.0077
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.0067	0.04
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.037	0.074
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.038	0.095
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.054	0.07
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		<0.039	0.025
Chrysene	mg/kg	1.2	2.7	88		0.019	0.053
Dibenzo(a,h)anthracene	mg/kg	0.2	0.42	0.09		<0.039	0.048
Fluoranthene	mg/kg	2.7	4.1	3100		0.0095	0.088
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.034	0.067
Naphthalene	mg/kg	0.04	0.2	1.8		<0.039	0.0074
Phenanthrene	mg/kg	1.3	2.5	210		0.015	0.032
Pyrene	mg/kg	1.9	3.0	2300		0.02	0.072
2-Methylnaphthalene	mg/kg	---	0.14	---		0.011	<0.085
<b>Inorganic Analytical Parameters</b>							
Arsenic	mg/kg	---	13	11.3		8.4	7.9
Barium	mg/kg	---	110	1500		13	63
Cadmium	mg/kg	---	0.6	5.2		0.083	0.21
Chromium, total	mg/kg	---	16.2	21		8.8	13
Lead	mg/kg	---	36	107		12	32
Mercury	mg/kg	---	0.06	0.1		0.028	0.043
Selenium	mg/kg	---	0.48	1.3		<0.56	0.57
Silver	mg/kg	---	0.55	4.4		<0.28	<0.32
Antimony	mg/kg	---	4.0	5		0.33	0.67
Beryllium	mg/kg	---	0.59	22		0.29	0.57
Calcium	mg/kg	---	9,300	---		99000	19000
Cobalt	mg/kg	---	8.9	20		8.9	6.9
Copper	mg/kg	---	19.6	2900		21	21
Cyanide	mg/kg	---	0.51	---		<0.47	<0.59
Iron	mg/kg	---	15,900	15000		15000	18000
Magnesium	mg/kg	---	4,820	325000		29000	9300
Manganese	mg/kg	---	636	630		360	360
Nickel	mg/kg	---	18	100		19	16
Potassium	mg/kg	---	1,268	---		1000	1300
Sodium	mg/kg	---	130	---		120	240
Thallium	mg/kg	---	0.32	2.6		<0.56	<0.63
Vanadium	mg/kg	---	25.2	550		11	18
Zinc	mg/kg	---	95	5100		46	83
pH			6.25	9		7.9	8
<b>Inorganic Analytical Parameters (SPLP)</b>							
Antimony,SPLP	mg/L	---	---	---		--	--
Arsenic,SPLP	mg/L	---	---	---		--	--
Barium,SPLP	mg/L	---	---	---		--	--
Beryllium,SPLP	mg/L	---	---	---		--	--
Cadmium,SPLP	mg/L	---	---	---		--	--
Calcium,SPLP	mg/L	---	---	---		--	--
Chromium,SPLP	mg/L	---	---	---		--	--
Cobalt,SPLP	mg/L	---	---	---		--	--
Copper,SPLP	mg/L	---	---	---		--	--
Iron,SPLP	mg/L	---	---	---		--	--
Lead,SPLP	mg/L	---	---	---		--	--
Magnesium,SPLP	mg/L	---	---	---		--	--
Manganese,SPLP	mg/L	---	---	---		0.047	0.058
Mercury,SPLP	mg/L	---	---	---		--	--
Nickel,SPLP	mg/L	---	---	---		--	--

Detected Constituents to MACs-PTB 174-009;Work Order:037A  
 Preliminary Site Investigation  
 FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-4)  
 Oak Forest/Markham, Cook County, IL  
 Terracon Project No. 11177029M  
 Page 2 of 4

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-4-B01 (0-5)	2696V-4-B02 (0-5)
				CCDD	Sample Depth (feet)	(0-5)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	10/31/2017	10/31/2017
Potassium,SPLP	mg/L	---	---	---		--	--
Selenium,SPLP	mg/L	---	---	---		--	--
Silver,SPLP	mg/L	---	---	---		--	--
Sodium,SPLP	mg/L	---	---	---		--	--
Thallium,SPLP	mg/L	---	---	---		--	--
Vanadium,SPLP	mg/L	---	---	---		--	--
Zinc,SPLP	mg/L	---	---	---		--	--
Cyanide,SPLP	mg/L	---	---	---		--	--
<b>Inorganic Analytical Parameters (TCLP)</b>							
Arsenic,TCLP	mg/L	---	---	---		<0.050	<0.050
Barium,TCLP	mg/L	---	---	---		0.4	0.49
Cadmium,TCLP	mg/L	---	---	---		<0.0050	0.003
Chromium,TCLP	mg/L	---	---	---		<0.025	<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075	<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020	<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050	<0.050
Silver,TCLP	mg/L	---	---	---		<0.025	<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060	<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040	<0.0040
Calcium,TCLP	mg/L	---	---	---		540	280
Cobalt,TCLP	mg/L	---	---	---		0.031	0.023
Copper,TCLP	mg/L	---	---	---		0.022	0.018
Cyanide,TCLP	mg/L	---	---	---		----	----
Iron,TCLP	mg/L	---	---	---		<0.40	0.3
Magnesium,TCLP	mg/L	---	---	---		19	77
Manganese,TCLP	mg/L	---	---	---		2.1	8.5
Nickel,TCLP	mg/L	---	---	---		0.061	0.019
Potassium,TCLP	mg/L	---	---	---		3.8	3.7
Sodium,TCLP	mg/L	---	---	---		----	----
Thallium,TCLP	mg/L	---	---	---		<0.0020	<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025	<0.025
Zinc,TCLP	mg/L	---	---	---		0.072	0.2



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-4)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
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Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-4-B03 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	10/31/2017
<b>Volatile Organic Analytical Parameters</b>						
Acetone	mg/kg	---	---	25		0.023
2-Butanone	mg/kg	---	---	17		<0.0040
<b>Semivolatile Organic Analytical Parameters</b>						
Anthracene	mg/kg	0.25	0.4	12000		<0.037
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		<0.037
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		<0.037
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.032
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.031
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		<0.037
Chrysene	mg/kg	1.2	2.7	88		<0.037
Dibenzo(a,h)anthracene	mg/kg	0.2	0.42	0.09		<0.037
Fluoranthene	mg/kg	2.7	4.1	3100		<0.037
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.029
Naphthalene	mg/kg	0.04	0.2	1.8		<0.037
Phenanthrene	mg/kg	1.3	2.5	210		<0.037
Pyrene	mg/kg	1.9	3.0	2300		<0.037
2-Methylnaphthalene	mg/kg	---	0.14	---		<0.076
<b>Inorganic Analytical Parameters</b>						
Arsenic	mg/kg	---	13	11.3		11
Barium	mg/kg	---	110	1500		16
Cadmium	mg/kg	---	0.6	5.2		0.067
Chromium, total	mg/kg	---	16.2	21		8.6
Lead	mg/kg	---	36	107		13
Mercury	mg/kg	---	0.06	0.1		0.024
Selenium	mg/kg	---	0.48	1.3		<0.58
Silver	mg/kg	---	0.55	4.4		<0.29
Antimony	mg/kg	---	4.0	5		0.51
Beryllium	mg/kg	---	0.59	22		0.31
Calcium	mg/kg	---	9,300	---		120000
Cobalt	mg/kg	---	8.9	20		5.2
Copper	mg/kg	---	19.6	2900		17
Cyanide	mg/kg	---	0.51	---		<0.53
Iron	mg/kg	---	15,900	15000		17000
Magnesium	mg/kg	---	4,820	325000		40000
Manganese	mg/kg	---	636	630		310
Nickel	mg/kg	---	18	100		14
Potassium	mg/kg	---	1,268	---		960
Sodium	mg/kg	---	130	---		300
Thallium	mg/kg	---	0.32	2.6		<0.58
Vanadium	mg/kg	---	25.2	550		11
Zinc	mg/kg	---	95	5100		54
pH			6.25	9		8.4
<b>Inorganic Analytical Parameters (SPLP)</b>						
Antimony,SPLP	mg/L	---	---	---		--
Arsenic,SPLP	mg/L	---	---	---		--
Barium,SPLP	mg/L	---	---	---		--
Beryllium,SPLP	mg/L	---	---	---		--
Cadmium,SPLP	mg/L	---	---	---		--
Calcium,SPLP	mg/L	---	---	---		--
Chromium,SPLP	mg/L	---	---	---		--
Cobalt,SPLP	mg/L	---	---	---		--
Copper,SPLP	mg/L	---	---	---		--
Iron,SPLP	mg/L	---	---	---		--
Lead,SPLP	mg/L	---	---	---		--
Magnesium,SPLP	mg/L	---	---	---		--
Manganese,SPLP	mg/L	---	---	---		0.12
Mercury,SPLP	mg/L	---	---	---		--
Nickel,SPLP	mg/L	---	---	---		--

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-4-B03 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	10/31/2017
Potassium,SPLP	mg/L	---	---	---		--
Selenium,SPLP	mg/L	---	---	---		--
Silver,SPLP	mg/L	---	---	---		--
Sodium,SPLP	mg/L	---	---	---		--
Thallium,SPLP	mg/L	---	---	---		--
Vanadium,SPLP	mg/L	---	---	---		--
Zinc,SPLP	mg/L	---	---	---		--
Cyanide,SPLP	mg/L	---	---	---		--
<b>Inorganic Analytical Parameters (TCLP)</b>						
Arsenic,TCLP	mg/L	---	---	---		<0.050
Barium,TCLP	mg/L	---	---	---		0.3
Cadmium,TCLP	mg/L	---	---	---		0.0031
Chromium,TCLP	mg/L	---	---	---		<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050
Silver,TCLP	mg/L	---	---	---		<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040
Calcium,TCLP	mg/L	---	---	---		360
Cobalt,TCLP	mg/L	---	---	---		0.015
Copper,TCLP	mg/L	---	---	---		0.022
Cyanide,TCLP	mg/L	---	---	---		----
Iron,TCLP	mg/L	---	---	---		<0.40
Magnesium,TCLP	mg/L	---	---	---		160
Manganese,TCLP	mg/L	---	---	---		3.3
Nickel,TCLP	mg/L	---	---	---		0.022
Potassium,TCLP	mg/L	---	---	---		1.9
Sodium,TCLP	mg/L	---	---	---		----
Thallium,TCLP	mg/L	---	---	---		<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025
Zinc,TCLP	mg/L	---	---	---		0.056

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-136607-4

Client Project/Site: IDOT - Oak Forest/Markam - WO37

For:

Terracon Consulting Eng & Scientists

135 Ambassador Drive

Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:

11/13/2017 5:45:02 PM

Jodie Bracken, Project Management Assistant II

[jodie.bracken@testamericainc.com](mailto:jodie.bracken@testamericainc.com)

Designee for

Richard Wright, Senior Project Manager

(708)534-5200

[richard.wright@testamericainc.com](mailto:richard.wright@testamericainc.com)

### LINKS

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Have a Question?



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[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markam - WO37

TestAmerica Job ID: 500-136607-4

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**Job ID: 500-136607-4**

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**Laboratory: TestAmerica Chicago**

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**Narrative**

**Job Narrative  
500-136607-4**

**Receipt**

The samples were received on 11/1/2017 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.9° C.

**GC/MS VOA**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**GC/MS Semi VOA**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Metals**

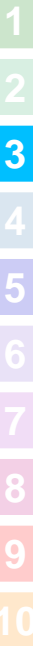
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Organic Prep**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markam - WO37

TestAmerica Job ID: 500-136607-4

**Client Sample ID: 2696V-4-B03 (0-5)**

**Lab Sample ID: 500-136607-6**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.023		0.016	0.0070	mg/Kg	1	☼	8260B	Total/NA
Benzo[b]fluoranthene	0.032	J	0.037	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.031	J	0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.029	J	0.037	0.0097	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.51	J B	1.2	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	11		0.58	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	16		0.58	0.066	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.31		0.23	0.054	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.067	J B	0.12	0.021	mg/Kg	1	☼	6010B	Total/NA
Chromium	8.6		0.58	0.29	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.2		0.29	0.076	mg/Kg	1	☼	6010B	Total/NA
Copper	17	B	0.58	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	17000	B	12	6.0	mg/Kg	1	☼	6010B	Total/NA
Lead	13		0.29	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	40000		5.8	2.9	mg/Kg	1	☼	6010B	Total/NA
Calcium	120000	B	120	20	mg/Kg	10	☼	6010B	Total/NA
Manganese	310		0.58	0.084	mg/Kg	1	☼	6010B	Total/NA
Nickel	14		0.58	0.17	mg/Kg	1	☼	6010B	Total/NA
Vanadium	11		0.29	0.068	mg/Kg	1	☼	6010B	Total/NA
Zinc	54		1.2	0.51	mg/Kg	1	☼	6010B	Total/NA
Potassium	960		29	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	300		58	8.6	mg/Kg	1	☼	6010B	Total/NA
Barium	0.30	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0031	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	360		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.015	J	0.025	0.010	mg/L	1		6010B	TCLP
Copper	0.022	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	160		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	3.3		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.022	J	0.025	0.010	mg/L	1		6010B	TCLP
Potassium	1.9	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.056	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.12		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.024		0.018	0.0060	mg/Kg	1	☼	7471B	Total/NA
pH	8.4		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-4-B02 (0-5)**

**Lab Sample ID: 500-136607-7**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.093		0.022	0.0094	mg/Kg	1	☼	8260B	Total/NA
2-Butanone (MEK)	0.012		0.0054	0.0024	mg/Kg	1	☼	8260B	Total/NA
Anthracene	0.0077	J	0.042	0.0070	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.040	J	0.042	0.0057	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.074		0.042	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.095		0.042	0.0091	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.070		0.042	0.014	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.025	J	0.042	0.012	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.053		0.042	0.011	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.048		0.042	0.0081	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.088		0.042	0.0078	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markam - WO37

TestAmerica Job ID: 500-136607-4

**Client Sample ID: 2696V-4-B02 (0-5) (Continued)**

**Lab Sample ID: 500-136607-7**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Indeno[1,2,3-cd]pyrene	0.067		0.042	0.011	mg/Kg	1	☼	8270D		Total/NA
Naphthalene	0.0074	J	0.042	0.0065	mg/Kg	1	☼	8270D		Total/NA
Phenanthrene	0.032	J	0.042	0.0059	mg/Kg	1	☼	8270D		Total/NA
Pyrene	0.072		0.042	0.0084	mg/Kg	1	☼	8270D		Total/NA
Antimony	0.67	J B	1.3	0.25	mg/Kg	1	☼	6010B		Total/NA
Arsenic	7.9		0.63	0.22	mg/Kg	1	☼	6010B		Total/NA
Barium	63		0.63	0.072	mg/Kg	1	☼	6010B		Total/NA
Beryllium	0.57		0.25	0.059	mg/Kg	1	☼	6010B		Total/NA
Cadmium	0.21	B	0.13	0.023	mg/Kg	1	☼	6010B		Total/NA
Chromium	13		0.63	0.31	mg/Kg	1	☼	6010B		Total/NA
Cobalt	6.9		0.32	0.083	mg/Kg	1	☼	6010B		Total/NA
Copper	21	B	0.63	0.18	mg/Kg	1	☼	6010B		Total/NA
Iron	18000	B	13	6.6	mg/Kg	1	☼	6010B		Total/NA
Lead	32		0.32	0.15	mg/Kg	1	☼	6010B		Total/NA
Magnesium	9300		6.3	3.1	mg/Kg	1	☼	6010B		Total/NA
Calcium	19000	B	13	2.1	mg/Kg	1	☼	6010B		Total/NA
Manganese	360		0.63	0.091	mg/Kg	1	☼	6010B		Total/NA
Nickel	16		0.63	0.18	mg/Kg	1	☼	6010B		Total/NA
Selenium	0.57	J	0.63	0.37	mg/Kg	1	☼	6010B		Total/NA
Vanadium	18		0.32	0.074	mg/Kg	1	☼	6010B		Total/NA
Zinc	83		1.3	0.55	mg/Kg	1	☼	6010B		Total/NA
Potassium	1300		32	11	mg/Kg	1	☼	6010B		Total/NA
Sodium	240		63	9.3	mg/Kg	1	☼	6010B		Total/NA
Barium	0.49	J	0.50	0.050	mg/L	1		6010B		TCLP
Cadmium	0.0030	J	0.0050	0.0020	mg/L	1		6010B		TCLP
Calcium	280		5.0	0.50	mg/L	1		6010B		TCLP
Cobalt	0.023	J	0.025	0.010	mg/L	1		6010B		TCLP
Copper	0.018	J	0.025	0.010	mg/L	1		6010B		TCLP
Iron	0.30	J	0.40	0.20	mg/L	1		6010B		TCLP
Magnesium	77		2.5	0.50	mg/L	1		6010B		TCLP
Manganese	8.5		0.025	0.010	mg/L	1		6010B		TCLP
Nickel	0.019	J	0.025	0.010	mg/L	1		6010B		TCLP
Potassium	3.7		2.5	0.50	mg/L	1		6010B		TCLP
Zinc	0.20	J	0.50	0.020	mg/L	1		6010B		TCLP
Manganese	0.058		0.025	0.010	mg/L	1		6010B		SPLP East
Mercury	0.043		0.020	0.0065	mg/Kg	1	☼	7471B		Total/NA
pH	8.0		0.20	0.20	SU	1		9045D		Total/NA

**Client Sample ID: 2696V-4-B01 (0-5)**

**Lab Sample ID: 500-136607-8**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Benzo[a]anthracene	0.0067	J	0.039	0.0053	mg/Kg	1	☼	8270D		Total/NA
Benzo[a]pyrene	0.037	J	0.039	0.0076	mg/Kg	1	☼	8270D		Total/NA
Benzo[b]fluoranthene	0.038	J	0.039	0.0084	mg/Kg	1	☼	8270D		Total/NA
Benzo[g,h,i]perylene	0.054		0.039	0.013	mg/Kg	1	☼	8270D		Total/NA
Chrysene	0.019	J	0.039	0.011	mg/Kg	1	☼	8270D		Total/NA
Fluoranthene	0.0095	J	0.039	0.0073	mg/Kg	1	☼	8270D		Total/NA
Indeno[1,2,3-cd]pyrene	0.034	J	0.039	0.010	mg/Kg	1	☼	8270D		Total/NA
2-Methylnaphthalene	0.011	J	0.079	0.0072	mg/Kg	1	☼	8270D		Total/NA
Phenanthrene	0.015	J	0.039	0.0055	mg/Kg	1	☼	8270D		Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markam - WO37

TestAmerica Job ID: 500-136607-4

**Client Sample ID: 2696V-4-B01 (0-5) (Continued)**

**Lab Sample ID: 500-136607-8**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Pyrene	0.020	J	0.039	0.0078	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.33	J B	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	8.4		0.56	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	13		0.56	0.064	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.29		0.23	0.053	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.083	J B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	8.8		0.56	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	8.9		0.28	0.074	mg/Kg	1	☼	6010B	Total/NA
Copper	21	B	0.56	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	15000	B	11	5.9	mg/Kg	1	☼	6010B	Total/NA
Lead	12		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	29000		5.6	2.8	mg/Kg	1	☼	6010B	Total/NA
Calcium	99000	B	110	19	mg/Kg	10	☼	6010B	Total/NA
Manganese	360		0.56	0.082	mg/Kg	1	☼	6010B	Total/NA
Nickel	19		0.56	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	11		0.28	0.067	mg/Kg	1	☼	6010B	Total/NA
Zinc	46		1.1	0.50	mg/Kg	1	☼	6010B	Total/NA
Potassium	1000		28	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	120		56	8.4	mg/Kg	1	☼	6010B	Total/NA
Barium	0.40	J	0.50	0.050	mg/L	1		6010B	TCLP
Calcium	540		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.031		0.025	0.010	mg/L	1		6010B	TCLP
Copper	0.022	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	19		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	2.1		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.061		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	3.8		2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.072	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.047		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.028		0.019	0.0065	mg/Kg	1	☼	7471B	Total/NA
pH	7.9		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markam - WO37

TestAmerica Job ID: 500-136607-4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136607-6	2696V-4-B03 (0-5)	Solid	10/31/17 13:35	11/01/17 09:15
500-136607-7	2696V-4-B02 (0-5)	Solid	10/31/17 14:05	11/01/17 09:15
500-136607-8	2696V-4-B01 (0-5)	Solid	10/31/17 14:30	11/01/17 09:15

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markam - WO37

TestAmerica Job ID: 500-136607-4

**Client Sample ID: 2696V-4-B03 (0-5)**

**Lab Sample ID: 500-136607-6**

**Date Collected: 10/31/17 13:35**

**Matrix: Solid**

**Date Received: 11/01/17 09:15**

**Percent Solids: 84.9**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.023</b>		0.016	0.0070	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Benzene	<0.0016		0.0016	0.00041	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Bromodichloromethane	<0.0016		0.0016	0.00033	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Bromoform	<0.0016		0.0016	0.00047	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Bromomethane	<0.0040		0.0040	0.0015	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
2-Butanone (MEK)	<0.0040		0.0040	0.0018	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Carbon disulfide	<0.0040		0.0040	0.00083	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Carbon tetrachloride	<0.0016		0.0016	0.00047	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Chlorobenzene	<0.0016		0.0016	0.00059	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Chloroethane	<0.0040		0.0040	0.0012	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Chloroform	<0.0016		0.0016	0.00056	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Chloromethane	<0.0040		0.0040	0.0016	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
cis-1,2-Dichloroethene	<0.0016		0.0016	0.00045	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
cis-1,3-Dichloropropene	<0.0016		0.0016	0.00048	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Dibromochloromethane	<0.0016		0.0016	0.00052	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
1,1-Dichloroethane	<0.0016		0.0016	0.00055	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
1,2-Dichloroethane	<0.0040		0.0040	0.0013	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
1,1-Dichloroethene	<0.0016		0.0016	0.00055	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
1,2-Dichloropropane	<0.0016		0.0016	0.00041	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
1,3-Dichloropropane, Total	<0.0016		0.0016	0.00056	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Ethylbenzene	<0.0016		0.0016	0.00077	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
2-Hexanone	<0.0040		0.0040	0.0013	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Methylene Chloride	<0.0040		0.0040	0.0016	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
4-Methyl-2-pentanone (MIBK)	<0.0040		0.0040	0.0012	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Methyl tert-butyl ether	<0.0016		0.0016	0.00047	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Styrene	<0.0016		0.0016	0.00048	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
1,1,2,2-Tetrachloroethane	<0.0016		0.0016	0.00051	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Tetrachloroethene	<0.0016		0.0016	0.00055	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Toluene	<0.0016		0.0016	0.00041	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
trans-1,2-Dichloroethene	<0.0016		0.0016	0.00071	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
trans-1,3-Dichloropropene	<0.0016		0.0016	0.00056	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
1,1,1-Trichloroethane	<0.0016		0.0016	0.00054	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
1,1,2-Trichloroethane	<0.0016		0.0016	0.00069	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Trichloroethene	<0.0016		0.0016	0.00054	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Vinyl acetate	<0.0040		0.0040	0.0014	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Vinyl chloride	<0.0016		0.0016	0.00071	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1
Xylenes, Total	<0.0032		0.0032	0.00051	mg/Kg	☼	11/01/17 18:01	11/03/17 18:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		75 - 131	11/01/17 18:01	11/03/17 18:11	1
Dibromofluoromethane	101		75 - 126	11/01/17 18:01	11/03/17 18:11	1
1,2-Dichloroethane-d4 (Surr)	93		70 - 134	11/01/17 18:01	11/03/17 18:11	1
Toluene-d8 (Surr)	95		75 - 124	11/01/17 18:01	11/03/17 18:11	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Anthracene	<0.037		0.037	0.0063	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Benzo[a]anthracene	<0.037		0.037	0.0050	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markam - WO37

TestAmerica Job ID: 500-136607-4

**Client Sample ID: 2696V-4-B03 (0-5)**

**Lab Sample ID: 500-136607-6**

**Date Collected: 10/31/17 13:35**

**Matrix: Solid**

**Date Received: 11/01/17 09:15**

**Percent Solids: 84.9**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.037		0.037	0.0073	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
<b>Benzo[b]fluoranthene</b>	<b>0.032</b>	<b>J</b>	0.037	0.0081	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
<b>Benzo[g,h,i]perylene</b>	<b>0.031</b>	<b>J</b>	0.037	0.012	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Benzo[k]fluoranthene	<0.037		0.037	0.011	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Chrysene	<0.037		0.037	0.010	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
2,4-Dinitrophenol	<0.76		0.76	0.66	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Fluoranthene	<0.037		0.037	0.0069	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Hexachlorobenzene	<0.076		0.076	0.0087	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.029</b>	<b>J</b>	0.037	0.0097	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
2-Methylnaphthalene	<0.076		0.076	0.0069	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Naphthalene	<0.037		0.037	0.0058	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
2-Nitrophenol	<0.37		0.37	0.089	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markam - WO37

TestAmerica Job ID: 500-136607-4

**Client Sample ID: 2696V-4-B03 (0-5)**

**Lab Sample ID: 500-136607-6**

Date Collected: 10/31/17 13:35

Matrix: Solid

Date Received: 11/01/17 09:15

Percent Solids: 84.9

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Pentachlorophenol	<0.76		0.76	0.60	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Phenanthrene	<0.037		0.037	0.0052	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Phenol	<0.19		0.19	0.083	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
Pyrene	<0.037		0.037	0.0074	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/07/17 07:13	11/07/17 18:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	88		44 - 121	11/07/17 07:13	11/07/17 18:04	1
2-Fluorophenol	107		46 - 133	11/07/17 07:13	11/07/17 18:04	1
Nitrobenzene-d5	93		41 - 120	11/07/17 07:13	11/07/17 18:04	1
Phenol-d5	107		46 - 125	11/07/17 07:13	11/07/17 18:04	1
Terphenyl-d14	103		35 - 160	11/07/17 07:13	11/07/17 18:04	1
2,4,6-Tribromophenol	78		25 - 139	11/07/17 07:13	11/07/17 18:04	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.51</b>	<b>J B</b>	1.2	0.22	mg/Kg	☼	11/02/17 15:42	11/05/17 22:02	1
<b>Arsenic</b>	<b>11</b>		0.58	0.20	mg/Kg	☼	11/02/17 15:42	11/03/17 15:53	1
<b>Barium</b>	<b>16</b>		0.58	0.066	mg/Kg	☼	11/02/17 15:42	11/03/17 15:53	1
<b>Beryllium</b>	<b>0.31</b>		0.23	0.054	mg/Kg	☼	11/02/17 15:42	11/03/17 15:53	1
<b>Cadmium</b>	<b>0.067</b>	<b>J B</b>	0.12	0.021	mg/Kg	☼	11/02/17 15:42	11/03/17 15:53	1
<b>Chromium</b>	<b>8.6</b>		0.58	0.29	mg/Kg	☼	11/02/17 15:42	11/03/17 15:53	1
<b>Cobalt</b>	<b>5.2</b>		0.29	0.076	mg/Kg	☼	11/02/17 15:42	11/03/17 15:53	1
<b>Copper</b>	<b>17</b>	<b>B</b>	0.58	0.16	mg/Kg	☼	11/02/17 15:42	11/03/17 15:53	1
<b>Iron</b>	<b>17000</b>	<b>B</b>	12	6.0	mg/Kg	☼	11/02/17 15:42	11/03/17 15:53	1
<b>Lead</b>	<b>13</b>		0.29	0.13	mg/Kg	☼	11/02/17 15:42	11/03/17 15:53	1
<b>Magnesium</b>	<b>40000</b>		5.8	2.9	mg/Kg	☼	11/02/17 15:42	11/03/17 15:53	1
<b>Calcium</b>	<b>120000</b>	<b>B</b>	120	20	mg/Kg	☼	11/02/17 15:42	11/05/17 22:06	10
<b>Manganese</b>	<b>310</b>		0.58	0.084	mg/Kg	☼	11/02/17 15:42	11/03/17 15:53	1
<b>Nickel</b>	<b>14</b>		0.58	0.17	mg/Kg	☼	11/02/17 15:42	11/03/17 15:53	1
Selenium	<0.58		0.58	0.34	mg/Kg	☼	11/02/17 15:42	11/03/17 15:53	1
Silver	<0.29		0.29	0.075	mg/Kg	☼	11/02/17 15:42	11/03/17 15:53	1
Thallium	<0.58		0.58	0.29	mg/Kg	☼	11/02/17 15:42	11/03/17 15:53	1
<b>Vanadium</b>	<b>11</b>		0.29	0.068	mg/Kg	☼	11/02/17 15:42	11/03/17 15:53	1
<b>Zinc</b>	<b>54</b>		1.2	0.51	mg/Kg	☼	11/02/17 15:42	11/03/17 15:53	1
<b>Potassium</b>	<b>960</b>		29	10	mg/Kg	☼	11/02/17 15:42	11/03/17 15:53	1
<b>Sodium</b>	<b>300</b>		58	8.6	mg/Kg	☼	11/02/17 15:42	11/03/17 15:53	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/06/17 11:00	11/07/17 10:06	1
<b>Barium</b>	<b>0.30</b>	<b>J</b>	0.50	0.050	mg/L		11/06/17 11:00	11/07/17 10:06	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/06/17 11:00	11/07/17 10:06	1
<b>Cadmium</b>	<b>0.0031</b>	<b>J</b>	0.0050	0.0020	mg/L		11/06/17 11:00	11/07/17 10:06	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markam - WO37

TestAmerica Job ID: 500-136607-4

**Client Sample ID: 2696V-4-B03 (0-5)**

**Lab Sample ID: 500-136607-6**

**Date Collected: 10/31/17 13:35**

**Matrix: Solid**

**Date Received: 11/01/17 09:15**

**Percent Solids: 84.9**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>360</b>		5.0	0.50	mg/L		11/06/17 11:00	11/07/17 10:06	1
Chromium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:06	1
<b>Cobalt</b>	<b>0.015</b>	<b>J</b>	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:06	1
<b>Copper</b>	<b>0.022</b>	<b>J</b>	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:06	1
Iron	<0.40		0.40	0.20	mg/L		11/06/17 11:00	11/07/17 10:06	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/06/17 11:00	11/07/17 10:06	1
<b>Magnesium</b>	<b>160</b>		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:06	1
<b>Manganese</b>	<b>3.3</b>		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:06	1
<b>Nickel</b>	<b>0.022</b>	<b>J</b>	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:06	1
<b>Potassium</b>	<b>1.9</b>	<b>J</b>	2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:06	1
Selenium	<0.050		0.050	0.020	mg/L		11/06/17 11:00	11/07/17 10:06	1
Silver	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:06	1
Vanadium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:06	1
<b>Zinc</b>	<b>0.056</b>	<b>J</b>	0.50	0.020	mg/L		11/06/17 11:00	11/07/17 10:06	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.12</b>		0.025	0.010	mg/L		11/06/17 10:45	11/07/17 13:50	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/06/17 11:00	11/07/17 13:55	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/06/17 11:00	11/07/17 13:55	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/06/17 14:30	11/07/17 08:44	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.024</b>		0.018	0.0060	mg/Kg	☼	11/03/17 15:15	11/06/17 09:35	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.53		0.53	0.18	mg/Kg	☼	11/11/17 10:00	11/11/17 13:34	1
<b>pH</b>	<b>8.4</b>		0.20	0.20	SU			11/07/17 16:52	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markam - WO37

TestAmerica Job ID: 500-136607-4

**Client Sample ID: 2696V-4-B02 (0-5)**

**Lab Sample ID: 500-136607-7**

**Date Collected: 10/31/17 14:05**

**Matrix: Solid**

**Date Received: 11/01/17 09:15**

**Percent Solids: 77.3**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.093</b>		0.022	0.0094	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Benzene	<0.0022		0.0022	0.00055	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Bromodichloromethane	<0.0022		0.0022	0.00044	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Bromoform	<0.0022		0.0022	0.00063	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Bromomethane	<0.0054		0.0054	0.0020	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
<b>2-Butanone (MEK)</b>	<b>0.012</b>		0.0054	0.0024	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Carbon disulfide	<0.0054		0.0054	0.0011	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Carbon tetrachloride	<0.0022		0.0022	0.00063	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Chlorobenzene	<0.0022		0.0022	0.00080	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Chloroethane	<0.0054		0.0054	0.0016	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Chloroform	<0.0022		0.0022	0.00075	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Chloromethane	<0.0054		0.0054	0.0022	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
cis-1,2-Dichloroethene	<0.0022		0.0022	0.00060	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
cis-1,3-Dichloropropene	<0.0022		0.0022	0.00065	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Dibromochloromethane	<0.0022		0.0022	0.00071	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
1,1-Dichloroethane	<0.0022		0.0022	0.00074	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
1,2-Dichloroethane	<0.0054		0.0054	0.0017	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
1,1-Dichloroethene	<0.0022		0.0022	0.00074	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
1,2-Dichloropropane	<0.0022		0.0022	0.00056	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
1,3-Dichloropropane, Total	<0.0022		0.0022	0.00076	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Ethylbenzene	<0.0022		0.0022	0.0010	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
2-Hexanone	<0.0054		0.0054	0.0017	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Methylene Chloride	<0.0054		0.0054	0.0021	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
4-Methyl-2-pentanone (MIBK)	<0.0054		0.0054	0.0016	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Methyl tert-butyl ether	<0.0022		0.0022	0.00063	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Styrene	<0.0022		0.0022	0.00065	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
1,1,2,2-Tetrachloroethane	<0.0022		0.0022	0.00069	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Tetrachloroethene	<0.0022		0.0022	0.00073	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Toluene	<0.0022		0.0022	0.00054	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
trans-1,2-Dichloroethene	<0.0022		0.0022	0.00096	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
trans-1,3-Dichloropropene	<0.0022		0.0022	0.00076	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
1,1,1-Trichloroethane	<0.0022		0.0022	0.00072	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
1,1,2-Trichloroethane	<0.0022		0.0022	0.00093	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Trichloroethene	<0.0022		0.0022	0.00073	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Vinyl acetate	<0.0054		0.0054	0.0019	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Vinyl chloride	<0.0022		0.0022	0.00095	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1
Xylenes, Total	<0.0043		0.0043	0.00069	mg/Kg	☼	11/01/17 18:01	11/03/17 18:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		75 - 131	11/01/17 18:01	11/03/17 18:36	1
Dibromofluoromethane	103		75 - 126	11/01/17 18:01	11/03/17 18:36	1
1,2-Dichloroethane-d4 (Surr)	97		70 - 134	11/01/17 18:01	11/03/17 18:36	1
Toluene-d8 (Surr)	98		75 - 124	11/01/17 18:01	11/03/17 18:36	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.042		0.042	0.0076	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Acenaphthylene	<0.042		0.042	0.0055	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
<b>Anthracene</b>	<b>0.0077</b>	<b>J</b>	0.042	0.0070	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
<b>Benzo[a]anthracene</b>	<b>0.040</b>	<b>J</b>	0.042	0.0057	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markam - WO37

TestAmerica Job ID: 500-136607-4

**Client Sample ID: 2696V-4-B02 (0-5)**

**Lab Sample ID: 500-136607-7**

**Date Collected: 10/31/17 14:05**

**Matrix: Solid**

**Date Received: 11/01/17 09:15**

**Percent Solids: 77.3**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.074</b>		0.042	0.0081	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
<b>Benzo[b]fluoranthene</b>	<b>0.095</b>		0.042	0.0091	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
<b>Benzo[g,h,i]perylene</b>	<b>0.070</b>		0.042	0.014	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
<b>Benzo[k]fluoranthene</b>	<b>0.025</b>	<b>J</b>	0.042	0.012	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.043	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.063	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Bis(2-ethylhexyl) phthalate	<0.21		0.21	0.077	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.055	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Butyl benzyl phthalate	<0.21		0.21	0.080	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Carbazole	<0.21		0.21	0.11	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
4-Chloroaniline	<0.85		0.85	0.20	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
4-Chloro-3-methylphenol	<0.42		0.42	0.14	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
2-Chloronaphthalene	<0.21		0.21	0.046	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
2-Chlorophenol	<0.21		0.21	0.072	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.049	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
<b>Chrysene</b>	<b>0.053</b>		0.042	0.011	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
<b>Dibenz(a,h)anthracene</b>	<b>0.048</b>		0.042	0.0081	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Dibenzofuran	<0.21		0.21	0.049	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
1,2-Dichlorobenzene	<0.21		0.21	0.050	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
1,3-Dichlorobenzene	<0.21		0.21	0.047	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
1,4-Dichlorobenzene	<0.21		0.21	0.054	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
3,3'-Dichlorobenzidine	<0.21		0.21	0.059	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
2,4-Dichlorophenol	<0.42		0.42	0.10	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Diethyl phthalate	<0.21		0.21	0.071	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
2,4-Dimethylphenol	<0.42		0.42	0.16	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Dimethyl phthalate	<0.21		0.21	0.055	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Di-n-butyl phthalate	<0.21		0.21	0.064	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
4,6-Dinitro-2-methylphenol	<0.85		0.85	0.34	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
2,4-Dinitrophenol	<0.85		0.85	0.74	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
2,4-Dinitrotoluene	<0.21		0.21	0.067	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
2,6-Dinitrotoluene	<0.21		0.21	0.083	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Di-n-octyl phthalate	<0.21		0.21	0.069	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
<b>Fluoranthene</b>	<b>0.088</b>		0.042	0.0078	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Fluorene	<0.042		0.042	0.0059	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Hexachlorobenzene	<0.085		0.085	0.0097	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Hexachlorobutadiene	<0.21		0.21	0.066	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Hexachlorocyclopentadiene	<0.85		0.85	0.24	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Hexachloroethane	<0.21		0.21	0.064	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.067</b>		0.042	0.011	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Isophorone	<0.21		0.21	0.047	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
2-Methylnaphthalene	<0.085		0.085	0.0077	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
2-Methylphenol	<0.21		0.21	0.067	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
3 & 4 Methylphenol	<0.21		0.21	0.070	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
<b>Naphthalene</b>	<b>0.0074</b>	<b>J</b>	0.042	0.0065	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
2-Nitroaniline	<0.21		0.21	0.057	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
3-Nitroaniline	<0.42		0.42	0.13	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
4-Nitroaniline	<0.42		0.42	0.18	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Nitrobenzene	<0.042		0.042	0.010	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
2-Nitrophenol	<0.42		0.42	0.099	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markam - WO37

TestAmerica Job ID: 500-136607-4

**Client Sample ID: 2696V-4-B02 (0-5)**

**Lab Sample ID: 500-136607-7**

Date Collected: 10/31/17 14:05

Matrix: Solid

Date Received: 11/01/17 09:15

Percent Solids: 77.3

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.85		0.85	0.40	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
N-Nitrosodi-n-propylamine	<0.085		0.085	0.051	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
N-Nitrosodiphenylamine	<0.21		0.21	0.050	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.049	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Pentachlorophenol	<0.85		0.85	0.67	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
<b>Phenanthrene</b>	<b>0.032</b>	<b>J</b>	0.042	0.0059	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
Phenol	<0.21		0.21	0.093	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
<b>Pyrene</b>	<b>0.072</b>		0.042	0.0084	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.045	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
2,4,5-Trichlorophenol	<0.42		0.42	0.096	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1
2,4,6-Trichlorophenol	<0.42		0.42	0.14	mg/Kg	☼	11/07/17 07:13	11/07/17 18:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	95		44 - 121	11/07/17 07:13	11/07/17 18:31	1
2-Fluorophenol	107		46 - 133	11/07/17 07:13	11/07/17 18:31	1
Nitrobenzene-d5	96		41 - 120	11/07/17 07:13	11/07/17 18:31	1
Phenol-d5	106		46 - 125	11/07/17 07:13	11/07/17 18:31	1
Terphenyl-d14	102		35 - 160	11/07/17 07:13	11/07/17 18:31	1
2,4,6-Tribromophenol	85		25 - 139	11/07/17 07:13	11/07/17 18:31	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.67</b>	<b>J B</b>	1.3	0.25	mg/Kg	☼	11/02/17 15:42	11/05/17 22:10	1
<b>Arsenic</b>	<b>7.9</b>		0.63	0.22	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1
<b>Barium</b>	<b>63</b>		0.63	0.072	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1
<b>Beryllium</b>	<b>0.57</b>		0.25	0.059	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1
<b>Cadmium</b>	<b>0.21</b>	<b>B</b>	0.13	0.023	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1
<b>Chromium</b>	<b>13</b>		0.63	0.31	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1
<b>Cobalt</b>	<b>6.9</b>		0.32	0.083	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1
<b>Copper</b>	<b>21</b>	<b>B</b>	0.63	0.18	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1
<b>Iron</b>	<b>18000</b>	<b>B</b>	13	6.6	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1
<b>Lead</b>	<b>32</b>		0.32	0.15	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1
<b>Magnesium</b>	<b>9300</b>		6.3	3.1	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1
<b>Calcium</b>	<b>19000</b>	<b>B</b>	13	2.1	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1
<b>Manganese</b>	<b>360</b>		0.63	0.091	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1
<b>Nickel</b>	<b>16</b>		0.63	0.18	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1
<b>Selenium</b>	<b>0.57</b>	<b>J</b>	0.63	0.37	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1
Silver	<0.32		0.32	0.081	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1
Thallium	<0.63		0.63	0.31	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1
<b>Vanadium</b>	<b>18</b>		0.32	0.074	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1
<b>Zinc</b>	<b>83</b>		1.3	0.55	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1
<b>Potassium</b>	<b>1300</b>		32	11	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1
<b>Sodium</b>	<b>240</b>		63	9.3	mg/Kg	☼	11/02/17 15:42	11/03/17 15:57	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/06/17 11:00	11/07/17 10:10	1
<b>Barium</b>	<b>0.49</b>	<b>J</b>	0.50	0.050	mg/L		11/06/17 11:00	11/07/17 10:10	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/06/17 11:00	11/07/17 10:10	1
<b>Cadmium</b>	<b>0.0030</b>	<b>J</b>	0.0050	0.0020	mg/L		11/06/17 11:00	11/07/17 10:10	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markam - WO37

TestAmerica Job ID: 500-136607-4

**Client Sample ID: 2696V-4-B02 (0-5)**

**Lab Sample ID: 500-136607-7**

Date Collected: 10/31/17 14:05

Matrix: Solid

Date Received: 11/01/17 09:15

Percent Solids: 77.3

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	280		5.0	0.50	mg/L		11/06/17 11:00	11/07/17 10:10	1
Chromium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:10	1
Cobalt	0.023	J	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:10	1
Copper	0.018	J	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:10	1
Iron	0.30	J	0.40	0.20	mg/L		11/06/17 11:00	11/07/17 10:10	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/06/17 11:00	11/07/17 10:10	1
Magnesium	77		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:10	1
Manganese	8.5		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:10	1
Nickel	0.019	J	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:10	1
Potassium	3.7		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:10	1
Selenium	<0.050		0.050	0.020	mg/L		11/06/17 11:00	11/07/17 10:10	1
Silver	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:10	1
Vanadium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:10	1
Zinc	0.20	J	0.50	0.020	mg/L		11/06/17 11:00	11/07/17 10:10	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.058		0.025	0.010	mg/L		11/06/17 10:45	11/07/17 13:53	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/06/17 11:00	11/07/17 14:00	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/06/17 11:00	11/07/17 14:00	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/06/17 14:30	11/07/17 08:45	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.043		0.020	0.0065	mg/Kg	☼	11/03/17 15:15	11/06/17 09:37	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.59		0.59	0.20	mg/Kg	☼	11/11/17 10:00	11/11/17 13:34	1
pH	8.0		0.20	0.20	SU			11/07/17 16:52	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markam - WO37

TestAmerica Job ID: 500-136607-4

**Client Sample ID: 2696V-4-B01 (0-5)**

**Lab Sample ID: 500-136607-8**

**Date Collected: 10/31/17 14:30**

**Matrix: Solid**

**Date Received: 11/01/17 09:15**

**Percent Solids: 83.7**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.016		0.016	0.0071	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Benzene	<0.0016		0.0016	0.00042	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Bromodichloromethane	<0.0016		0.0016	0.00033	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Bromoform	<0.0016		0.0016	0.00048	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Bromomethane	<0.0041		0.0041	0.0015	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
2-Butanone (MEK)	<0.0041		0.0041	0.0018	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Carbon disulfide	<0.0041		0.0041	0.00085	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Carbon tetrachloride	<0.0016		0.0016	0.00047	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Chlorobenzene	<0.0016		0.0016	0.00060	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Chloroethane	<0.0041		0.0041	0.0012	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Chloroform	<0.0016		0.0016	0.00057	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Chloromethane	<0.0041		0.0041	0.0016	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
cis-1,2-Dichloroethene	<0.0016		0.0016	0.00046	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
cis-1,3-Dichloropropene	<0.0016		0.0016	0.00049	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Dibromochloromethane	<0.0016		0.0016	0.00053	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
1,1-Dichloroethane	<0.0016		0.0016	0.00056	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
1,2-Dichloroethane	<0.0041		0.0041	0.0013	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
1,1-Dichloroethene	<0.0016		0.0016	0.00056	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
1,2-Dichloropropane	<0.0016		0.0016	0.00042	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
1,3-Dichloropropane, Total	<0.0016		0.0016	0.00057	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Ethylbenzene	<0.0016		0.0016	0.00078	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
2-Hexanone	<0.0041		0.0041	0.0013	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Methylene Chloride	<0.0041		0.0041	0.0016	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
4-Methyl-2-pentanone (MIBK)	<0.0041		0.0041	0.0012	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Methyl tert-butyl ether	<0.0016		0.0016	0.00048	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Styrene	<0.0016		0.0016	0.00049	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
1,1,2,2-Tetrachloroethane	<0.0016		0.0016	0.00052	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Tetrachloroethene	<0.0016		0.0016	0.00056	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Toluene	<0.0016		0.0016	0.00041	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
trans-1,2-Dichloroethene	<0.0016		0.0016	0.00072	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
trans-1,3-Dichloropropene	<0.0016		0.0016	0.00057	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
1,1,1-Trichloroethane	<0.0016		0.0016	0.00055	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
1,1,2-Trichloroethane	<0.0016		0.0016	0.00070	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Trichloroethene	<0.0016		0.0016	0.00055	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Vinyl acetate	<0.0041		0.0041	0.0014	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Vinyl chloride	<0.0016		0.0016	0.00072	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1
Xylenes, Total	<0.0033		0.0033	0.00052	mg/Kg	☼	11/01/17 18:01	11/03/17 19:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		75 - 131	11/01/17 18:01	11/03/17 19:01	1
Dibromofluoromethane	101		75 - 126	11/01/17 18:01	11/03/17 19:01	1
1,2-Dichloroethane-d4 (Surr)	94		70 - 134	11/01/17 18:01	11/03/17 19:01	1
Toluene-d8 (Surr)	105		75 - 124	11/01/17 18:01	11/03/17 19:01	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.039		0.039	0.0070	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Acenaphthylene	<0.039		0.039	0.0052	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Anthracene	<0.039		0.039	0.0065	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
<b>Benzo[a]anthracene</b>	<b>0.0067</b>	<b>J</b>	0.039	0.0053	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markam - WO37

TestAmerica Job ID: 500-136607-4

**Client Sample ID: 2696V-4-B01 (0-5)**

**Lab Sample ID: 500-136607-8**

**Date Collected: 10/31/17 14:30**

**Matrix: Solid**

**Date Received: 11/01/17 09:15**

**Percent Solids: 83.7**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.037</b>	<b>J</b>	0.039	0.0076	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
<b>Benzo[b]fluoranthene</b>	<b>0.038</b>	<b>J</b>	0.039	0.0084	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
<b>Benzo[g,h,i]perylene</b>	<b>0.054</b>		0.039	0.013	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Benzo[k]fluoranthene	<0.039		0.039	0.012	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.071	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Butyl benzyl phthalate	<0.20		0.20	0.074	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Carbazole	<0.20		0.20	0.098	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
4-Chloroaniline	<0.79		0.79	0.18	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
<b>Chrysene</b>	<b>0.019</b>	<b>J</b>	0.039	0.011	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Dibenz(a,h)anthracene	<0.039		0.039	0.0076	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
1,2-Dichlorobenzene	<0.20		0.20	0.047	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
2,4-Dichlorophenol	<0.39		0.39	0.093	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Diethyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
4,6-Dinitro-2-methylphenol	<0.79		0.79	0.31	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
2,4-Dinitrophenol	<0.79		0.79	0.69	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
2,6-Dinitrotoluene	<0.20		0.20	0.077	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
<b>Fluoranthene</b>	<b>0.0095</b>	<b>J</b>	0.039	0.0073	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Fluorene	<0.039		0.039	0.0055	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Hexachlorobenzene	<0.079		0.079	0.0091	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Hexachlorobutadiene	<0.20		0.20	0.061	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Hexachlorocyclopentadiene	<0.79		0.79	0.22	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Hexachloroethane	<0.20		0.20	0.059	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.034</b>	<b>J</b>	0.039	0.010	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
<b>2-Methylnaphthalene</b>	<b>0.011</b>	<b>J</b>	0.079	0.0072	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Naphthalene	<0.039		0.039	0.0060	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Nitrobenzene	<0.039		0.039	0.0098	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
2-Nitrophenol	<0.39		0.39	0.092	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markam - WO37

TestAmerica Job ID: 500-136607-4

**Client Sample ID: 2696V-4-B01 (0-5)**

**Lab Sample ID: 500-136607-8**

Date Collected: 10/31/17 14:30

Matrix: Solid

Date Received: 11/01/17 09:15

Percent Solids: 83.7

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.79		0.79	0.37	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
N-Nitrosodi-n-propylamine	<0.079		0.079	0.048	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.045	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Pentachlorophenol	<0.79		0.79	0.63	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
<b>Phenanthrene</b>	<b>0.015</b>	<b>J</b>	0.039	0.0055	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
Phenol	<0.20		0.20	0.087	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
<b>Pyrene</b>	<b>0.020</b>	<b>J</b>	0.039	0.0078	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
2,4,5-Trichlorophenol	<0.39		0.39	0.089	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	11/07/17 07:13	11/07/17 18:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	93		44 - 121	11/07/17 07:13	11/07/17 18:59	1
2-Fluorophenol	107		46 - 133	11/07/17 07:13	11/07/17 18:59	1
Nitrobenzene-d5	96		41 - 120	11/07/17 07:13	11/07/17 18:59	1
Phenol-d5	108		46 - 125	11/07/17 07:13	11/07/17 18:59	1
Terphenyl-d14	98		35 - 160	11/07/17 07:13	11/07/17 18:59	1
2,4,6-Tribromophenol	77		25 - 139	11/07/17 07:13	11/07/17 18:59	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.33</b>	<b>J B</b>	1.1	0.22	mg/Kg	☼	11/02/17 15:42	11/05/17 22:14	1
<b>Arsenic</b>	<b>8.4</b>		0.56	0.19	mg/Kg	☼	11/02/17 15:42	11/03/17 16:01	1
<b>Barium</b>	<b>13</b>		0.56	0.064	mg/Kg	☼	11/02/17 15:42	11/03/17 16:01	1
<b>Beryllium</b>	<b>0.29</b>		0.23	0.053	mg/Kg	☼	11/02/17 15:42	11/03/17 16:01	1
<b>Cadmium</b>	<b>0.083</b>	<b>J B</b>	0.11	0.020	mg/Kg	☼	11/02/17 15:42	11/03/17 16:01	1
<b>Chromium</b>	<b>8.8</b>		0.56	0.28	mg/Kg	☼	11/02/17 15:42	11/03/17 16:01	1
<b>Cobalt</b>	<b>8.9</b>		0.28	0.074	mg/Kg	☼	11/02/17 15:42	11/03/17 16:01	1
<b>Copper</b>	<b>21</b>	<b>B</b>	0.56	0.16	mg/Kg	☼	11/02/17 15:42	11/03/17 16:01	1
<b>Iron</b>	<b>15000</b>	<b>B</b>	11	5.9	mg/Kg	☼	11/02/17 15:42	11/03/17 16:01	1
<b>Lead</b>	<b>12</b>		0.28	0.13	mg/Kg	☼	11/02/17 15:42	11/03/17 16:01	1
<b>Magnesium</b>	<b>29000</b>		5.6	2.8	mg/Kg	☼	11/02/17 15:42	11/03/17 16:01	1
<b>Calcium</b>	<b>99000</b>	<b>B</b>	110	19	mg/Kg	☼	11/02/17 15:42	11/05/17 22:18	10
<b>Manganese</b>	<b>360</b>		0.56	0.082	mg/Kg	☼	11/02/17 15:42	11/03/17 16:01	1
<b>Nickel</b>	<b>19</b>		0.56	0.16	mg/Kg	☼	11/02/17 15:42	11/03/17 16:01	1
Selenium	<0.56		0.56	0.33	mg/Kg	☼	11/02/17 15:42	11/03/17 16:01	1
Silver	<0.28		0.28	0.073	mg/Kg	☼	11/02/17 15:42	11/03/17 16:01	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	11/02/17 15:42	11/03/17 16:01	1
<b>Vanadium</b>	<b>11</b>		0.28	0.067	mg/Kg	☼	11/02/17 15:42	11/03/17 16:01	1
<b>Zinc</b>	<b>46</b>		1.1	0.50	mg/Kg	☼	11/02/17 15:42	11/03/17 16:01	1
<b>Potassium</b>	<b>1000</b>		28	10	mg/Kg	☼	11/02/17 15:42	11/03/17 16:01	1
<b>Sodium</b>	<b>120</b>		56	8.4	mg/Kg	☼	11/02/17 15:42	11/03/17 16:01	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/06/17 11:00	11/07/17 10:14	1
<b>Barium</b>	<b>0.40</b>	<b>J</b>	0.50	0.050	mg/L		11/06/17 11:00	11/07/17 10:14	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/06/17 11:00	11/07/17 10:14	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/06/17 11:00	11/07/17 10:14	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markam - WO37

TestAmerica Job ID: 500-136607-4

**Client Sample ID: 2696V-4-B01 (0-5)**

**Lab Sample ID: 500-136607-8**

**Date Collected: 10/31/17 14:30**

**Matrix: Solid**

**Date Received: 11/01/17 09:15**

**Percent Solids: 83.7**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>540</b>		5.0	0.50	mg/L		11/06/17 11:00	11/07/17 10:14	1
Chromium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:14	1
<b>Cobalt</b>	<b>0.031</b>		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:14	1
<b>Copper</b>	<b>0.022</b>	<b>J</b>	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:14	1
Iron	<0.40		0.40	0.20	mg/L		11/06/17 11:00	11/07/17 10:14	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/06/17 11:00	11/07/17 10:14	1
<b>Magnesium</b>	<b>19</b>		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:14	1
<b>Manganese</b>	<b>2.1</b>		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:14	1
<b>Nickel</b>	<b>0.061</b>		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:14	1
<b>Potassium</b>	<b>3.8</b>		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:14	1
Selenium	<0.050		0.050	0.020	mg/L		11/06/17 11:00	11/07/17 10:14	1
Silver	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:14	1
Vanadium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:14	1
<b>Zinc</b>	<b>0.072</b>	<b>J</b>	0.50	0.020	mg/L		11/06/17 11:00	11/07/17 10:14	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.047</b>		0.025	0.010	mg/L		11/06/17 10:45	11/07/17 13:57	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/06/17 11:00	11/07/17 14:04	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/06/17 11:00	11/07/17 14:04	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/06/17 14:30	11/07/17 08:47	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.028</b>		0.019	0.0065	mg/Kg	☼	11/03/17 15:15	11/06/17 09:39	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.47		0.47	0.16	mg/Kg	☼	11/11/17 10:00	11/11/17 13:35	1
<b>pH</b>	<b>7.9</b>		0.20	0.20	SU			11/07/17 16:52	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markam - WO37

TestAmerica Job ID: 500-136607-4

## Qualifiers

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markam - WO37

TestAmerica Job ID: 500-136607-4

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)  
 Contact: MATT WEISS  
 Company: TERRACON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-136607  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: \_\_\_\_\_

Client		Client Project #		Preservative		Parameter		Matrix		Comments
<u>TERRACON</u>		<u>11177029M</u>		<u>Sediment</u>		<u>water</u>		<u>VOCS</u>		
Project Name		Lab Project #		# of Containers		Matrix		Matrix		Comments
<u>IDOT</u>										
Project Location/State		Lab PM		Date		Time		Matrix		Comments
<u>MARKHAM, IL</u>		<u>DICK WRIGHT</u>								
Sampler		Sample ID		Date		Time		Matrix		Comments
<u>CRIG VARLAND</u>										
6		<u>2696V-4-B03-(0-5')</u>	<u>10-31-17</u>	<u>1335</u>	<u>5</u>	<u>5</u>	<u>X</u>	<u>X</u>		
7		<u>2696V-4-B02-(0-5')</u>	<u>1</u>	<u>1405</u>	<u>5</u>	<u>5</u>	<u>X</u>	<u>XX</u>		
8		<u>2696V-4-B01-(0-5')</u>	<u>1</u>	<u>1430</u>	<u>5</u>	<u>5</u>	<u>X</u>	<u>XX</u>		

- Preservative Key
1. HCL, Cool to 4°
  2. H2SO4, Cool to 4°
  3. HNO3, Cool to 4°
  4. NaOH, Cool to 4°
  5. NaOH/Zn, Cool to 4°
  6. NaHSO4
  7. Cool to 4°
  8. None
  9. Other

Turnaround Time Required (Business Days)  
 1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other  
 Requested Due Date: \_\_\_\_\_

Sample Disposal  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By <u>[Signature]</u>	Company <u>TERRACON</u>	Date <u>11-1-17</u>	Time <u>0850</u>	Received By <u>[Signature]</u>	Company <u>TA</u>	Date <u>11/1/17</u>	Time <u>0850</u>
Relinquished By <u>[Signature]</u>	Company <u>TA</u>	Date <u>11-1-17</u>	Time <u>0915</u>	Received By <u>[Signature]</u>	Company <u>TA</u>	Date <u>11/1/17</u>	Time <u>0915</u>

Lab Courier: \_\_\_\_\_  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

- Matrix Key
- WW - Wastewater
  - W - Water
  - S - Soil
  - SL - Sludge
  - MS - Miscellaneous
  - OL - Oil
  - A - Air
  - SE - Sediment
  - SO - Soil
  - L - Leachate
  - WI - Wipe
  - DW - Drinking Water
  - O - Other

Client Comments: \_\_\_\_\_

Lab Comments: \_\_\_\_\_



## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136607-4

**Login Number: 136607**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Kelsey, Shawn M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.9c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

Kedzie Ave (Northbound) IDOT STA 91+50 to 93+09 (ISGS Site 2696V-5)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

Soil from boring B01 was sampled adjacent to ISGS Site No 2696V-5.  
See Exhibits 9, 9A, and Table 9 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136893-1.  
Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

*Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))*

Company Name: Terracon Consultants, Inc

Street Address: 135 Ambassador Drive

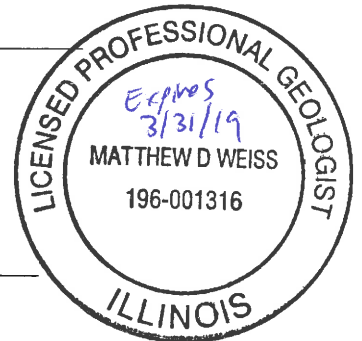
City: Naperville State: IL Zip Code: 60540

Phone: 630-717-4263

Matt Weiss  
Printed Name:

[Signature]  
Licensed Professional Engineer or  
Licensed Professional Geologist Signature:

7/24/18  
Date:



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-5)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 1 of 2

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-5-B01 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/07/2017
<b>Semivolatile Organic Analytical Parameters</b>						
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.015
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.017
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.015
Chrysene	mg/kg	1.2	2.7	88		0.024
Fluoranthene	mg/kg	2.7	4.1	3100		0.033
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.014
Phenanthrene	mg/kg	1.3	2.5	210		0.019
Pyrene	mg/kg	1.9	3.0	2300		0.027
<b>Inorganic Analytical Parameters</b>						
Arsenic	mg/kg	---	13	11.3		7.1
Barium	mg/kg	---	110	1500		52
Cadmium	mg/kg	---	0.6	5.2		0.34
Chromium, total	mg/kg	---	16.2	21		14
Lead	mg/kg	---	36	107		24
Mercury	mg/kg	---	0.06	0.1		0.038
Selenium	mg/kg	---	0.48	1.3		0.82
Silver	mg/kg	---	0.55	4.4		<0.29
Antimony	mg/kg	---	4.0	5		0.37
Beryllium	mg/kg	---	0.59	22		0.66
Calcium	mg/kg	---	9,300	---		15000
Cobalt	mg/kg	---	8.9	20		9.1
Copper	mg/kg	---	19.6	2900		24
Cyanide	mg/kg	---	0.51	---		0.22
Iron	mg/kg	---	15,900	15000		18000
Magnesium	mg/kg	---	4,820	325000		9400
Manganese	mg/kg	---	636	630		370
Nickel	mg/kg	---	18	100		23
Potassium	mg/kg	---	1,268	---		1400
Sodium	mg/kg	---	130	---		970
Thallium	mg/kg	---	0.32	2.6		<0.58
Vanadium	mg/kg	---	25.2	550		19
Zinc	mg/kg	---	95	5100		69
pH			6.25	9		8.7
<b>Inorganic Analytical Parameters (SPLP)</b>						
Antimony,SPLP	mg/L	---	---	---		--
Arsenic,SPLP	mg/L	---	---	---		--
Barium,SPLP	mg/L	---	---	---		--
Beryllium,SPLP	mg/L	---	---	---		--
Cadmium,SPLP	mg/L	---	---	---		--
Calcium,SPLP	mg/L	---	---	---		--
Chromium,SPLP	mg/L	---	---	---		--
Cobalt,SPLP	mg/L	---	---	---		--
Copper,SPLP	mg/L	---	---	---		--
Iron,SPLP	mg/L	---	---	---		--
Lead,SPLP	mg/L	---	---	---		--
Magnesium,SPLP	mg/L	---	---	---		--
Manganese,SPLP	mg/L	---	---	---		0.36
Mercury,SPLP	mg/L	---	---	---		--
Nickel,SPLP	mg/L	---	---	---		--
Potassium,SPLP	mg/L	---	---	---		--
Selenium,SPLP	mg/L	---	---	---		--
Silver,SPLP	mg/L	---	---	---		--
Sodium,SPLP	mg/L	---	---	---		--
Thallium,SPLP	mg/L	---	---	---		--
Vanadium,SPLP	mg/L	---	---	---		--
Zinc,SPLP	mg/L	---	---	---		--
Cyanide,SPLP	mg/L	---	---	---		--

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-5-B01 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/07/2017
<b>Inorganic Analytical Parameters (TCLP)</b>						
Arsenic, TCLP	mg/L	---	---	---		<0.050
Barium, TCLP	mg/L	---	---	---		0.31
Cadmium, TCLP	mg/L	---	---	---		0.002
Chromium, TCLP	mg/L	---	---	---		<0.025
Lead, TCLP	mg/L	---	---	---		<0.0075
Mercury, TCLP	mg/L	---	---	---		<0.00020
Selenium, TCLP	mg/L	---	---	---		<0.050
Silver, TCLP	mg/L	---	---	---		<0.025
Antimony, TCLP	mg/L	---	---	---		<0.0060
Beryllium, TCLP	mg/L	---	---	---		<0.0040
Calcium, TCLP	mg/L	---	---	---		320
Cobalt, TCLP	mg/L	---	---	---		<0.025
Copper, TCLP	mg/L	---	---	---		0.032
Cyanide, TCLP	mg/L	---	---	---		----
Iron, TCLP	mg/L	---	---	---		<0.40
Magnesium, TCLP	mg/L	---	---	---		140
Manganese, TCLP	mg/L	---	---	---		0.65
Nickel, TCLP	mg/L	---	---	---		<0.025
Potassium, TCLP	mg/L	---	---	---		1.3
Sodium, TCLP	mg/L	---	---	---		----
Thallium, TCLP	mg/L	---	---	---		<0.0020
Vanadium, TCLP	mg/L	---	---	---		<0.025
Zinc, TCLP	mg/L	---	---	---		0.068

# TestAmerica

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## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

TestAmerica Job ID: 500-136893-1  
Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:  
Terracon Consulting Eng & Scientists  
135 Ambassador Drive  
Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:  
11/17/2017 5:06:45 PM  
Jodie Bracken, Project Management Assistant II  
[jodie.bracken@testamericainc.com](mailto:jodie.bracken@testamericainc.com)

Designee for  
Richard Wright, Senior Project Manager  
(708)534-5200  
[richard.wright@testamericainc.com](mailto:richard.wright@testamericainc.com)

### LINKS

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results through  
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Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-1

**Job ID: 500-136893-1**

**Laboratory: TestAmerica Chicago**

## Narrative

### Job Narrative 500-136893-1

#### Receipt

The samples were received on 11/7/2017 4:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.9° C, 4.0° C and 5.5° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-409604 recovered above the upper control limit for Zinc. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following sample was impacted: 2696V-5-B01 (0-5) (500-136893-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-1

**Client Sample ID: 2696V-5-B01 (0-5)**

**Lab Sample ID: 500-136893-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Benzo[a]anthracene	0.015	J	0.039	0.0053	mg/Kg	1	☼	8270D	Total/NA	
Benzo[a]pyrene	0.017	J	0.039	0.0076	mg/Kg	1	☼	8270D	Total/NA	
Benzo[g,h,i]perylene	0.015	J	0.039	0.013	mg/Kg	1	☼	8270D	Total/NA	
Chrysene	0.024	J	0.039	0.011	mg/Kg	1	☼	8270D	Total/NA	
Fluoranthene	0.033	J	0.039	0.0073	mg/Kg	1	☼	8270D	Total/NA	
Indeno[1,2,3-cd]pyrene	0.014	J	0.039	0.010	mg/Kg	1	☼	8270D	Total/NA	
Phenanthrene	0.019	J	0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA	
Pyrene	0.027	J	0.039	0.0078	mg/Kg	1	☼	8270D	Total/NA	
Antimony	0.37	J	1.2	0.23	mg/Kg	1	☼	6010B	Total/NA	
Arsenic	7.1		0.58	0.20	mg/Kg	1	☼	6010B	Total/NA	
Barium	52		0.58	0.066	mg/Kg	1	☼	6010B	Total/NA	
Beryllium	0.66		0.23	0.054	mg/Kg	1	☼	6010B	Total/NA	
Cadmium	0.34	B	0.12	0.021	mg/Kg	1	☼	6010B	Total/NA	
Chromium	14		0.58	0.29	mg/Kg	1	☼	6010B	Total/NA	
Cobalt	9.1		0.29	0.076	mg/Kg	1	☼	6010B	Total/NA	
Copper	24		0.58	0.16	mg/Kg	1	☼	6010B	Total/NA	
Iron	18000	B	12	6.0	mg/Kg	1	☼	6010B	Total/NA	
Lead	24		0.29	0.13	mg/Kg	1	☼	6010B	Total/NA	
Magnesium	9400		5.8	2.9	mg/Kg	1	☼	6010B	Total/NA	
Calcium	15000	B	12	2.0	mg/Kg	1	☼	6010B	Total/NA	
Manganese	370	B	0.58	0.084	mg/Kg	1	☼	6010B	Total/NA	
Nickel	23		0.58	0.17	mg/Kg	1	☼	6010B	Total/NA	
Selenium	0.82		0.58	0.34	mg/Kg	1	☼	6010B	Total/NA	
Vanadium	19		0.29	0.069	mg/Kg	1	☼	6010B	Total/NA	
Zinc	69		1.2	0.51	mg/Kg	1	☼	6010B	Total/NA	
Potassium	1400		29	10	mg/Kg	1	☼	6010B	Total/NA	
Sodium	970		58	8.6	mg/Kg	1	☼	6010B	Total/NA	
Barium	0.31	J	0.50	0.050	mg/L	1		6010B	TCLP	
Cadmium	0.0020	J	0.0050	0.0020	mg/L	1		6010B	TCLP	
Calcium	320		5.0	0.50	mg/L	1		6010B	TCLP	
Copper	0.032		0.025	0.010	mg/L	1		6010B	TCLP	
Magnesium	140		2.5	0.50	mg/L	1		6010B	TCLP	
Manganese	0.65		0.025	0.010	mg/L	1		6010B	TCLP	
Potassium	1.3	J	2.5	0.50	mg/L	1		6010B	TCLP	
Zinc	0.068	J ^	0.50	0.020	mg/L	1		6010B	TCLP	
Manganese	0.36		0.025	0.010	mg/L	1		6010B	SPLP East	
Mercury	0.038		0.020	0.0065	mg/Kg	1	☼	7471B	Total/NA	
Cyanide, Total	0.22	J	0.60	0.21	mg/Kg	1	☼	9014	Total/NA	
pH	8.7		0.20	0.20	SU	1		9045D	Total/NA	

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136893-1	2696V-5-B01 (0-5)	Solid	11/07/17 11:45	11/07/17 16:20

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-1

**Client Sample ID: 2696V-5-B01 (0-5)**

**Lab Sample ID: 500-136893-1**

Date Collected: 11/07/17 11:45

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 80.6

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.023		0.023	0.0099	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Benzene	<0.0023		0.0023	0.00058	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Bromodichloromethane	<0.0023		0.0023	0.00046	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Bromoform	<0.0023		0.0023	0.00066	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Bromomethane	<0.0057		0.0057	0.0021	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
2-Butanone (MEK)	<0.0057		0.0057	0.0025	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Carbon disulfide	<0.0057		0.0057	0.0012	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Carbon tetrachloride	<0.0023		0.0023	0.00066	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Chlorobenzene	<0.0023		0.0023	0.00084	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Chloroethane	<0.0057		0.0057	0.0017	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Chloroform	<0.0023		0.0023	0.00079	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Chloromethane	<0.0057		0.0057	0.0023	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
cis-1,2-Dichloroethene	<0.0023		0.0023	0.00064	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
cis-1,3-Dichloropropene	<0.0023		0.0023	0.00069	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Dibromochloromethane	<0.0023		0.0023	0.00074	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
1,1-Dichloroethane	<0.0023		0.0023	0.00078	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
1,2-Dichloroethane	<0.0057		0.0057	0.0018	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
1,1-Dichloroethene	<0.0023		0.0023	0.00078	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
1,2-Dichloropropane	<0.0023		0.0023	0.00059	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
1,3-Dichloropropane, Total	<0.0023		0.0023	0.00080	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Ethylbenzene	<0.0023		0.0023	0.0011	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
2-Hexanone	<0.0057		0.0057	0.0018	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Methylene Chloride	<0.0057		0.0057	0.0022	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
4-Methyl-2-pentanone (MIBK)	<0.0057		0.0057	0.0017	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Methyl tert-butyl ether	<0.0023		0.0023	0.00067	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Styrene	<0.0023		0.0023	0.00069	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
1,1,2,2-Tetrachloroethane	<0.0023		0.0023	0.00073	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Tetrachloroethene	<0.0023		0.0023	0.00077	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Toluene	<0.0023		0.0023	0.00057	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
trans-1,2-Dichloroethene	<0.0023		0.0023	0.0010	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
trans-1,3-Dichloropropene	<0.0023		0.0023	0.00080	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
1,1,1-Trichloroethane	<0.0023		0.0023	0.00076	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
1,1,2-Trichloroethane	<0.0023		0.0023	0.00098	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Trichloroethene	<0.0023		0.0023	0.00077	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Vinyl acetate	<0.0057		0.0057	0.0020	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Vinyl chloride	<0.0023		0.0023	0.0010	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1
Xylenes, Total	<0.0045		0.0045	0.00073	mg/Kg	☼	11/07/17 17:56	11/10/17 13:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		75 - 131	11/07/17 17:56	11/10/17 13:30	1
Dibromofluoromethane	97		75 - 126	11/07/17 17:56	11/10/17 13:30	1
1,2-Dichloroethane-d4 (Surr)	86		70 - 134	11/07/17 17:56	11/10/17 13:30	1
Toluene-d8 (Surr)	98		75 - 124	11/07/17 17:56	11/10/17 13:30	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.039		0.039	0.0070	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Acenaphthylene	<0.039		0.039	0.0052	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Anthracene	<0.039		0.039	0.0065	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
<b>Benzo[a]anthracene</b>	<b>0.015</b>	<b>J</b>	0.039	0.0053	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-1

**Client Sample ID: 2696V-5-B01 (0-5)**

**Lab Sample ID: 500-136893-1**

**Date Collected: 11/07/17 11:45**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 80.6**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.017</b>	<b>J</b>	0.039	0.0076	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Benzo[b]fluoranthene	<0.039		0.039	0.0084	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
<b>Benzo[g,h,i]perylene</b>	<b>0.015</b>	<b>J</b>	0.039	0.013	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Benzo[k]fluoranthene	<0.039		0.039	0.012	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.072	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Butyl benzyl phthalate	<0.20		0.20	0.074	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Carbazole	<0.20		0.20	0.098	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
4-Chloroaniline	<0.79		0.79	0.18	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
<b>Chrysene</b>	<b>0.024</b>	<b>J</b>	0.039	0.011	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Dibenz(a,h)anthracene	<0.039		0.039	0.0076	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
1,2-Dichlorobenzene	<0.20		0.20	0.047	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
2,4-Dichlorophenol	<0.39		0.39	0.093	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Diethyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
4,6-Dinitro-2-methylphenol	<0.79		0.79	0.31	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
2,4-Dinitrophenol	<0.79		0.79	0.69	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
2,6-Dinitrotoluene	<0.20		0.20	0.077	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
<b>Fluoranthene</b>	<b>0.033</b>	<b>J</b>	0.039	0.0073	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Fluorene	<0.039		0.039	0.0055	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Hexachlorobenzene	<0.079		0.079	0.0091	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Hexachlorocyclopentadiene	<0.79		0.79	0.23	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.014</b>	<b>J</b>	0.039	0.010	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
2-Methylnaphthalene	<0.079		0.079	0.0072	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Naphthalene	<0.039		0.039	0.0060	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Nitrobenzene	<0.039		0.039	0.0098	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
2-Nitrophenol	<0.39		0.39	0.092	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-1

**Client Sample ID: 2696V-5-B01 (0-5)**

**Lab Sample ID: 500-136893-1**

Date Collected: 11/07/17 11:45

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 80.6

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.79		0.79	0.37	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
N-Nitrosodi-n-propylamine	<0.079		0.079	0.048	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.045	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Pentachlorophenol	<0.79		0.79	0.63	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
<b>Phenanthrene</b>	<b>0.019</b>	<b>J</b>	0.039	0.0055	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
Phenol	<0.20		0.20	0.087	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
<b>Pyrene</b>	<b>0.027</b>	<b>J</b>	0.039	0.0078	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
2,4,5-Trichlorophenol	<0.39		0.39	0.089	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	11/14/17 07:55	11/15/17 19:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	87		44 - 121	11/14/17 07:55	11/15/17 19:57	1
2-Fluorophenol	95		46 - 133	11/14/17 07:55	11/15/17 19:57	1
Nitrobenzene-d5	91		41 - 120	11/14/17 07:55	11/15/17 19:57	1
Phenol-d5	100		46 - 125	11/14/17 07:55	11/15/17 19:57	1
Terphenyl-d14	94		35 - 160	11/14/17 07:55	11/15/17 19:57	1
2,4,6-Tribromophenol	96		25 - 139	11/14/17 07:55	11/15/17 19:57	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.37</b>	<b>J</b>	1.2	0.23	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
<b>Arsenic</b>	<b>7.1</b>		0.58	0.20	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
<b>Barium</b>	<b>52</b>		0.58	0.066	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
<b>Beryllium</b>	<b>0.66</b>		0.23	0.054	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
<b>Cadmium</b>	<b>0.34</b>	<b>B</b>	0.12	0.021	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
<b>Chromium</b>	<b>14</b>		0.58	0.29	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
<b>Cobalt</b>	<b>9.1</b>		0.29	0.076	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
<b>Copper</b>	<b>24</b>		0.58	0.16	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
<b>Iron</b>	<b>18000</b>	<b>B</b>	12	6.0	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
<b>Lead</b>	<b>24</b>		0.29	0.13	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
<b>Magnesium</b>	<b>9400</b>		5.8	2.9	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
<b>Calcium</b>	<b>15000</b>	<b>B</b>	12	2.0	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
<b>Manganese</b>	<b>370</b>	<b>B</b>	0.58	0.084	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
<b>Nickel</b>	<b>23</b>		0.58	0.17	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
<b>Selenium</b>	<b>0.82</b>		0.58	0.34	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
Silver	<0.29		0.29	0.075	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
Thallium	<0.58		0.58	0.29	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
<b>Vanadium</b>	<b>19</b>		0.29	0.069	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
<b>Zinc</b>	<b>69</b>		1.2	0.51	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
<b>Potassium</b>	<b>1400</b>		29	10	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1
<b>Sodium</b>	<b>970</b>		58	8.6	mg/Kg	☼	11/08/17 16:57	11/10/17 00:54	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 14:43	11/11/17 16:42	1
<b>Barium</b>	<b>0.31</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 14:43	11/11/17 16:42	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 14:43	11/11/17 16:42	1
<b>Cadmium</b>	<b>0.0020</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 14:43	11/11/17 16:42	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-1

**Client Sample ID: 2696V-5-B01 (0-5)**

**Lab Sample ID: 500-136893-1**

**Date Collected: 11/07/17 11:45**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 80.6**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>320</b>		5.0	0.50	mg/L		11/10/17 14:43	11/11/17 16:42	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:42	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:42	1
<b>Copper</b>	<b>0.032</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:42	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 14:43	11/11/17 16:42	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 14:43	11/11/17 16:42	1
<b>Magnesium</b>	<b>140</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 16:42	1
<b>Manganese</b>	<b>0.65</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:42	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:42	1
<b>Potassium</b>	<b>1.3 J</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 16:42	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 14:43	11/11/17 16:42	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:42	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:42	1
<b>Zinc</b>	<b>0.068 J ^</b>		0.50	0.020	mg/L		11/10/17 14:43	11/11/17 16:42	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.36</b>		0.025	0.010	mg/L		11/10/17 14:42	11/11/17 23:23	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 14:43	11/13/17 12:53	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 14:43	11/13/17 12:53	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/13/17 16:00	11/14/17 13:50	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.038</b>		0.020	0.0065	mg/Kg	☼	11/09/17 16:15	11/10/17 09:14	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cyanide, Total</b>	<b>0.22 J</b>		0.60	0.21	mg/Kg	☼	11/15/17 13:10	11/15/17 16:36	1
<b>pH</b>	<b>8.7</b>		0.20	0.20	SU			11/14/17 17:36	1



# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-1

## Qualifiers

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

### General Chemistry

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

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-1

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Report To (optional)  
 Contact: MATT WIGGS  
 Company: TERRALON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-736893  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: 55, 29, 40

Client		Client Project #		Preservative		Parameter		Sample ID		Sampling		# of Containers		Matrix		500-136893 COC	Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other
Project Name		Lab Project #		Project Location/State		Sampler		Date		Time		Matrix		Comments			
Lab ID	MS/MSD	Sample ID		Date		Time		# of Containers		Matrix							
<u>TERRALON</u>		<u>11177029M</u>															
<u>WORK ORDER # 037</u>				<u>MARKHAM, IL</u>		<u>CRAIG VANLAND</u>											
						<u>DICK WRIGHT</u>											
<u>1</u>		<u>2696V-5-801-(60-5)</u>		<u>11-7-17</u>	<u>1145</u>	<u>5</u>	<u>5</u>	<u>VOCS</u>	<u>SUBCS</u>	<u>23 TAL METALS</u>	<u>P.H.</u>	<u>TECP 23 TAL</u>	<u>METALS</u>				

Turnaround Time Required (Business Days)  
 1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other  
 Requested Date: \_\_\_\_\_

Sample Disposal  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRALON</u> Date: <u>11-7-17</u> Time: <u>1550</u>	Received By: <u>P. Neal</u> Company: <u>TA</u> Date: <u>11/7/17</u> Time: <u>1550</u>
Relinquished By: <u>P. Neal</u> Company: <u>TA</u> Date: <u>11/7/17</u> Time: <u>1628</u>	Received By: <u>[Signature]</u> Company: <u>TACHS</u> Date: <u>11/7/17</u> Time: <u>1620</u>
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____

Lab Courier: TA  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

- Matrix Key
- WW - Wastewater
  - W - Water
  - S - Soil
  - SL - Sludge
  - MS - Miscellaneous
  - OL - Oil
  - A - Air
  - SE - Sediment
  - SO - Soil
  - L - Leachate
  - WI - Wipe
  - DW - Drinking Water
  - O - Other

Client Comments  
NO ALUMINUM

Lab Comments:  
 \_\_\_\_\_

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136893-1

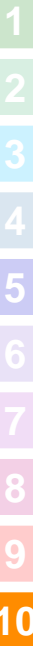
**Login Number: 136893**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9, 4.0, 5.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

Kedzie Ave (Northbound) IDOT STA 89+80 to 91+50 (ISGS Site 2696V-6)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

Soil from boring B01 was sampled adjacent to ISGS Site No 2696V-6.  
See Exhibits 9, 9A, and Table 11 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136893-2  
Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

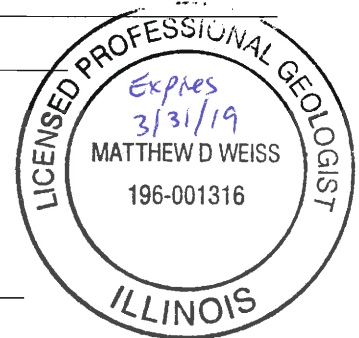
**Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))**

Company Name: Terracon Consultants, Inc  
 Street Address: 135 Ambassador Drive  
 City: Naperville State: IL Zip Code: 60540  
 Phone: 630-717-4263

Matt Weiss  
 Printed Name:

[Signature]  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

7/24/18  
 Date:



**Detected Constituents to MACs-PTB 174-009;Work Order:037A**  
**Preliminary Site Investigation**  
**FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-6)**  
**Oak Forest/Markham, Cook County, IL**  
**Terracon Project No. 11177029M**  
**Page 1 of 2**

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-6-B01 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/07/2017
<b>Semivolatile Organic Analytical Parameters</b>						
Phenanthrene	mg/kg	1.3	2.5	210		0.0093
2-Methylnaphthalene	mg/kg	---	0.14	---		0.0081
<b>Inorganic Analytical Parameters</b>						
Arsenic	mg/kg	---	13	11.3		0.47
Barium	mg/kg	---	110	1500		56
Cadmium	mg/kg	---	0.6	5.2		<0.097
Chromium, total	mg/kg	---	16.2	21		15
Lead	mg/kg	---	36	107		2
Mercury	mg/kg	---	0.06	0.1		0.007
Selenium	mg/kg	---	0.48	1.3		0.49
Silver	mg/kg	---	0.55	4.4		<0.24
Antimony	mg/kg	---	4.0	5		<0.97
Beryllium	mg/kg	---	0.59	22		0.98
Calcium	mg/kg	---	9,300	---		9600
Cobalt	mg/kg	---	8.9	20		3.3
Copper	mg/kg	---	19.6	2900		6.6
Cyanide	mg/kg	---	0.51	---		<0.53
Iron	mg/kg	---	15,900	15000		24000
Magnesium	mg/kg	---	4,820	325000		810
Manganese	mg/kg	---	636	630		65
Nickel	mg/kg	---	18	100		12
Potassium	mg/kg	---	1,268	---		2300
Sodium	mg/kg	---	130	---		440
Thallium	mg/kg	---	0.32	2.6		<0.49
Vanadium	mg/kg	---	25.2	550		18
Zinc	mg/kg	---	95	5100		28
pH			6.25	9		8
<b>Inorganic Analytical Parameters (SPLP)</b>						
Antimony,SPLP	mg/L	---	---	---		--
Arsenic,SPLP	mg/L	---	---	---		--
Barium,SPLP	mg/L	---	---	---		--
Beryllium,SPLP	mg/L	---	---	---		--
Cadmium,SPLP	mg/L	---	---	---		--
Calcium,SPLP	mg/L	---	---	---		--
Chromium,SPLP	mg/L	---	---	---		--
Cobalt,SPLP	mg/L	---	---	---		--
Copper,SPLP	mg/L	---	---	---		--
Iron,SPLP	mg/L	---	---	---		--
Lead,SPLP	mg/L	---	---	---		--
Magnesium,SPLP	mg/L	---	---	---		--
Manganese,SPLP	mg/L	---	---	---		--
Mercury,SPLP	mg/L	---	---	---		--
Nickel,SPLP	mg/L	---	---	---		--
Potassium,SPLP	mg/L	---	---	---		--
Selenium,SPLP	mg/L	---	---	---		--
Silver,SPLP	mg/L	---	---	---		--
Sodium,SPLP	mg/L	---	---	---		--
Thallium,SPLP	mg/L	---	---	---		--
Vanadium,SPLP	mg/L	---	---	---		--
Zinc,SPLP	mg/L	---	---	---		--
Cyanide,SPLP	mg/L	---	---	---		--



Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-6-B01 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/07/2017
<b>Inorganic Analytical Parameters (TCLP)</b>						
Arsenic, TCLP	mg/L	---	---	---		<0.050
Barium, TCLP	mg/L	---	---	---		0.06
Cadmium, TCLP	mg/L	---	---	---		<0.0050
Chromium, TCLP	mg/L	---	---	---		<0.025
Lead, TCLP	mg/L	---	---	---		<0.0075
Mercury, TCLP	mg/L	---	---	---		<0.00020
Selenium, TCLP	mg/L	---	---	---		<0.050
Silver, TCLP	mg/L	---	---	---		<0.025
Antimony, TCLP	mg/L	---	---	---		<0.0060
Beryllium, TCLP	mg/L	---	---	---		<0.0040
Calcium, TCLP	mg/L	---	---	---		17
Cobalt, TCLP	mg/L	---	---	---		<0.025
Copper, TCLP	mg/L	---	---	---		0.023
Cyanide, TCLP	mg/L	---	---	---		----
Iron, TCLP	mg/L	---	---	---		0.26
Magnesium, TCLP	mg/L	---	---	---		6.6
Manganese, TCLP	mg/L	---	---	---		0.07
Nickel, TCLP	mg/L	---	---	---		0.017
Potassium, TCLP	mg/L	---	---	---		1.2
Sodium, TCLP	mg/L	---	---	---		----
Thallium, TCLP	mg/L	---	---	---		<0.0020
Vanadium, TCLP	mg/L	---	---	---		<0.025
Zinc, TCLP	mg/L	---	---	---		1.6

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-136893-2

Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:

Terracon Consulting Eng & Scientists

135 Ambassador Drive

Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:

11/17/2017 5:10:40 PM

Jodie Bracken, Project Management Assistant II

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-2

**Job ID: 500-136893-2**

**Laboratory: TestAmerica Chicago**

## Narrative

### Job Narrative 500-136893-2

#### Receipt

The samples were received on 11/7/2017 4:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.9° C, 4.0° C and 5.5° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-409604 recovered above the upper control limit for Zinc. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following sample is impacted: 2696V-6-B01 (0-5) (500-136893-2).

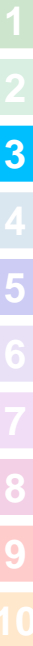
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-2

**Client Sample ID: 2696V-6-B01 (0-5)**

**Lab Sample ID: 500-136893-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Methylnaphthalene	0.0081	J	0.068	0.0062	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.0093	J	0.033	0.0047	mg/Kg	1	☼	8270D	Total/NA
Arsenic	0.47	J	0.49	0.17	mg/Kg	1	☼	6010B	Total/NA
Barium	56		0.49	0.055	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.98		0.19	0.045	mg/Kg	1	☼	6010B	Total/NA
Chromium	15		0.49	0.24	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.3		0.24	0.064	mg/Kg	1	☼	6010B	Total/NA
Copper	6.6		0.49	0.14	mg/Kg	1	☼	6010B	Total/NA
Iron	24000	B	9.7	5.1	mg/Kg	1	☼	6010B	Total/NA
Lead	2.0		0.24	0.11	mg/Kg	1	☼	6010B	Total/NA
Magnesium	810		4.9	2.4	mg/Kg	1	☼	6010B	Total/NA
Calcium	9600	B	9.7	1.7	mg/Kg	1	☼	6010B	Total/NA
Manganese	65	B	0.49	0.071	mg/Kg	1	☼	6010B	Total/NA
Nickel	12		0.49	0.14	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.49		0.49	0.29	mg/Kg	1	☼	6010B	Total/NA
Vanadium	18		0.24	0.057	mg/Kg	1	☼	6010B	Total/NA
Zinc	28		0.97	0.43	mg/Kg	1	☼	6010B	Total/NA
Potassium	2300		24	8.6	mg/Kg	1	☼	6010B	Total/NA
Sodium	440		49	7.2	mg/Kg	1	☼	6010B	Total/NA
Barium	0.060	J	0.50	0.050	mg/L	1		6010B	TCLP
Calcium	17		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.023	J	0.025	0.010	mg/L	1		6010B	TCLP
Iron	0.26	J	0.40	0.20	mg/L	1		6010B	TCLP
Magnesium	6.6		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.070		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.017	J	0.025	0.010	mg/L	1		6010B	TCLP
Potassium	1.2	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	1.6		0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.0070	J	0.016	0.0054	mg/Kg	1	☼	7471B	Total/NA
pH	8.0		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-2

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136893-2	2696V-6-B01 (0-5)	Solid	11/07/17 11:30	11/07/17 16:20

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-2

**Client Sample ID: 2696V-6-B01 (0-5)**

**Lab Sample ID: 500-136893-2**

**Date Collected: 11/07/17 11:30**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 94.7**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.022		0.022	0.0094	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Benzene	<0.0022		0.0022	0.00055	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Bromodichloromethane	<0.0022		0.0022	0.00044	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Bromoform	<0.0022		0.0022	0.00063	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Bromomethane	<0.0054		0.0054	0.0020	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
2-Butanone (MEK)	<0.0054		0.0054	0.0024	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Carbon disulfide	<0.0054		0.0054	0.0011	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Carbon tetrachloride	<0.0022		0.0022	0.00063	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Chlorobenzene	<0.0022		0.0022	0.00080	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Chloroethane	<0.0054		0.0054	0.0016	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Chloroform	<0.0022		0.0022	0.00075	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Chloromethane	<0.0054		0.0054	0.0022	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
cis-1,2-Dichloroethene	<0.0022		0.0022	0.00061	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
cis-1,3-Dichloropropene	<0.0022		0.0022	0.00065	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Dibromochloromethane	<0.0022		0.0022	0.00071	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
1,1-Dichloroethane	<0.0022		0.0022	0.00074	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
1,2-Dichloroethane	<0.0054		0.0054	0.0017	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
1,1-Dichloroethene	<0.0022		0.0022	0.00075	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
1,2-Dichloropropane	<0.0022		0.0022	0.00056	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
1,3-Dichloropropane, Total	<0.0022		0.0022	0.00076	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Ethylbenzene	<0.0022		0.0022	0.0010	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
2-Hexanone	<0.0054		0.0054	0.0017	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Methylene Chloride	<0.0054		0.0054	0.0021	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
4-Methyl-2-pentanone (MIBK)	<0.0054		0.0054	0.0016	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Methyl tert-butyl ether	<0.0022		0.0022	0.00064	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Styrene	<0.0022		0.0022	0.00065	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
1,1,2,2-Tetrachloroethane	<0.0022		0.0022	0.00069	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Tetrachloroethene	<0.0022		0.0022	0.00074	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Toluene	<0.0022		0.0022	0.00055	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
trans-1,2-Dichloroethene	<0.0022		0.0022	0.00096	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
trans-1,3-Dichloropropene	<0.0022		0.0022	0.00076	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
1,1,1-Trichloroethane	<0.0022		0.0022	0.00073	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
1,1,2-Trichloroethane	<0.0022		0.0022	0.00093	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Trichloroethene	<0.0022		0.0022	0.00073	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Vinyl acetate	<0.0054		0.0054	0.0019	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Vinyl chloride	<0.0022		0.0022	0.00096	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1
Xylenes, Total	<0.0043		0.0043	0.00069	mg/Kg	☼	11/07/17 17:56	11/10/17 13:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		75 - 131	11/07/17 17:56	11/10/17 13:55	1
Dibromofluoromethane	99		75 - 126	11/07/17 17:56	11/10/17 13:55	1
1,2-Dichloroethane-d4 (Surr)	92		70 - 134	11/07/17 17:56	11/10/17 13:55	1
Toluene-d8 (Surr)	98		75 - 124	11/07/17 17:56	11/10/17 13:55	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.033		0.033	0.0060	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Acenaphthylene	<0.033		0.033	0.0044	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Anthracene	<0.033		0.033	0.0056	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Benzo[a]anthracene	<0.033		0.033	0.0045	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-2

**Client Sample ID: 2696V-6-B01 (0-5)**

**Lab Sample ID: 500-136893-2**

**Date Collected: 11/07/17 11:30**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 94.7**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.033		0.033	0.0065	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Benzo[b]fluoranthene	<0.033		0.033	0.0073	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Benzo[g,h,i]perylene	<0.033		0.033	0.011	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Benzo[k]fluoranthene	<0.033		0.033	0.0099	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Bis(2-chloroethoxy)methane	<0.17		0.17	0.034	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Bis(2-chloroethyl)ether	<0.17		0.17	0.050	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Bis(2-ethylhexyl) phthalate	<0.17		0.17	0.061	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
4-Bromophenyl phenyl ether	<0.17		0.17	0.044	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Butyl benzyl phthalate	<0.17		0.17	0.064	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Carbazole	<0.17		0.17	0.084	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
4-Chloroaniline	<0.68		0.68	0.16	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
4-Chloro-3-methylphenol	<0.33		0.33	0.11	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
2-Chloronaphthalene	<0.17		0.17	0.037	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
2-Chlorophenol	<0.17		0.17	0.057	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
4-Chlorophenyl phenyl ether	<0.17		0.17	0.039	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Chrysene	<0.033		0.033	0.0092	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Dibenz(a,h)anthracene	<0.033		0.033	0.0065	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Dibenzofuran	<0.17		0.17	0.039	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
1,2-Dichlorobenzene	<0.17		0.17	0.040	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
1,3-Dichlorobenzene	<0.17		0.17	0.038	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
1,4-Dichlorobenzene	<0.17		0.17	0.043	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
3,3'-Dichlorobenzidine	<0.17		0.17	0.047	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
2,4-Dichlorophenol	<0.33		0.33	0.080	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Diethyl phthalate	<0.17		0.17	0.057	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
2,4-Dimethylphenol	<0.33		0.33	0.13	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Dimethyl phthalate	<0.17		0.17	0.044	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Di-n-butyl phthalate	<0.17		0.17	0.051	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
4,6-Dinitro-2-methylphenol	<0.68		0.68	0.27	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
2,4-Dinitrophenol	<0.68		0.68	0.59	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
2,4-Dinitrotoluene	<0.17		0.17	0.053	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
2,6-Dinitrotoluene	<0.17		0.17	0.066	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Di-n-octyl phthalate	<0.17		0.17	0.055	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Fluoranthene	<0.033		0.033	0.0062	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Fluorene	<0.033		0.033	0.0047	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Hexachlorobenzene	<0.068		0.068	0.0078	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Hexachlorobutadiene	<0.17		0.17	0.053	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Hexachlorocyclopentadiene	<0.68		0.68	0.19	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Hexachloroethane	<0.17		0.17	0.051	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Indeno[1,2,3-cd]pyrene	<0.033		0.033	0.0087	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Isophorone	<0.17		0.17	0.038	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
<b>2-Methylnaphthalene</b>	<b>0.0081</b>	<b>J</b>	0.068	0.0062	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
2-Methylphenol	<0.17		0.17	0.054	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
3 & 4 Methylphenol	<0.17		0.17	0.056	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Naphthalene	<0.033		0.033	0.0052	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
2-Nitroaniline	<0.17		0.17	0.045	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
3-Nitroaniline	<0.33		0.33	0.10	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
4-Nitroaniline	<0.33		0.33	0.14	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Nitrobenzene	<0.033		0.033	0.0084	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
2-Nitrophenol	<0.33		0.33	0.079	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-2

**Client Sample ID: 2696V-6-B01 (0-5)**

**Lab Sample ID: 500-136893-2**

Date Collected: 11/07/17 11:30

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 94.7

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.68		0.68	0.32	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
N-Nitrosodi-n-propylamine	<0.068		0.068	0.041	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
N-Nitrosodiphenylamine	<0.17		0.17	0.040	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
2,2'-oxybis[1-chloropropane]	<0.17		0.17	0.039	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Pentachlorophenol	<0.68		0.68	0.54	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
<b>Phenanthrene</b>	<b>0.0093</b>	<b>J</b>	0.033	0.0047	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Phenol	<0.17		0.17	0.075	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
Pyrene	<0.033		0.033	0.0067	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
1,2,4-Trichlorobenzene	<0.17		0.17	0.036	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
2,4,5-Trichlorophenol	<0.33		0.33	0.077	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1
2,4,6-Trichlorophenol	<0.33		0.33	0.12	mg/Kg	☼	11/14/17 07:55	11/15/17 20:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	96		44 - 121	11/14/17 07:55	11/15/17 20:22	1
2-Fluorophenol	100		46 - 133	11/14/17 07:55	11/15/17 20:22	1
Nitrobenzene-d5	106		41 - 120	11/14/17 07:55	11/15/17 20:22	1
Phenol-d5	105		46 - 125	11/14/17 07:55	11/15/17 20:22	1
Terphenyl-d14	102		35 - 160	11/14/17 07:55	11/15/17 20:22	1
2,4,6-Tribromophenol	63		25 - 139	11/14/17 07:55	11/15/17 20:22	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.97		0.97	0.19	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
<b>Arsenic</b>	<b>0.47</b>	<b>J</b>	0.49	0.17	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
<b>Barium</b>	<b>56</b>		0.49	0.055	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
<b>Beryllium</b>	<b>0.98</b>		0.19	0.045	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
Cadmium	<0.097		0.097	0.018	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
<b>Chromium</b>	<b>15</b>		0.49	0.24	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
<b>Cobalt</b>	<b>3.3</b>		0.24	0.064	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
<b>Copper</b>	<b>6.6</b>		0.49	0.14	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
<b>Iron</b>	<b>24000</b>	<b>B</b>	9.7	5.1	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
<b>Lead</b>	<b>2.0</b>		0.24	0.11	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
<b>Magnesium</b>	<b>810</b>		4.9	2.4	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
<b>Calcium</b>	<b>9600</b>	<b>B</b>	9.7	1.7	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
<b>Manganese</b>	<b>65</b>	<b>B</b>	0.49	0.071	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
<b>Nickel</b>	<b>12</b>		0.49	0.14	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
<b>Selenium</b>	<b>0.49</b>		0.49	0.29	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
Silver	<0.24		0.24	0.063	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
Thallium	<0.49		0.49	0.24	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
<b>Vanadium</b>	<b>18</b>		0.24	0.057	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
<b>Zinc</b>	<b>28</b>		0.97	0.43	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
<b>Potassium</b>	<b>2300</b>		24	8.6	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1
<b>Sodium</b>	<b>440</b>		49	7.2	mg/Kg	☼	11/08/17 16:57	11/10/17 00:57	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 14:43	11/11/17 16:46	1
<b>Barium</b>	<b>0.060</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 14:43	11/11/17 16:46	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 14:43	11/11/17 16:46	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/10/17 14:43	11/11/17 16:46	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-2

**Client Sample ID: 2696V-6-B01 (0-5)**

**Lab Sample ID: 500-136893-2**

**Date Collected: 11/07/17 11:30**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 94.7**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>17</b>		5.0	0.50	mg/L		11/10/17 14:43	11/11/17 16:46	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:46	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:46	1
<b>Copper</b>	<b>0.023</b>	<b>J</b>	0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:46	1
<b>Iron</b>	<b>0.26</b>	<b>J</b>	0.40	0.20	mg/L		11/10/17 14:43	11/11/17 16:46	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 14:43	11/11/17 16:46	1
<b>Magnesium</b>	<b>6.6</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 16:46	1
<b>Manganese</b>	<b>0.070</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:46	1
<b>Nickel</b>	<b>0.017</b>	<b>J</b>	0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:46	1
<b>Potassium</b>	<b>1.2</b>	<b>J</b>	2.5	0.50	mg/L		11/10/17 14:43	11/11/17 16:46	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 14:43	11/11/17 16:46	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:46	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:46	1
<b>Zinc</b>	<b>1.6</b>		0.50	0.020	mg/L		11/10/17 14:43	11/14/17 13:54	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 14:43	11/13/17 12:57	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 14:43	11/13/17 12:57	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/13/17 16:00	11/14/17 14:50	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.0070</b>	<b>J</b>	0.016	0.0054	mg/Kg	☼	11/09/17 16:15	11/10/17 09:17	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.53		0.53	0.18	mg/Kg	☼	11/15/17 13:10	11/15/17 16:37	1
<b>pH</b>	<b>8.0</b>		0.20	0.20	SU			11/14/17 17:36	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-2

## Qualifiers

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-2

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)  
 Contact: MATT WIGGS  
 Company: TERRALON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference#: \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-136893  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: 5.5, 4.0, 2.9

Client		Client Project #		Preservative		Parameter		Matrix		Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other
Project Name		Lab Project #		Matrix		Matrix		Matrix		
Project Location/State		Lab Project #		Matrix		Matrix		Matrix		
Sampler		Lab PM		Matrix		Matrix		Matrix		
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	Matrix	Matrix	Matrix	Comments
2		2696V-6-B01-(O-S)	11-7-17	1130	5	3	VOCs	SVOCs	23 TAL METALS PH	
									TRUP 23 METALS	

Turnaround Time Required (Business Days):  1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other \_\_\_\_\_

Sample Disposal:  Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRALON</u> Date: <u>11-7-17</u> Time: <u>1550</u>	Received By: <u>R. Neal</u> Company: <u>TA</u> Date: <u>11/7/17</u> Time: <u>1550</u>
Relinquished By: <u>R. Neal</u> Company: <u>TA</u> Date: <u>11/7/17</u> Time: <u>1620</u>	Received By: <u>Deirdre Seamy</u> Company: <u>TA CH</u> Date: <u>11/7/17</u> Time: <u>1620</u>

Lab Courier: JA  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

**Matrix Key**  
 WW - Wastewater  
 W - Water  
 S - Soil  
 SL - Sludge  
 MS - Miscellaneous  
 OL - Oil  
 A - Air

SE - Sediment  
 SO - Soil  
 L - Leachate  
 WI - Wipe  
 DW - Drinking Water  
 O - Other

Client Comments:  
NO ALUMINUM

Lab Comments:  
 \_\_\_\_\_

# Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136893-2

**Login Number: 136893**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9, 4.0, 5.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

Kedzie Ave (Northbound) IDOT STA 88+30 to 89+80 (ISGS Site 2696V-7)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.



Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)];

Soil from boring B02 was sampled adjacent to ISGS Site No 2696V-7.  
 See Exhibits 9, 9A, and Table 13 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610];

TestAmerica Lab Report No J136893-3  
 Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

**Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))**

Company Name: Terracon Consultants, Inc

Street Address: 135 Ambassador Drive

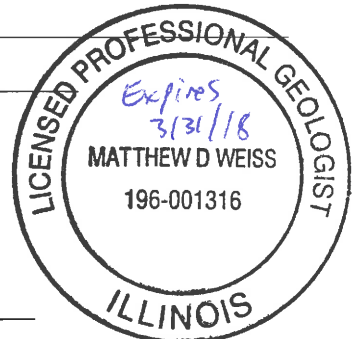
City: Naperville State: IL Zip Code: 60540

Phone: 630-717-4263

Matt Weiss  
Printed Name:

[Signature]  
Licensed Professional Engineer or  
Licensed Professional Geologist Signature:

7/24/18  
Date:



**Detected Constituents to MACs-PTB 174-009;Work Order:037A**  
**Preliminary Site Investigation**  
**FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-7)**  
**Oak Forest/Markham, Cook County, IL**  
**Terracon Project No. 11177029M**  
**Page 1 of 2**

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-7-B02 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/07/2017
<b>Inorganic Analytical Parameters</b>						
Arsenic	mg/kg	---	13	11.3		8
Barium	mg/kg	---	110	1500		12
Cadmium	mg/kg	---	0.6	5.2		0.22
Chromium, total	mg/kg	---	16.2	21		5.8
Lead	mg/kg	---	36	107		8.7
Mercury	mg/kg	---	0.06	0.1		0.014
Selenium	mg/kg	---	0.48	1.3		<0.56
Silver	mg/kg	---	0.55	4.4		<0.28
Antimony	mg/kg	---	4.0	5		0.43
Beryllium	mg/kg	---	0.59	22		0.3
Calcium	mg/kg	---	9,300	---		140000
Cobalt	mg/kg	---	8.9	20		5.7
Copper	mg/kg	---	19.6	2900		18
Cyanide	mg/kg	---	0.51	---		<0.51
Iron	mg/kg	---	15,900	15000		13000
Magnesium	mg/kg	---	4,820	325000		42000
Manganese	mg/kg	---	636	630		330
Nickel	mg/kg	---	18	100		13
Potassium	mg/kg	---	1,268	---		980
Sodium	mg/kg	---	130	---		220
Thallium	mg/kg	---	0.32	2.6		<0.56
Vanadium	mg/kg	---	25.2	550		8.2
Zinc	mg/kg	---	95	5100		44
pH			6.25	9		8.9
<b>Inorganic Analytical Parameters (SPLP)</b>						
Antimony,SPLP	mg/L	---	---	---		--
Arsenic,SPLP	mg/L	---	---	---		--
Barium,SPLP	mg/L	---	---	---		--
Beryllium,SPLP	mg/L	---	---	---		--
Cadmium,SPLP	mg/L	---	---	---		--
Calcium,SPLP	mg/L	---	---	---		--
Chromium,SPLP	mg/L	---	---	---		--
Cobalt,SPLP	mg/L	---	---	---		--
Copper,SPLP	mg/L	---	---	---		--
Iron,SPLP	mg/L	---	---	---		--
Lead,SPLP	mg/L	---	---	---		--
Magnesium,SPLP	mg/L	---	---	---		--
Manganese,SPLP	mg/L	---	---	---		0.028
Mercury,SPLP	mg/L	---	---	---		--
Nickel,SPLP	mg/L	---	---	---		--
Potassium,SPLP	mg/L	---	---	---		--
Selenium,SPLP	mg/L	---	---	---		--
Silver,SPLP	mg/L	---	---	---		--
Sodium,SPLP	mg/L	---	---	---		--
Thallium,SPLP	mg/L	---	---	---		--
Vanadium,SPLP	mg/L	---	---	---		--
Zinc,SPLP	mg/L	---	---	---		--
Cyanide,SPLP	mg/L	---	---	---		--

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-7-B02 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/07/2017
<b>Inorganic Analytical Parameters (TCLP)</b>						
Arsenic, TCLP	mg/L	---	---	---		<0.050
Barium, TCLP	mg/L	---	---	---		0.19
Cadmium, TCLP	mg/L	---	---	---		0.0034
Chromium, TCLP	mg/L	---	---	---		<0.025
Lead, TCLP	mg/L	---	---	---		<0.0075
Mercury, TCLP	mg/L	---	---	---		<0.00020
Selenium, TCLP	mg/L	---	---	---		<0.050
Silver, TCLP	mg/L	---	---	---		<0.025
Antimony, TCLP	mg/L	---	---	---		<0.0060
Beryllium, TCLP	mg/L	---	---	---		<0.0040
Calcium, TCLP	mg/L	---	---	---		850
Cobalt, TCLP	mg/L	---	---	---		<0.025
Copper, TCLP	mg/L	---	---	---		0.027
Cyanide, TCLP	mg/L	---	---	---		----
Iron, TCLP	mg/L	---	---	---		<0.40
Magnesium, TCLP	mg/L	---	---	---		35
Manganese, TCLP	mg/L	---	---	---		0.59
Nickel, TCLP	mg/L	---	---	---		0.012
Potassium, TCLP	mg/L	---	---	---		2.1
Sodium, TCLP	mg/L	---	---	---		----
Thallium, TCLP	mg/L	---	---	---		<0.0020
Vanadium, TCLP	mg/L	---	---	---		<0.025
Zinc, TCLP	mg/L	---	---	---		0.09

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-136893-3

Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:

Terracon Consulting Eng & Scientists

135 Ambassador Drive

Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:

11/17/2017 5:11:30 PM

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### LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-3

**Job ID: 500-136893-3**

**Laboratory: TestAmerica Chicago**

## Narrative

### Job Narrative 500-136893-3

#### Receipt

The samples were received on 11/7/2017 4:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.9° C, 4.0° C and 5.5° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-409604 recovered above the upper control limit for Zinc. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: 2696V-7-B02 (0-5) (500-136893-3) and 2696V-7-B01 (0-5) (500-136893-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-3

**Client Sample ID: 2696V-7-B02 (0-5)**

**Lab Sample ID: 500-136893-3**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.43	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	8.0		0.56	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	12		0.56	0.064	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.30		0.22	0.052	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.22	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	5.8		0.56	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.7		0.28	0.073	mg/Kg	1	☼	6010B	Total/NA
Copper	18		0.56	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	13000	B	11	5.8	mg/Kg	1	☼	6010B	Total/NA
Lead	8.7		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	42000		5.6	2.8	mg/Kg	1	☼	6010B	Total/NA
Calcium	140000	B	110	19	mg/Kg	10	☼	6010B	Total/NA
Manganese	330	B	0.56	0.081	mg/Kg	1	☼	6010B	Total/NA
Nickel	13		0.56	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	8.2		0.28	0.066	mg/Kg	1	☼	6010B	Total/NA
Zinc	44		1.1	0.49	mg/Kg	1	☼	6010B	Total/NA
Potassium	980		28	9.9	mg/Kg	1	☼	6010B	Total/NA
Sodium	220		56	8.3	mg/Kg	1	☼	6010B	Total/NA
Barium	0.19	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0034	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	850		50	5.0	mg/L	10		6010B	TCLP
Copper	0.027		0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	35		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.59		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.012	J	0.025	0.010	mg/L	1		6010B	TCLP
Potassium	2.1	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.090	J ^	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.028		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.014	J	0.017	0.0056	mg/Kg	1	☼	7471B	Total/NA
pH	8.9		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-7-B01 (0-5)**

**Lab Sample ID: 500-136893-4**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.015	J	0.039	0.0052	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.019	J	0.039	0.0065	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.064		0.039	0.0053	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.083		0.039	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.13		0.039	0.0085	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.052		0.039	0.013	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.039		0.039	0.012	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.072		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.0093	J	0.039	0.0076	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.13		0.039	0.0073	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.040		0.039	0.010	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.058		0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.10		0.039	0.0078	mg/Kg	1	☼	8270D	Total/NA
Arsenic	7.5		0.58	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	130		0.58	0.066	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.55		0.23	0.054	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-3

**Client Sample ID: 2696V-7-B01 (0-5) (Continued)**

**Lab Sample ID: 500-136893-4**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.23	B	0.12	0.021	mg/Kg	1	☼	6010B	Total/NA
Chromium	14		0.58	0.29	mg/Kg	1	☼	6010B	Total/NA
Cobalt	13		0.29	0.076	mg/Kg	1	☼	6010B	Total/NA
Copper	19		0.58	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	17000	B	12	6.0	mg/Kg	1	☼	6010B	Total/NA
Lead	62		0.29	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	21000		5.8	2.9	mg/Kg	1	☼	6010B	Total/NA
Calcium	33000	B	12	2.0	mg/Kg	1	☼	6010B	Total/NA
Manganese	740	B	0.58	0.084	mg/Kg	1	☼	6010B	Total/NA
Nickel	26		0.58	0.17	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.85		0.58	0.34	mg/Kg	1	☼	6010B	Total/NA
Vanadium	15		0.29	0.068	mg/Kg	1	☼	6010B	Total/NA
Zinc	66		1.2	0.51	mg/Kg	1	☼	6010B	Total/NA
Potassium	1500		29	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	1100		58	8.6	mg/Kg	1	☼	6010B	Total/NA
Barium	0.65		0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0032	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	370		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.035		0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	120		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	6.3		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.018	J	0.025	0.010	mg/L	1		6010B	TCLP
Potassium	2.8		2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.15	J ^	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	1.0		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.034		0.018	0.0061	mg/Kg	1	☼	7471B	Total/NA
pH	9.0		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago



# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136893-3	2696V-7-B02 (0-5)	Solid	11/07/17 12:00	11/07/17 16:20
500-136893-4	2696V-7-B01 (0-5)	Solid	11/07/17 12:30	11/07/17 16:20

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-3

**Client Sample ID: 2696V-7-B02 (0-5)**

**Lab Sample ID: 500-136893-3**

**Date Collected: 11/07/17 12:00**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 87.9**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.014		0.014	0.0061	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Benzene	<0.0014		0.0014	0.00036	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Bromodichloromethane	<0.0014		0.0014	0.00029	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Bromoform	<0.0014		0.0014	0.00041	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Bromomethane	<0.0035		0.0035	0.0013	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
2-Butanone (MEK)	<0.0035		0.0035	0.0016	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Carbon disulfide	<0.0035		0.0035	0.00073	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Carbon tetrachloride	<0.0014		0.0014	0.00041	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Chlorobenzene	<0.0014		0.0014	0.00052	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Chloroethane	<0.0035		0.0035	0.0010	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Chloroform	<0.0014		0.0014	0.00049	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Chloromethane	<0.0035		0.0035	0.0014	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
cis-1,2-Dichloroethene	<0.0014		0.0014	0.00039	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
cis-1,3-Dichloropropene	<0.0014		0.0014	0.00042	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Dibromochloromethane	<0.0014		0.0014	0.00046	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
1,1-Dichloroethane	<0.0014		0.0014	0.00048	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
1,2-Dichloroethane	<0.0035		0.0035	0.0011	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
1,1-Dichloroethene	<0.0014		0.0014	0.00048	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
1,2-Dichloropropane	<0.0014		0.0014	0.00036	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
1,3-Dichloropropane, Total	<0.0014		0.0014	0.00049	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Ethylbenzene	<0.0014		0.0014	0.00067	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
2-Hexanone	<0.0035		0.0035	0.0011	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Methylene Chloride	<0.0035		0.0035	0.0014	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
4-Methyl-2-pentanone (MIBK)	<0.0035		0.0035	0.0010	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Methyl tert-butyl ether	<0.0014		0.0014	0.00041	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Styrene	<0.0014		0.0014	0.00042	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
1,1,2,2-Tetrachloroethane	<0.0014		0.0014	0.00045	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Tetrachloroethene	<0.0014		0.0014	0.00048	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Toluene	<0.0014		0.0014	0.00035	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
trans-1,2-Dichloroethene	<0.0014		0.0014	0.00062	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
trans-1,3-Dichloropropene	<0.0014		0.0014	0.00049	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
1,1,1-Trichloroethane	<0.0014		0.0014	0.00047	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
1,1,2-Trichloroethane	<0.0014		0.0014	0.00060	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Trichloroethene	<0.0014		0.0014	0.00047	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Vinyl acetate	<0.0035		0.0035	0.0012	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Vinyl chloride	<0.0014		0.0014	0.00062	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1
Xylenes, Total	<0.0028		0.0028	0.00045	mg/Kg	☼	11/07/17 17:56	11/10/17 14:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		75 - 131	11/07/17 17:56	11/10/17 14:20	1
Dibromofluoromethane	98		75 - 126	11/07/17 17:56	11/10/17 14:20	1
1,2-Dichloroethane-d4 (Surr)	93		70 - 134	11/07/17 17:56	11/10/17 14:20	1
Toluene-d8 (Surr)	98		75 - 124	11/07/17 17:56	11/10/17 14:20	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.035		0.035	0.0064	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Acenaphthylene	<0.035		0.035	0.0047	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Anthracene	<0.035		0.035	0.0059	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Benzo[a]anthracene	<0.035		0.035	0.0048	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-3

**Client Sample ID: 2696V-7-B02 (0-5)**

**Lab Sample ID: 500-136893-3**

**Date Collected: 11/07/17 12:00**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 87.9**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.035		0.035	0.0069	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Benzo[b]fluoranthene	<0.035		0.035	0.0077	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Benzo[g,h,i]perylene	<0.035		0.035	0.011	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Benzo[k]fluoranthene	<0.035		0.035	0.010	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.053	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.065	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Butyl benzyl phthalate	<0.18		0.18	0.068	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Carbazole	<0.18		0.18	0.089	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
4-Chloroaniline	<0.72		0.72	0.17	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
4-Chloro-3-methylphenol	<0.35		0.35	0.12	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
2-Chlorophenol	<0.18		0.18	0.061	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.041	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Chrysene	<0.035		0.035	0.0097	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Dibenz(a,h)anthracene	<0.035		0.035	0.0069	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
1,2-Dichlorobenzene	<0.18		0.18	0.042	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
2,4-Dichlorophenol	<0.35		0.35	0.084	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Diethyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
2,4-Dimethylphenol	<0.35		0.35	0.13	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Dimethyl phthalate	<0.18		0.18	0.046	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Di-n-butyl phthalate	<0.18		0.18	0.054	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
4,6-Dinitro-2-methylphenol	<0.72		0.72	0.29	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
2,4-Dinitrophenol	<0.72		0.72	0.63	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
2,4-Dinitrotoluene	<0.18		0.18	0.056	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
2,6-Dinitrotoluene	<0.18		0.18	0.070	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Di-n-octyl phthalate	<0.18		0.18	0.058	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Fluoranthene	<0.035		0.035	0.0066	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Fluorene	<0.035		0.035	0.0050	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Hexachlorobenzene	<0.072		0.072	0.0082	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Hexachlorobutadiene	<0.18		0.18	0.056	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Hexachlorocyclopentadiene	<0.72		0.72	0.20	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Hexachloroethane	<0.18		0.18	0.054	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Indeno[1,2,3-cd]pyrene	<0.035		0.035	0.0092	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
2-Methylnaphthalene	<0.072		0.072	0.0065	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
2-Methylphenol	<0.18		0.18	0.057	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
3 & 4 Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Naphthalene	<0.035		0.035	0.0055	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
3-Nitroaniline	<0.35		0.35	0.11	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
4-Nitroaniline	<0.35		0.35	0.15	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Nitrobenzene	<0.035		0.035	0.0089	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
2-Nitrophenol	<0.35		0.35	0.084	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-3

**Client Sample ID: 2696V-7-B02 (0-5)**

**Lab Sample ID: 500-136893-3**

Date Collected: 11/07/17 12:00

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 87.9

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.72		0.72	0.34	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
N-Nitrosodi-n-propylamine	<0.072		0.072	0.043	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Pentachlorophenol	<0.72		0.72	0.57	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Phenanthrene	<0.035		0.035	0.0049	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Phenol	<0.18		0.18	0.079	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
Pyrene	<0.035		0.035	0.0071	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.038	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
2,4,5-Trichlorophenol	<0.35		0.35	0.081	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1
2,4,6-Trichlorophenol	<0.35		0.35	0.12	mg/Kg	☼	11/14/17 07:55	11/15/17 20:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	85		44 - 121	11/14/17 07:55	11/15/17 20:46	1
2-Fluorophenol	106		46 - 133	11/14/17 07:55	11/15/17 20:46	1
Nitrobenzene-d5	88		41 - 120	11/14/17 07:55	11/15/17 20:46	1
Phenol-d5	106		46 - 125	11/14/17 07:55	11/15/17 20:46	1
Terphenyl-d14	110		35 - 160	11/14/17 07:55	11/15/17 20:46	1
2,4,6-Tribromophenol	68		25 - 139	11/14/17 07:55	11/15/17 20:46	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.43	J	1.1	0.22	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1
Arsenic	8.0		0.56	0.19	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1
Barium	12		0.56	0.064	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1
Beryllium	0.30		0.22	0.052	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1
Cadmium	0.22	B	0.11	0.020	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1
Chromium	5.8		0.56	0.28	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1
Cobalt	5.7		0.28	0.073	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1
Copper	18		0.56	0.16	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1
Iron	13000	B	11	5.8	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1
Lead	8.7		0.28	0.13	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1
Magnesium	42000		5.6	2.8	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1
Calcium	140000	B	110	19	mg/Kg	☼	11/08/17 16:57	11/11/17 00:38	10
Manganese	330	B	0.56	0.081	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1
Nickel	13		0.56	0.16	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1
Selenium	<0.56		0.56	0.33	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1
Silver	<0.28		0.28	0.072	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1
Vanadium	8.2		0.28	0.066	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1
Zinc	44		1.1	0.49	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1
Potassium	980		28	9.9	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1
Sodium	220		56	8.3	mg/Kg	☼	11/08/17 16:57	11/10/17 01:23	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 14:43	11/11/17 16:50	1
Barium	0.19	J	0.50	0.050	mg/L		11/10/17 14:43	11/11/17 16:50	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 14:43	11/11/17 16:50	1
Cadmium	0.0034	J	0.0050	0.0020	mg/L		11/10/17 14:43	11/11/17 16:50	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-3

**Client Sample ID: 2696V-7-B02 (0-5)**

**Lab Sample ID: 500-136893-3**

Date Collected: 11/07/17 12:00

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 87.9

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>850</b>		50	5.0	mg/L		11/10/17 14:43	11/13/17 17:01	10
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:50	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:50	1
<b>Copper</b>	<b>0.027</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:50	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 14:43	11/11/17 16:50	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 14:43	11/11/17 16:50	1
<b>Magnesium</b>	<b>35</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 16:50	1
<b>Manganese</b>	<b>0.59</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:50	1
<b>Nickel</b>	<b>0.012</b>	J	0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:50	1
<b>Potassium</b>	<b>2.1</b>	J	2.5	0.50	mg/L		11/10/17 14:43	11/11/17 16:50	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 14:43	11/11/17 16:50	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:50	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:50	1
<b>Zinc</b>	<b>0.090</b>	J ^	0.50	0.020	mg/L		11/10/17 14:43	11/11/17 16:50	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.028</b>		0.025	0.010	mg/L		11/10/17 14:42	11/11/17 23:31	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 14:43	11/13/17 13:00	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 14:43	11/13/17 13:00	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/13/17 16:00	11/14/17 14:56	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.014</b>	J	0.017	0.0056	mg/Kg	☼	11/09/17 16:15	11/10/17 09:19	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.51		0.51	0.17	mg/Kg	☼	11/15/17 13:10	11/15/17 16:37	1
<b>pH</b>	<b>8.9</b>		0.20	0.20	SU			11/14/17 17:36	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-3

**Client Sample ID: 2696V-7-B01 (0-5)**

**Lab Sample ID: 500-136893-4**

**Date Collected: 11/07/17 12:30**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 82.9**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.027		0.027	0.012	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Benzene	<0.0027		0.0027	0.00070	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Bromodichloromethane	<0.0027		0.0027	0.00056	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Bromoform	<0.0027		0.0027	0.00080	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Bromomethane	<0.0068		0.0068	0.0026	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
2-Butanone (MEK)	<0.0068		0.0068	0.0030	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Carbon disulfide	<0.0068		0.0068	0.0014	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Carbon tetrachloride	<0.0027		0.0027	0.00079	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Chlorobenzene	<0.0027		0.0027	0.0010	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Chloroethane	<0.0068		0.0068	0.0020	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Chloroform	<0.0027		0.0027	0.00095	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Chloromethane	<0.0068		0.0068	0.0028	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
cis-1,2-Dichloroethene	<0.0027		0.0027	0.00077	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
cis-1,3-Dichloropropene	<0.0027		0.0027	0.00083	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Dibromochloromethane	<0.0027		0.0027	0.00090	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
1,1-Dichloroethane	<0.0027		0.0027	0.00094	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
1,2-Dichloroethane	<0.0068		0.0068	0.0021	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
1,1-Dichloroethene	<0.0027		0.0027	0.00094	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
1,2-Dichloropropane	<0.0027		0.0027	0.00071	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
1,3-Dichloropropene, Total	<0.0027		0.0027	0.00096	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Ethylbenzene	<0.0027		0.0027	0.0013	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
2-Hexanone	<0.0068		0.0068	0.0021	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Methylene Chloride	<0.0068		0.0068	0.0027	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
4-Methyl-2-pentanone (MIBK)	<0.0068		0.0068	0.0020	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Methyl tert-butyl ether	<0.0027		0.0027	0.00080	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Styrene	<0.0027		0.0027	0.00083	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
1,1,2,2-Tetrachloroethane	<0.0027		0.0027	0.00088	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Tetrachloroethene	<0.0027		0.0027	0.00093	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Toluene	<0.0027		0.0027	0.00069	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
trans-1,2-Dichloroethene	<0.0027		0.0027	0.0012	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
trans-1,3-Dichloropropene	<0.0027		0.0027	0.00096	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
1,1,1-Trichloroethane	<0.0027		0.0027	0.00092	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
1,1,2-Trichloroethane	<0.0027		0.0027	0.0012	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Trichloroethene	<0.0027		0.0027	0.00093	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Vinyl acetate	<0.0068		0.0068	0.0024	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Vinyl chloride	<0.0027		0.0027	0.0012	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1
Xylenes, Total	<0.0055		0.0055	0.00088	mg/Kg	☼	11/07/17 17:56	11/10/17 14:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		75 - 131	11/07/17 17:56	11/10/17 14:46	1
Dibromofluoromethane	94		75 - 126	11/07/17 17:56	11/10/17 14:46	1
1,2-Dichloroethane-d4 (Surr)	80		70 - 134	11/07/17 17:56	11/10/17 14:46	1
Toluene-d8 (Surr)	101		75 - 124	11/07/17 17:56	11/10/17 14:46	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.039		0.039	0.0070	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Acenaphthylene	0.015	J	0.039	0.0052	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Anthracene	0.019	J	0.039	0.0065	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Benzo[a]anthracene	0.064		0.039	0.0053	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-3

**Client Sample ID: 2696V-7-B01 (0-5)**

**Lab Sample ID: 500-136893-4**

**Date Collected: 11/07/17 12:30**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 82.9**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.083</b>		0.039	0.0076	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
<b>Benzo[b]fluoranthene</b>	<b>0.13</b>		0.039	0.0085	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
<b>Benzo[g,h,i]perylene</b>	<b>0.052</b>		0.039	0.013	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
<b>Benzo[k]fluoranthene</b>	<b>0.039</b>		0.039	0.012	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.072	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Butyl benzyl phthalate	<0.20		0.20	0.075	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Carbazole	<0.20		0.20	0.098	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
4-Chloroaniline	<0.79		0.79	0.18	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
<b>Chrysene</b>	<b>0.072</b>		0.039	0.011	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
<b>Dibenz(a,h)anthracene</b>	<b>0.0093 J</b>		0.039	0.0076	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
1,2-Dichlorobenzene	<0.20		0.20	0.047	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
2,4-Dichlorophenol	<0.39		0.39	0.093	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Diethyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
4,6-Dinitro-2-methylphenol	<0.79		0.79	0.31	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
2,4-Dinitrophenol	<0.79		0.79	0.69	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
2,6-Dinitrotoluene	<0.20		0.20	0.077	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
<b>Fluoranthene</b>	<b>0.13</b>		0.039	0.0073	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Fluorene	<0.039		0.039	0.0055	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Hexachlorobenzene	<0.079		0.079	0.0091	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Hexachlorocyclopentadiene	<0.79		0.79	0.23	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.040</b>		0.039	0.010	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
2-Methylnaphthalene	<0.079		0.079	0.0072	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Naphthalene	<0.039		0.039	0.0060	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Nitrobenzene	<0.039		0.039	0.0098	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
2-Nitrophenol	<0.39		0.39	0.093	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-3

**Client Sample ID: 2696V-7-B01 (0-5)**

**Lab Sample ID: 500-136893-4**

Date Collected: 11/07/17 12:30

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 82.9

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.79		0.79	0.37	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
N-Nitrosodi-n-propylamine	<0.079		0.079	0.048	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.045	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Pentachlorophenol	<0.79		0.79	0.63	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
<b>Phenanthrene</b>	<b>0.058</b>		0.039	0.0055	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
Phenol	<0.20		0.20	0.087	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
<b>Pyrene</b>	<b>0.10</b>		0.039	0.0078	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
2,4,5-Trichlorophenol	<0.39		0.39	0.089	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	11/14/17 07:55	11/15/17 21:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	88		44 - 121	11/14/17 07:55	11/15/17 21:10	1
2-Fluorophenol	94		46 - 133	11/14/17 07:55	11/15/17 21:10	1
Nitrobenzene-d5	101		41 - 120	11/14/17 07:55	11/15/17 21:10	1
Phenol-d5	99		46 - 125	11/14/17 07:55	11/15/17 21:10	1
Terphenyl-d14	87		35 - 160	11/14/17 07:55	11/15/17 21:10	1
2,4,6-Tribromophenol	87		25 - 139	11/14/17 07:55	11/15/17 21:10	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.23	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
<b>Arsenic</b>	<b>7.5</b>		0.58	0.20	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
<b>Barium</b>	<b>130</b>		0.58	0.066	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
<b>Beryllium</b>	<b>0.55</b>		0.23	0.054	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
<b>Cadmium</b>	<b>0.23</b>	<b>B</b>	0.12	0.021	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
<b>Chromium</b>	<b>14</b>		0.58	0.29	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
<b>Cobalt</b>	<b>13</b>		0.29	0.076	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
<b>Copper</b>	<b>19</b>		0.58	0.16	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
<b>Iron</b>	<b>17000</b>	<b>B</b>	12	6.0	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
<b>Lead</b>	<b>62</b>		0.29	0.13	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
<b>Magnesium</b>	<b>21000</b>		5.8	2.9	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
<b>Calcium</b>	<b>33000</b>	<b>B</b>	12	2.0	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
<b>Manganese</b>	<b>740</b>	<b>B</b>	0.58	0.084	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
<b>Nickel</b>	<b>26</b>		0.58	0.17	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
<b>Selenium</b>	<b>0.85</b>		0.58	0.34	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
Silver	<0.29		0.29	0.075	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
Thallium	<0.58		0.58	0.29	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
<b>Vanadium</b>	<b>15</b>		0.29	0.068	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
<b>Zinc</b>	<b>66</b>		1.2	0.51	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
<b>Potassium</b>	<b>1500</b>		29	10	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1
<b>Sodium</b>	<b>1100</b>		58	8.6	mg/Kg	☼	11/08/17 16:57	11/10/17 01:27	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 14:43	11/11/17 16:54	1
<b>Barium</b>	<b>0.65</b>		0.50	0.050	mg/L		11/10/17 14:43	11/11/17 16:54	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 14:43	11/11/17 16:54	1
<b>Cadmium</b>	<b>0.0032</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 14:43	11/11/17 16:54	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-3

**Client Sample ID: 2696V-7-B01 (0-5)**

**Lab Sample ID: 500-136893-4**

Date Collected: 11/07/17 12:30

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 82.9

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>370</b>		5.0	0.50	mg/L		11/10/17 14:43	11/11/17 16:54	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:54	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:54	1
<b>Copper</b>	<b>0.035</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:54	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 14:43	11/11/17 16:54	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 14:43	11/11/17 16:54	1
<b>Magnesium</b>	<b>120</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 16:54	1
<b>Manganese</b>	<b>6.3</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:54	1
<b>Nickel</b>	<b>0.018</b>	J	0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:54	1
<b>Potassium</b>	<b>2.8</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 16:54	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 14:43	11/11/17 16:54	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:54	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 16:54	1
<b>Zinc</b>	<b>0.15</b>	J ^	0.50	0.020	mg/L		11/10/17 14:43	11/11/17 16:54	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>1.0</b>		0.025	0.010	mg/L		11/10/17 14:42	11/11/17 23:35	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 14:43	11/13/17 13:03	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 14:43	11/13/17 13:03	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/13/17 16:00	11/14/17 14:59	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.034</b>		0.018	0.0061	mg/Kg	☼	11/09/17 16:15	11/10/17 09:28	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.60		0.60	0.21	mg/Kg	☼	11/15/17 13:10	11/15/17 16:38	1
<b>pH</b>	<b>9.0</b>		0.20	0.20	SU			11/14/17 17:36	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-3

## Qualifiers

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-3

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Report To (optional)  
 Contact: MATT WEISS  
 Company: YORTRACON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-136893

Chain of Custody Number: \_\_\_\_\_

Page 1 of 1

Temperature °C of Cooler: 29, 40, 5.5

Client		Client Project #		Preservative		Parameter										Preservative Key	
<u>YORTRACON</u>		<u>11177029M</u>														1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name		Lab Project #															
<u>WORK ORDER # 037</u>																	
Project Location/State		Lab Project #															
<u>MARKHAM, IL</u>																	
Sampler		Lab PM															
<u>CRAIG VANZLAND</u>		<u>DICK WRIGHT</u>															
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	VOCs	SVOCs	23 TAL METALS PH	TRUP 23 TAL METALS							Comments
			Date	Time													
<u>3</u>		<u>2696V-7-B01-(0-5)</u>	<u>11-7-17</u>	<u>1200</u>	<u>5</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>							
<u>4</u>		<u>2696V-7-B01-(0-5)</u>	<u>1</u>	<u>1230</u>	<u>5</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>							

Turnaround Time Required (Business Days)

\_\_\_ 1 Day \_\_\_ 2 Days \_\_\_ 5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>YORTRACON</u> Date: <u>11-7-17</u> Time: <u>1550</u>	Received By: <u>P. Neal</u> Company: <u>TA</u> Date: <u>11/7/17</u> Time: <u>1550</u>
Relinquished By: <u>P. Neal</u> Company: <u>TA</u> Date: <u>11/7/17</u> Time: <u>1620</u>	Received By: <u>[Signature]</u> Company: <u>YORTRACON</u> Date: <u>11/7/17</u> Time: <u>1620</u>

Lab Courier: TA  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

Matrix Key

- WW - Wastewater
- W - Water
- S - Soil
- SL - Sludge
- MS - Miscellaneous
- OL - Oil
- A - Air
- SE - Sediment
- SO - Soil
- L - Leachate
- WI - Wipe
- DW - Drinking Water
- O - Other

Client Comments

NO ALUMINUM

Lab Comments:

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136893-3

**Login Number: 136893**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9, 4.0, 5.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

Kedzie Ave (Northbound) IDOT STA 86+00 to 87+00 (ISGS Site 2696V-8)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

Soil from boring B01 was sampled adjacent to ISGS Site No 2696V-8.  
See Exhibits 8, 8A, and Table 15 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136893-4  
Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

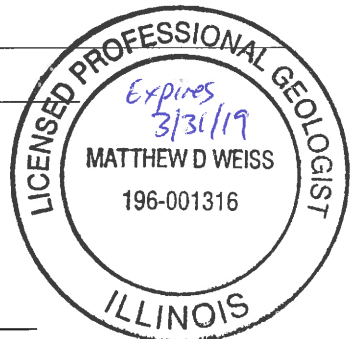
***Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))***

Company Name: Terracon Consultants, Inc  
 Street Address: 135 Ambassador Drive  
 City: Naperville State: IL Zip Code: 60540  
 Phone: 630-717-4263

Matt Weiss  
 Printed Name:

[Signature]  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

7/24/18  
 Date:



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-8)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 1 of 2

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-8-B01 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/07/2017
<b>Inorganic Analytical Parameters</b>						
Arsenic	mg/kg	---	13	11.3		7.6
Barium	mg/kg	---	110	1500		100
Cadmium	mg/kg	---	0.6	5.2		0.14
Chromium, total	mg/kg	---	16.2	21		16
Lead	mg/kg	---	36	107		12
Mercury	mg/kg	---	0.06	0.1		0.033
Selenium	mg/kg	---	0.48	1.3		0.99
Silver	mg/kg	---	0.55	4.4		<0.30
Antimony	mg/kg	---	4.0	5		<1.2
Beryllium	mg/kg	---	0.59	22		0.58
Calcium	mg/kg	---	9,300	---		4000
Cobalt	mg/kg	---	8.9	20		16
Copper	mg/kg	---	19.6	2900		13
Cyanide	mg/kg	---	0.51	---		<0.59
Iron	mg/kg	---	15,900	15000		22000
Magnesium	mg/kg	---	4,820	325000		4600
Manganese	mg/kg	---	636	630		1100
Nickel	mg/kg	---	18	100		30
Potassium	mg/kg	---	1,268	---		1800
Sodium	mg/kg	---	130	---		440
Thallium	mg/kg	---	0.32	2.6		<0.60
Vanadium	mg/kg	---	25.2	550		18
Zinc	mg/kg	---	95	5100		53
pH			6.25	9		8.5
<b>Inorganic Analytical Parameters (SPLP)</b>						
Antimony,SPLP	mg/L	---	---	---		--
Arsenic,SPLP	mg/L	---	---	---		--
Barium,SPLP	mg/L	---	---	---		--
Beryllium,SPLP	mg/L	---	---	---		--
Cadmium,SPLP	mg/L	---	---	---		--
Calcium,SPLP	mg/L	---	---	---		--
Chromium,SPLP	mg/L	---	---	---		--
Cobalt,SPLP	mg/L	---	---	---		--
Copper,SPLP	mg/L	---	---	---		--
Iron,SPLP	mg/L	---	---	---		--
Lead,SPLP	mg/L	---	---	---		--
Magnesium,SPLP	mg/L	---	---	---		--
Manganese,SPLP	mg/L	---	---	---		--
Mercury,SPLP	mg/L	---	---	---		--
Nickel,SPLP	mg/L	---	---	---		--
Potassium,SPLP	mg/L	---	---	---		--
Selenium,SPLP	mg/L	---	---	---		--
Silver,SPLP	mg/L	---	---	---		--
Sodium,SPLP	mg/L	---	---	---		--
Thallium,SPLP	mg/L	---	---	---		--
Vanadium,SPLP	mg/L	---	---	---		--
Zinc,SPLP	mg/L	---	---	---		--
Cyanide,SPLP	mg/L	---	---	---		--



**Detected Constituents to MACs-PTB 174-009;Work Order:037A**  
**Preliminary Site Investigation**  
**FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-8)**  
**Oak Forest/Markham, Cook County, IL**  
**Terracon Project No. 11177029M**  
**Page 2 of 2**

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-8-B01 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/07/2017
<b>Inorganic Analytical Parameters (TCLP)</b>						
Arsenic, TCLP	mg/L	---	---	---		<0.050
Barium, TCLP	mg/L	---	---	---		0.15
Cadmium, TCLP	mg/L	---	---	---		<0.0050
Chromium, TCLP	mg/L	---	---	---		<0.025
Lead, TCLP	mg/L	---	---	---		<0.0075
Mercury, TCLP	mg/L	---	---	---		<0.00020
Selenium, TCLP	mg/L	---	---	---		<0.050
Silver, TCLP	mg/L	---	---	---		<0.025
Antimony, TCLP	mg/L	---	---	---		<0.0060
Beryllium, TCLP	mg/L	---	---	---		<0.0040
Calcium, TCLP	mg/L	---	---	---		96
Cobalt, TCLP	mg/L	---	---	---		<0.025
Copper, TCLP	mg/L	---	---	---		0.023
Cyanide, TCLP	mg/L	---	---	---		----
Iron, TCLP	mg/L	---	---	---		0.45
Magnesium, TCLP	mg/L	---	---	---		35
Manganese, TCLP	mg/L	---	---	---		0.031
Nickel, TCLP	mg/L	---	---	---		<0.025
Potassium, TCLP	mg/L	---	---	---		1.8
Sodium, TCLP	mg/L	---	---	---		----
Thallium, TCLP	mg/L	---	---	---		<0.0020
Vanadium, TCLP	mg/L	---	---	---		<0.025
Zinc, TCLP	mg/L	---	---	---		0.058

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

TestAmerica Job ID: 500-136893-4  
Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:  
Terracon Consulting Eng & Scientists  
135 Ambassador Drive  
Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:  
11/17/2017 5:12:17 PM  
Jodie Bracken, Project Management Assistant II  
[jodie.bracken@testamericainc.com](mailto:jodie.bracken@testamericainc.com)

Designee for  
Richard Wright, Senior Project Manager  
(708)534-5200  
[richard.wright@testamericainc.com](mailto:richard.wright@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



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[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-4

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**Job ID: 500-136893-4**

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**Laboratory: TestAmerica Chicago**

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## Narrative

### Job Narrative 500-136893-4

#### Receipt

The samples were received on 11/7/2017 4:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.9° C, 4.0° C and 5.5° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-409604 recovered above the upper control limit for Zinc. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following sample is impacted: 2696V-8-B01 (0-5) (500-136893-5).

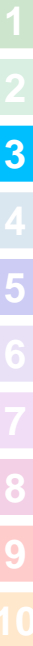
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-4

**Client Sample ID: 2696V-8-B01 (0-5)**

**Lab Sample ID: 500-136893-5**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	7.6		0.60	0.21	mg/Kg	1		☼	6010B	Total/NA
Barium	100		0.60	0.068	mg/Kg	1		☼	6010B	Total/NA
Beryllium	0.58		0.24	0.056	mg/Kg	1		☼	6010B	Total/NA
Cadmium	0.14	B	0.12	0.022	mg/Kg	1		☼	6010B	Total/NA
Chromium	16		0.60	0.30	mg/Kg	1		☼	6010B	Total/NA
Cobalt	16		0.30	0.079	mg/Kg	1		☼	6010B	Total/NA
Copper	13		0.60	0.17	mg/Kg	1		☼	6010B	Total/NA
Iron	22000	B	12	6.2	mg/Kg	1		☼	6010B	Total/NA
Lead	12		0.30	0.14	mg/Kg	1		☼	6010B	Total/NA
Magnesium	4600		6.0	3.0	mg/Kg	1		☼	6010B	Total/NA
Calcium	4000	B	12	2.0	mg/Kg	1		☼	6010B	Total/NA
Manganese	1100	B	0.60	0.087	mg/Kg	1		☼	6010B	Total/NA
Nickel	30		0.60	0.17	mg/Kg	1		☼	6010B	Total/NA
Selenium	0.99		0.60	0.35	mg/Kg	1		☼	6010B	Total/NA
Vanadium	18		0.30	0.071	mg/Kg	1		☼	6010B	Total/NA
Zinc	53		1.2	0.53	mg/Kg	1		☼	6010B	Total/NA
Potassium	1800		30	11	mg/Kg	1		☼	6010B	Total/NA
Sodium	440		60	8.9	mg/Kg	1		☼	6010B	Total/NA
Barium	0.15	J	0.50	0.050	mg/L	1			6010B	TCLP
Calcium	96		5.0	0.50	mg/L	1			6010B	TCLP
Copper	0.023	J	0.025	0.010	mg/L	1			6010B	TCLP
Iron	0.45		0.40	0.20	mg/L	1			6010B	TCLP
Magnesium	35		2.5	0.50	mg/L	1			6010B	TCLP
Manganese	0.031		0.025	0.010	mg/L	1			6010B	TCLP
Potassium	1.8	J	2.5	0.50	mg/L	1			6010B	TCLP
Zinc	0.058	J ^	0.50	0.020	mg/L	1			6010B	TCLP
Mercury	0.033		0.019	0.0063	mg/Kg	1		☼	7471B	Total/NA
pH	8.5		0.20	0.20	SU	1			9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-4

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136893-5	2696V-8-B01 (0-5)	Solid	11/07/17 13:00	11/07/17 16:20

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-4

**Client Sample ID: 2696V-8-B01 (0-5)**

**Lab Sample ID: 500-136893-5**

Date Collected: 11/07/17 13:00

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 82.1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.021		0.021	0.0092	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Benzene	<0.0021		0.0021	0.00054	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Bromodichloromethane	<0.0021		0.0021	0.00043	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Bromoform	<0.0021		0.0021	0.00061	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Bromomethane	<0.0053		0.0053	0.0020	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
2-Butanone (MEK)	<0.0053		0.0053	0.0023	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Carbon disulfide	<0.0053		0.0053	0.0011	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Carbon tetrachloride	<0.0021		0.0021	0.00061	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Chlorobenzene	<0.0021		0.0021	0.00078	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Chloroethane	<0.0053		0.0053	0.0016	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Chloroform	<0.0021		0.0021	0.00073	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Chloromethane	<0.0053		0.0053	0.0021	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
cis-1,2-Dichloroethene	<0.0021		0.0021	0.00059	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
cis-1,3-Dichloropropene	<0.0021		0.0021	0.00063	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Dibromochloromethane	<0.0021		0.0021	0.00069	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
1,1-Dichloroethane	<0.0021		0.0021	0.00072	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
1,2-Dichloroethane	<0.0053		0.0053	0.0016	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
1,1-Dichloroethene	<0.0021		0.0021	0.00072	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
1,2-Dichloropropane	<0.0021		0.0021	0.00054	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
1,3-Dichloropropane, Total	<0.0021		0.0021	0.00074	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Ethylbenzene	<0.0021		0.0021	0.0010	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
2-Hexanone	<0.0053		0.0053	0.0016	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Methylene Chloride	<0.0053		0.0053	0.0021	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
4-Methyl-2-pentanone (MIBK)	<0.0053		0.0053	0.0016	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Methyl tert-butyl ether	<0.0021		0.0021	0.00062	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Styrene	<0.0021		0.0021	0.00064	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
1,1,2,2-Tetrachloroethane	<0.0021		0.0021	0.00067	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Tetrachloroethene	<0.0021		0.0021	0.00072	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Toluene	<0.0021		0.0021	0.00053	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
trans-1,2-Dichloroethene	<0.0021		0.0021	0.00093	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
trans-1,3-Dichloropropene	<0.0021		0.0021	0.00074	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
1,1,1-Trichloroethane	<0.0021		0.0021	0.00071	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
1,1,2-Trichloroethane	<0.0021		0.0021	0.00090	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Trichloroethene	<0.0021		0.0021	0.00071	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Vinyl acetate	<0.0053		0.0053	0.0018	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Vinyl chloride	<0.0021		0.0021	0.00093	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1
Xylenes, Total	<0.0042		0.0042	0.00067	mg/Kg	☼	11/07/17 17:56	11/10/17 15:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		75 - 131	11/07/17 17:56	11/10/17 15:11	1
Dibromofluoromethane	101		75 - 126	11/07/17 17:56	11/10/17 15:11	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 134	11/07/17 17:56	11/10/17 15:11	1
Toluene-d8 (Surr)	97		75 - 124	11/07/17 17:56	11/10/17 15:11	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.039		0.039	0.0071	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Acenaphthylene	<0.039		0.039	0.0052	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Anthracene	<0.039		0.039	0.0066	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Benzo[a]anthracene	<0.039		0.039	0.0053	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-4

**Client Sample ID: 2696V-8-B01 (0-5)**

**Lab Sample ID: 500-136893-5**

**Date Collected: 11/07/17 13:00**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 82.1**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.039		0.039	0.0077	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Benzo[b]fluoranthene	<0.039		0.039	0.0085	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Benzo[g,h,i]perylene	<0.039		0.039	0.013	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Benzo[k]fluoranthene	<0.039		0.039	0.012	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.072	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Butyl benzyl phthalate	<0.20		0.20	0.075	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Carbazole	<0.20		0.20	0.099	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
4-Chloroaniline	<0.80		0.80	0.19	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
2-Chlorophenol	<0.20		0.20	0.068	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Chrysene	<0.039		0.039	0.011	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Dibenz(a,h)anthracene	<0.039		0.039	0.0077	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
1,2-Dichlorobenzene	<0.20		0.20	0.047	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
2,4-Dichlorophenol	<0.39		0.39	0.094	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Diethyl phthalate	<0.20		0.20	0.067	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Dimethyl phthalate	<0.20		0.20	0.052	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
4,6-Dinitro-2-methylphenol	<0.80		0.80	0.32	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
2,4-Dinitrophenol	<0.80		0.80	0.70	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
2,4-Dinitrotoluene	<0.20		0.20	0.063	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
2,6-Dinitrotoluene	<0.20		0.20	0.078	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Di-n-octyl phthalate	<0.20		0.20	0.065	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Fluoranthene	<0.039		0.039	0.0073	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Fluorene	<0.039		0.039	0.0056	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Hexachlorobenzene	<0.080		0.080	0.0092	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Hexachlorocyclopentadiene	<0.80		0.80	0.23	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Indeno[1,2,3-cd]pyrene	<0.039		0.039	0.010	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
2-Methylnaphthalene	<0.080		0.080	0.0073	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
2-Methylphenol	<0.20		0.20	0.064	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
3 & 4 Methylphenol	<0.20		0.20	0.066	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Naphthalene	<0.039		0.039	0.0061	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
4-Nitroaniline	<0.39		0.39	0.17	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Nitrobenzene	<0.039		0.039	0.0099	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
2-Nitrophenol	<0.39		0.39	0.094	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-4

**Client Sample ID: 2696V-8-B01 (0-5)**

**Lab Sample ID: 500-136893-5**

**Date Collected: 11/07/17 13:00**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 82.1**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.80		0.80	0.38	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
N-Nitrosodi-n-propylamine	<0.080		0.080	0.048	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Pentachlorophenol	<0.80		0.80	0.64	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Phenanthrene	<0.039		0.039	0.0055	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Phenol	<0.20		0.20	0.088	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
Pyrene	<0.039		0.039	0.0079	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
2,4,5-Trichlorophenol	<0.39		0.39	0.090	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1
2,4,6-Trichlorophenol	<0.39		0.39	0.14	mg/Kg	☼	11/14/17 07:55	11/15/17 21:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	89		44 - 121	11/14/17 07:55	11/15/17 21:35	1
2-Fluorophenol	100		46 - 133	11/14/17 07:55	11/15/17 21:35	1
Nitrobenzene-d5	111		41 - 120	11/14/17 07:55	11/15/17 21:35	1
Phenol-d5	105		46 - 125	11/14/17 07:55	11/15/17 21:35	1
Terphenyl-d14	92		35 - 160	11/14/17 07:55	11/15/17 21:35	1
2,4,6-Tribromophenol	81		25 - 139	11/14/17 07:55	11/15/17 21:35	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.23	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
<b>Arsenic</b>	<b>7.6</b>		0.60	0.21	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
<b>Barium</b>	<b>100</b>		0.60	0.068	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
<b>Beryllium</b>	<b>0.58</b>		0.24	0.056	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
<b>Cadmium</b>	<b>0.14</b>	<b>B</b>	0.12	0.022	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
<b>Chromium</b>	<b>16</b>		0.60	0.30	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
<b>Cobalt</b>	<b>16</b>		0.30	0.079	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
<b>Copper</b>	<b>13</b>		0.60	0.17	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
<b>Iron</b>	<b>22000</b>	<b>B</b>	12	6.2	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
<b>Lead</b>	<b>12</b>		0.30	0.14	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
<b>Magnesium</b>	<b>4600</b>		6.0	3.0	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
<b>Calcium</b>	<b>4000</b>	<b>B</b>	12	2.0	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
<b>Manganese</b>	<b>1100</b>	<b>B</b>	0.60	0.087	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
<b>Nickel</b>	<b>30</b>		0.60	0.17	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
<b>Selenium</b>	<b>0.99</b>		0.60	0.35	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
Silver	<0.30		0.30	0.077	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
Thallium	<0.60		0.60	0.30	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
<b>Vanadium</b>	<b>18</b>		0.30	0.071	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
<b>Zinc</b>	<b>53</b>		1.2	0.53	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
<b>Potassium</b>	<b>1800</b>		30	11	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1
<b>Sodium</b>	<b>440</b>		60	8.9	mg/Kg	☼	11/08/17 16:57	11/10/17 01:31	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 14:43	11/11/17 17:06	1
<b>Barium</b>	<b>0.15</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 14:43	11/11/17 17:06	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 14:43	11/11/17 17:06	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/10/17 14:43	11/11/17 17:06	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-4

**Client Sample ID: 2696V-8-B01 (0-5)**

**Lab Sample ID: 500-136893-5**

**Date Collected: 11/07/17 13:00**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 82.1**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>96</b>		5.0	0.50	mg/L		11/10/17 14:43	11/11/17 17:06	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:06	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:06	1
<b>Copper</b>	<b>0.023</b>	<b>J</b>	0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:06	1
<b>Iron</b>	<b>0.45</b>		0.40	0.20	mg/L		11/10/17 14:43	11/11/17 17:06	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 14:43	11/11/17 17:06	1
<b>Magnesium</b>	<b>35</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 17:06	1
<b>Manganese</b>	<b>0.031</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:06	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:06	1
<b>Potassium</b>	<b>1.8</b>	<b>J</b>	2.5	0.50	mg/L		11/10/17 14:43	11/11/17 17:06	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 14:43	11/11/17 17:06	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:06	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:06	1
<b>Zinc</b>	<b>0.058</b>	<b>J ^</b>	0.50	0.020	mg/L		11/10/17 14:43	11/11/17 17:06	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 14:43	11/13/17 13:07	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 14:43	11/13/17 13:07	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/13/17 16:00	11/14/17 15:01	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.033</b>		0.019	0.0063	mg/Kg	☼	11/09/17 16:15	11/10/17 09:35	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.59		0.59	0.20	mg/Kg	☼	11/15/17 13:10	11/15/17 16:38	1
<b>pH</b>	<b>8.5</b>		0.20	0.20	SU			11/14/17 17:36	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-4

## Qualifiers

### Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-4

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)  
 Contact: MATT WEISS  
 Company: TERRACON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-136893  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: 29,40,55

Client		Client Project #		Preservative		Parameter		Matrix		Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other
Project Name		Lab Project #		Matrix		Matrix		Matrix		
Project Location/State		Lab Project #		Matrix		Matrix		Matrix		
<u>TERRACON</u>		<u>11177029M</u>								
<u>WORK ORDER # 037</u>										
<u>MARKHAM, IL</u>										
SAMPLER <u>CRIS VARLAND</u>		LAB PM <u>DICK WRIBAT</u>								
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix				
<u>6</u>		<u>2696V-8-301-(0-5)</u>	<u>11-7-17</u>	<u>1300</u>	<u>3</u>	<u>S</u>	<u>NOLS</u>	<u>SUOLY</u>	<u>Z3 TAL METALS, PH</u>	
							<u>X</u>	<u>X</u>	<u>X</u>	<u>TALP Z3 TAL METALS</u>

Turnaround Time Required (Business Days)

1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By <u>[Signature]</u>	Company <u>TERRACON</u>	Date <u>11-7-17</u>	Time <u>1530</u>	Received By <u>[Signature]</u>	Company <u>TA</u>	Date <u>11/7/17</u>	Time <u>1550</u>
Relinquished By <u>[Signature]</u>	Company <u>TA</u>	Date <u>11/7/17</u>	Time <u>1620</u>	Received By <u>[Signature]</u>	Company <u>TALHS</u>	Date <u>11/7/17</u>	Time <u>1620</u>

Lab Courier: TA  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

Matrix Key

- WW - Wastewater
- W - Water
- S - Soil
- SL - Sludge
- MS - Miscellaneous
- OL - Oil
- A - Air
- SE - Sediment
- SC - Soil
- L - Leachate
- WI - Wipe
- DW - Drinking Water
- O - Other

Client Comments

NO ALUMINUM

Lab Comments:

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136893-4

**Login Number: 136893**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9, 4.0, 5.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

Kedzie Ave (Northbound) IDOT STA 84+70 to 86+00 (ISGS Site 2696V-9)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located [35 Ill. Adm. Code 1100.610(a)]:

Soil from boring B01 was sampled adjacent to ISGS Site No 2696V-9.  
See Exhibits 6, 6A, 8, and Table 17 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136670-1.  
Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

**Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))**

Company Name: Terracon Consultants, Inc

Street Address: 135 Ambassador Drive

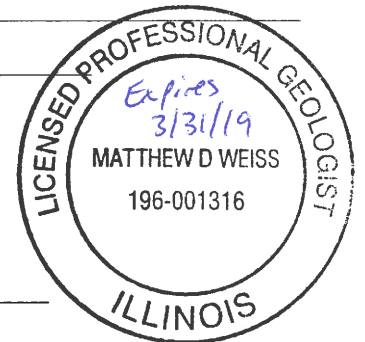
City: Naperville State: IL Zip Code: 60540

Phone: 630-717-4263

Matt Weiss  
Printed Name:

[Signature]  
Licensed Professional Engineer or  
Licensed Professional Geologist Signature:

7/24/18  
Date:





**Detected Constituents to MACs-PTB 174-009;Work Order:037A**  
**Preliminary Site Investigation**  
**FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-9)**  
**Oak Forest/Markham, Cook County, IL**  
**Terracon Project No. 11177029M**  
**Page 1 of 2**

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-9-B01 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/01/2017
<b>Semivolatile Organic Analytical Parameters</b>						
Anthracene	mg/kg	0.25	0.4	12000		0.0069
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.0096
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.019
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.0088
Fluoranthene	mg/kg	2.7	4.1	3100		0.022
Phenanthrene	mg/kg	1.3	2.5	210		0.029
Pyrene	mg/kg	1.9	3.0	2300		0.02
<b>Inorganic Analytical Parameters</b>						
Arsenic	mg/kg	---	13	11.3		8.4
Barium	mg/kg	---	110	1500		17
Cadmium	mg/kg	---	0.6	5.2		0.13
Chromium, total	mg/kg	---	16.2	21		9.5
Lead	mg/kg	---	36	107		12
Mercury	mg/kg	---	0.06	0.1		0.021
Selenium	mg/kg	---	0.48	1.3		<0.56
Silver	mg/kg	---	0.55	4.4		<0.28
Antimony	mg/kg	---	4.0	5		0.41
Beryllium	mg/kg	---	0.59	22		0.34
Calcium	mg/kg	---	9,300	---		110000
Cobalt	mg/kg	---	8.9	20		7.4
Copper	mg/kg	---	19.6	2900		22
Cyanide	mg/kg	---	0.51	---		<0.45
Iron	mg/kg	---	15,900	15000		16000
Magnesium	mg/kg	---	4,820	325000		33000
Manganese	mg/kg	---	636	630		330
Nickel	mg/kg	---	18	100		18
Potassium	mg/kg	---	1,268	---		1100
Sodium	mg/kg	---	130	---		350
Thallium	mg/kg	---	0.32	2.6		<0.56
Vanadium	mg/kg	---	25.2	550		12
Zinc	mg/kg	---	95	5100		55
pH			6.25	9		9
<b>Inorganic Analytical Parameters (SPLP)</b>						
Antimony,SPLP	mg/L	---	---	---		--
Arsenic,SPLP	mg/L	---	---	---		--
Barium,SPLP	mg/L	---	---	---		--
Beryllium,SPLP	mg/L	---	---	---		--
Cadmium,SPLP	mg/L	---	---	---		--
Calcium,SPLP	mg/L	---	---	---		--
Chromium,SPLP	mg/L	---	---	---		--
Cobalt,SPLP	mg/L	---	---	---		--
Copper,SPLP	mg/L	---	---	---		--
Iron,SPLP	mg/L	---	---	---		--
Lead,SPLP	mg/L	---	---	---		--
Magnesium,SPLP	mg/L	---	---	---		--
Manganese,SPLP	mg/L	---	---	---		0.05
Mercury,SPLP	mg/L	---	---	---		--
Nickel,SPLP	mg/L	---	---	---		--
Potassium,SPLP	mg/L	---	---	---		--
Selenium,SPLP	mg/L	---	---	---		--
Silver,SPLP	mg/L	---	---	---		--
Sodium,SPLP	mg/L	---	---	---		--
Thallium,SPLP	mg/L	---	---	---		--
Vanadium,SPLP	mg/L	---	---	---		--
Zinc,SPLP	mg/L	---	---	---		--
Cyanide,SPLP	mg/L	---	---	---		--

**Detected Constituents to MACs-PTB 174-009;Work Order:037A**  
**Preliminary Site Investigation**  
**FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-9)**  
**Oak Forest/Markham, Cook County, IL**  
**Terracon Project No. 11177029M**  
**Page 2 of 2**

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-9-B01 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/01/2017
<b>Inorganic Analytical Parameters (TCLP)</b>						
Arsenic, TCLP	mg/L	---	---	---		<0.050
Barium, TCLP	mg/L	---	---	---		0.25
Cadmium, TCLP	mg/L	---	---	---		0.0028
Chromium, TCLP	mg/L	---	---	---		<0.025
Lead, TCLP	mg/L	---	---	---		<0.0075
Mercury, TCLP	mg/L	---	---	---		<0.00020
Selenium, TCLP	mg/L	---	---	---		<0.050
Silver, TCLP	mg/L	---	---	---		<0.025
Antimony, TCLP	mg/L	---	---	---		<0.0060
Beryllium, TCLP	mg/L	---	---	---		<0.0040
Calcium, TCLP	mg/L	---	---	---		940
Cobalt, TCLP	mg/L	---	---	---		<0.025
Copper, TCLP	mg/L	---	---	---		0.024
Cyanide, TCLP	mg/L	---	---	---		----
Iron, TCLP	mg/L	---	---	---		0.21
Magnesium, TCLP	mg/L	---	---	---		28
Manganese, TCLP	mg/L	---	---	---		0.34
Nickel, TCLP	mg/L	---	---	---		<0.025
Potassium, TCLP	mg/L	---	---	---		1.6
Sodium, TCLP	mg/L	---	---	---		----
Thallium, TCLP	mg/L	---	---	---		<0.0020
Vanadium, TCLP	mg/L	---	---	---		<0.025
Zinc, TCLP	mg/L	---	---	---		0.061

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-136670-1

Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:

Terracon Consulting Eng & Scientists

135 Ambassador Drive

Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:

11/14/2017 5:42:34 PM

Jodie Bracken, Project Management Assistant II

[jodie.bracken@testamericainc.com](mailto:jodie.bracken@testamericainc.com)

Designee for

Richard Wright, Senior Project Manager

(708)534-5200

[richard.wright@testamericainc.com](mailto:richard.wright@testamericainc.com)

### LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Job ID: 500-136670-1**

**Laboratory: TestAmerica Chicago**

## Narrative

### Job Narrative 500-136670-1

#### Receipt

The samples were received on 11/2/2017 10:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.7° C and 3.2° C.

#### GC/MS VOA

Method(s) 8260B: The following samples were diluted due to the abundance of non-target analytes: 2696V-9-B05 (0-5) (500-136670-1), 2696V-9-B03 (10-15) (500-136670-4), 2696V-9-B02 (0-5) (500-136670-5) and 2696V-9-B06 (0-5) (500-136670-7). Analysis of the samples could not be performed un-diluted due to the concentration of these non-target analytes exceeding the instruments saturation levels. The samples were run diluted at 50x (the lowest dilution allowed for method 5035) or higher depending on the concentrations of the non-target analytes. Elevated reporting limits (RLs) are provided.

Method(s) 8260B: The following sample detected Methylene Chloride above the reporting limit: 2696V-9-B06 (0-5) (500-136670-7). The method blank 409621 associated with the this sample did not detect Methylene Chloride. Since Methylene Chloride is a known lab contaminant and the results are just above the reporting limit; the results have been flagged with a "cn" flag to denote the probable lab contamination.

Method(s) 8260B: The laboratory control sample (LCS) for 409621 recovered outside control limits for the following analytes: Bromomethane and Chloroethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: The following sample was collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH was outside the required criteria when verified by the laboratory, and corrective action was not possible: 2696V-9-G01 (500-136670-8).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270D: The following sample contained one acid surrogate outside acceptance limits: 2696V-9-B05 (0-5) (500-136670-1). The laboratory's SOP allows one acid and one base surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Metals

Method(s) 200.8, 6020A: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following sample: 2696V-9-G01 (500-136670-8).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B05 (0-5)**

**Lab Sample ID: 500-136670-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	18		0.16	0.096	mg/Kg	500	☼	8260B	Total/NA
Ethylbenzene	7.7		0.16	0.12	mg/Kg	500	☼	8260B	Total/NA
Toluene	0.42		0.16	0.097	mg/Kg	500	☼	8260B	Total/NA
Xylenes, Total	1.9		0.33	0.14	mg/Kg	500	☼	8260B	Total/NA
Acenaphthene	0.38		0.038	0.0069	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.69		0.038	0.0064	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.93		0.038	0.0052	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.52		0.038	0.0075	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.82		0.038	0.0083	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.16		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.28		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Carbazole	1.4		0.19	0.096	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.87		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.060		0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	2.7		0.038	0.0071	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.55		0.038	0.0054	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.18		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Pyrene	2.1		0.038	0.0077	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene - DL	33		1.6	0.14	mg/Kg	20	☼	8270D	Total/NA
Naphthalene - DL	11		0.77	0.12	mg/Kg	20	☼	8270D	Total/NA
Phenanthrene - DL	3.7		0.77	0.11	mg/Kg	20	☼	8270D	Total/NA
Antimony	0.37	J B	1.2	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.6		0.58	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	44		0.58	0.066	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.51		0.23	0.054	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.12	B	0.12	0.021	mg/Kg	1	☼	6010B	Total/NA
Chromium	13		0.58	0.29	mg/Kg	1	☼	6010B	Total/NA
Cobalt	9.5		0.29	0.076	mg/Kg	1	☼	6010B	Total/NA
Copper	12	B	0.58	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	13000	B	12	6.0	mg/Kg	1	☼	6010B	Total/NA
Lead	17		0.29	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	46000		5.8	2.9	mg/Kg	1	☼	6010B	Total/NA
Calcium	110000	B	120	20	mg/Kg	10	☼	6010B	Total/NA
Manganese	250		0.58	0.084	mg/Kg	1	☼	6010B	Total/NA
Nickel	20		0.58	0.17	mg/Kg	1	☼	6010B	Total/NA
Vanadium	18		0.29	0.068	mg/Kg	1	☼	6010B	Total/NA
Zinc	39		1.2	0.51	mg/Kg	1	☼	6010B	Total/NA
Potassium	1500		29	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	180		58	8.6	mg/Kg	1	☼	6010B	Total/NA
Barium	0.41	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0023	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	290		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.016	J	0.025	0.010	mg/L	1		6010B	TCLP
Copper	0.020	J	0.025	0.010	mg/L	1		6010B	TCLP
Iron	0.43		0.40	0.20	mg/L	1		6010B	TCLP
Lead	0.021		0.0075	0.0075	mg/L	1		6010B	TCLP
Magnesium	160		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	4.0		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.021	J	0.025	0.010	mg/L	1		6010B	TCLP
Potassium	2.3	J	2.5	0.50	mg/L	1		6010B	TCLP

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

## Client Sample ID: 2696V-9-B05 (0-5) (Continued)

## Lab Sample ID: 500-136670-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Zinc	0.066	J	0.50	0.020	mg/L	1		6010B	TCLP
Lead	0.012		0.0075	0.0075	mg/L	1		6010B	SPLP East
Manganese	0.048		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.022		0.020	0.0066	mg/Kg	1	*	7471B	Total/NA
pH	8.0		0.20	0.20	SU	1		9045D	Total/NA

## Client Sample ID: 2696V-9-B04 (0-5)

## Lab Sample ID: 500-136670-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.046		0.020	0.0087	mg/Kg	1	*	8260B	Total/NA
Acenaphthene	0.017	J	0.039	0.0071	mg/Kg	1	*	8270D	Total/NA
Anthracene	0.021	J	0.039	0.0066	mg/Kg	1	*	8270D	Total/NA
Benzo[a]anthracene	0.025	J	0.039	0.0053	mg/Kg	1	*	8270D	Total/NA
Benzo[a]pyrene	0.028	J	0.039	0.0076	mg/Kg	1	*	8270D	Total/NA
Benzo[b]fluoranthene	0.037	J	0.039	0.0085	mg/Kg	1	*	8270D	Total/NA
Benzo[g,h,i]perylene	0.015	J	0.039	0.013	mg/Kg	1	*	8270D	Total/NA
Chrysene	0.030	J	0.039	0.011	mg/Kg	1	*	8270D	Total/NA
Fluoranthene	0.078		0.039	0.0073	mg/Kg	1	*	8270D	Total/NA
Fluorene	0.013	J	0.039	0.0055	mg/Kg	1	*	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.011	J	0.039	0.010	mg/Kg	1	*	8270D	Total/NA
2-Methylnaphthalene	0.22		0.080	0.0073	mg/Kg	1	*	8270D	Total/NA
Naphthalene	0.027	J	0.039	0.0061	mg/Kg	1	*	8270D	Total/NA
Phenanthrene	0.088		0.039	0.0055	mg/Kg	1	*	8270D	Total/NA
Pyrene	0.062		0.039	0.0078	mg/Kg	1	*	8270D	Total/NA
Antimony	0.39	J B	1.2	0.24	mg/Kg	1	*	6010B	Total/NA
Arsenic	12		0.61	0.21	mg/Kg	1	*	6010B	Total/NA
Barium	51		0.61	0.069	mg/Kg	1	*	6010B	Total/NA
Beryllium	0.64		0.24	0.057	mg/Kg	1	*	6010B	Total/NA
Cadmium	0.045	J B	0.12	0.022	mg/Kg	1	*	6010B	Total/NA
Chromium	17		0.61	0.30	mg/Kg	1	*	6010B	Total/NA
Cobalt	14		0.30	0.080	mg/Kg	1	*	6010B	Total/NA
Copper	25	B	0.61	0.17	mg/Kg	1	*	6010B	Total/NA
Iron	26000	B	12	6.3	mg/Kg	1	*	6010B	Total/NA
Lead	18		0.30	0.14	mg/Kg	1	*	6010B	Total/NA
Magnesium	15000		6.1	3.0	mg/Kg	1	*	6010B	Total/NA
Calcium	23000	B	12	2.1	mg/Kg	1	*	6010B	Total/NA
Manganese	380		0.61	0.088	mg/Kg	1	*	6010B	Total/NA
Nickel	31		0.61	0.18	mg/Kg	1	*	6010B	Total/NA
Selenium	0.42	J	0.61	0.36	mg/Kg	1	*	6010B	Total/NA
Vanadium	23		0.30	0.072	mg/Kg	1	*	6010B	Total/NA
Zinc	58		1.2	0.53	mg/Kg	1	*	6010B	Total/NA
Potassium	2000		30	11	mg/Kg	1	*	6010B	Total/NA
Sodium	240		61	9.0	mg/Kg	1	*	6010B	Total/NA
Barium	0.64		0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0031	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	330		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.030		0.025	0.010	mg/L	1		6010B	TCLP
Copper	0.016	J	0.025	0.010	mg/L	1		6010B	TCLP
Iron	0.43		0.40	0.20	mg/L	1		6010B	TCLP
Magnesium	140		2.5	0.50	mg/L	1		6010B	TCLP

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

## Client Sample ID: 2696V-9-B04 (0-5) (Continued)

## Lab Sample ID: 500-136670-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	7.4		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.025		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	2.3	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.051	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.12		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.032		0.019	0.0063	mg/Kg	1	☼	7471B	Total/NA
pH	8.3		0.20	0.20	SU	1		9045D	Total/NA

## Client Sample ID: 2696V-9-B04 (0-5) Dup

## Lab Sample ID: 500-136670-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.039		0.018	0.0078	mg/Kg	1	☼	8260B	Total/NA
Acenaphthylene	0.0058	J	0.039	0.0052	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.0095	J	0.039	0.0065	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.024	J	0.039	0.0053	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.059		0.039	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.10		0.039	0.0085	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.039		0.039	0.013	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.033	J	0.039	0.012	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.049		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.011	J	0.039	0.0076	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.041		0.039	0.0073	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.034	J	0.039	0.010	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.019	J	0.079	0.0072	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.024	J	0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.036	J	0.039	0.0078	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.24	J	1.2	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	14		0.59	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	56		0.59	0.067	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.60		0.24	0.055	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.20	B	0.12	0.021	mg/Kg	1	☼	6010B	Total/NA
Chromium	16		0.59	0.29	mg/Kg	1	☼	6010B	Total/NA
Cobalt	18		0.29	0.077	mg/Kg	1	☼	6010B	Total/NA
Copper	25	B	0.59	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	19000	B	9.7	5.0	mg/Kg	1	☼	6010B	Total/NA
Lead	29		0.29	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	13000		5.9	2.9	mg/Kg	1	☼	6010B	Total/NA
Calcium	21000	B	12	2.0	mg/Kg	1	☼	6010B	Total/NA
Manganese	460	B	0.59	0.085	mg/Kg	1	☼	6010B	Total/NA
Nickel	31		0.59	0.17	mg/Kg	1	☼	6010B	Total/NA
Vanadium	21		0.29	0.069	mg/Kg	1	☼	6010B	Total/NA
Zinc	68	B	1.2	0.52	mg/Kg	1	☼	6010B	Total/NA
Potassium	1700		29	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	240		59	8.7	mg/Kg	1	☼	6010B	Total/NA
Barium	0.60		0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0033	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	340		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.026		0.025	0.010	mg/L	1		6010B	TCLP
Copper	0.017	J	0.025	0.010	mg/L	1		6010B	TCLP
Iron	0.43		0.40	0.20	mg/L	1		6010B	TCLP

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

## Client Sample ID: 2696V-9-B04 (0-5) Dup (Continued)

## Lab Sample ID: 500-136670-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	120		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	5.6		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.027		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	2.4	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.067	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.068		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.033		0.020	0.0065	mg/Kg	1	☼	7471B	Total/NA
pH	8.3		0.20	0.20	SU	1		9045D	Total/NA

## Client Sample ID: 2696V-9-B03 (10-15)

## Lab Sample ID: 500-136670-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.019		0.012	0.0073	mg/Kg	50	☼	8260B	Total/NA
Ethylbenzene	3.4		0.012	0.0091	mg/Kg	50	☼	8260B	Total/NA
Toluene	0.023		0.012	0.0073	mg/Kg	50	☼	8260B	Total/NA
Xylenes, Total	1.9		0.025	0.011	mg/Kg	50	☼	8260B	Total/NA
Benzo[a]pyrene	0.014	J	0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.45		0.073	0.0067	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.59		0.036	0.0056	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.010	J	0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.011	J	0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.50	J B	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	9.4		0.56	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	11		0.56	0.064	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.26		0.23	0.053	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.16	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	6.5		0.56	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	6.6		0.28	0.074	mg/Kg	1	☼	6010B	Total/NA
Copper	21	B	0.56	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	14000	B	11	5.9	mg/Kg	1	☼	6010B	Total/NA
Lead	12		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	37000		5.6	2.8	mg/Kg	1	☼	6010B	Total/NA
Calcium	120000	B	110	19	mg/Kg	10	☼	6010B	Total/NA
Manganese	360		0.56	0.082	mg/Kg	1	☼	6010B	Total/NA
Nickel	15		0.56	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	9.1		0.28	0.066	mg/Kg	1	☼	6010B	Total/NA
Zinc	55		1.1	0.49	mg/Kg	1	☼	6010B	Total/NA
Potassium	860		28	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	200		56	8.3	mg/Kg	1	☼	6010B	Total/NA
Barium	0.26	J	0.50	0.050	mg/L	1		6010B	TCLP
Calcium	520		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.021	J	0.025	0.010	mg/L	1		6010B	TCLP
Copper	0.019	J	0.025	0.010	mg/L	1		6010B	TCLP
Iron	0.23	J	0.40	0.20	mg/L	1		6010B	TCLP
Magnesium	24		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	1.6		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.043		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	3.1		2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.061	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.030		0.025	0.010	mg/L	1		6010B	SPLP East

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

## Client Sample ID: 2696V-9-B03 (10-15) (Continued)

## Lab Sample ID: 500-136670-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.021		0.018	0.0061	mg/Kg	1	☼	7471B	Total/NA
pH	8.0		0.20	0.20	SU	1		9045D	Total/NA

## Client Sample ID: 2696V-9-B02 (0-5)

## Lab Sample ID: 500-136670-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.022	J	0.036	0.021	mg/Kg	100	☼	8260B	Total/NA
Ethylbenzene	0.044		0.036	0.026	mg/Kg	100	☼	8260B	Total/NA
Xylenes, Total	0.22		0.072	0.032	mg/Kg	100	☼	8260B	Total/NA
Benzo[a]anthracene	0.086		0.042	0.0057	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.097		0.042	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.097		0.042	0.0091	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.045		0.042	0.014	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.025	J	0.042	0.012	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.22		0.042	0.011	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.092		0.042	0.0078	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.029	J	0.042	0.0059	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.021	J	0.042	0.011	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.22		0.042	0.0059	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.37		0.042	0.0084	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.26	J B	1.2	0.24	mg/Kg	1	☼	6010B	Total/NA
Arsenic	8.4		0.61	0.21	mg/Kg	1	☼	6010B	Total/NA
Barium	58		0.61	0.070	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.63		0.25	0.057	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.22	B	0.12	0.022	mg/Kg	1	☼	6010B	Total/NA
Chromium	16		0.61	0.30	mg/Kg	1	☼	6010B	Total/NA
Cobalt	9.2		0.31	0.080	mg/Kg	1	☼	6010B	Total/NA
Copper	34	B	0.61	0.17	mg/Kg	1	☼	6010B	Total/NA
Iron	18000	B	12	6.4	mg/Kg	1	☼	6010B	Total/NA
Lead	1300		0.31	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	4000		6.1	3.0	mg/Kg	1	☼	6010B	Total/NA
Calcium	7900	B	12	2.1	mg/Kg	1	☼	6010B	Total/NA
Manganese	380		0.61	0.089	mg/Kg	1	☼	6010B	Total/NA
Nickel	20		0.61	0.18	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.51	J	0.61	0.36	mg/Kg	1	☼	6010B	Total/NA
Vanadium	21		0.31	0.072	mg/Kg	1	☼	6010B	Total/NA
Zinc	75		1.2	0.54	mg/Kg	1	☼	6010B	Total/NA
Potassium	1700		31	11	mg/Kg	1	☼	6010B	Total/NA
Sodium	850		61	9.1	mg/Kg	1	☼	6010B	Total/NA
Barium	0.38	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0027	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	150		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.029		0.025	0.010	mg/L	1		6010B	TCLP
Copper	0.019	J	0.025	0.010	mg/L	1		6010B	TCLP
Iron	2.1		0.40	0.20	mg/L	1		6010B	TCLP
Lead	0.43		0.0075	0.0075	mg/L	1		6010B	TCLP
Magnesium	32		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	4.9		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.027		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	7.1		2.5	0.50	mg/L	1		6010B	TCLP

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

## Client Sample ID: 2696V-9-B02 (0-5) (Continued)

## Lab Sample ID: 500-136670-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Zinc	0.13	J	0.50	0.020	mg/L	1		6010B	TCLP
Lead	0.15		0.0075	0.0075	mg/L	1		6010B	SPLP East
Manganese	0.043		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.048		0.019	0.0062	mg/Kg	1	*	7471B	Total/NA
pH	8.2		0.20	0.20	SU	1		9045D	Total/NA

## Client Sample ID: 2696V-9-B01 (0-5)

## Lab Sample ID: 500-136670-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	0.0069	J	0.038	0.0064	mg/Kg	1	*	8270D	Total/NA
Benzo[a]anthracene	0.0096	J	0.038	0.0051	mg/Kg	1	*	8270D	Total/NA
Benzo[a]pyrene	0.019	J	0.038	0.0074	mg/Kg	1	*	8270D	Total/NA
Benzo[b]fluoranthene	0.0088	J	0.038	0.0082	mg/Kg	1	*	8270D	Total/NA
Fluoranthene	0.022	J	0.038	0.0071	mg/Kg	1	*	8270D	Total/NA
Phenanthrene	0.029	J	0.038	0.0053	mg/Kg	1	*	8270D	Total/NA
Pyrene	0.020	J	0.038	0.0076	mg/Kg	1	*	8270D	Total/NA
Antimony	0.41	J B	1.1	0.22	mg/Kg	1	*	6010B	Total/NA
Arsenic	8.4		0.56	0.19	mg/Kg	1	*	6010B	Total/NA
Barium	17		0.56	0.064	mg/Kg	1	*	6010B	Total/NA
Beryllium	0.34		0.23	0.053	mg/Kg	1	*	6010B	Total/NA
Cadmium	0.13	B	0.11	0.020	mg/Kg	1	*	6010B	Total/NA
Chromium	9.5		0.56	0.28	mg/Kg	1	*	6010B	Total/NA
Cobalt	7.4		0.28	0.074	mg/Kg	1	*	6010B	Total/NA
Copper	22	B	0.56	0.16	mg/Kg	1	*	6010B	Total/NA
Iron	16000	B	11	5.9	mg/Kg	1	*	6010B	Total/NA
Lead	12		0.28	0.13	mg/Kg	1	*	6010B	Total/NA
Magnesium	33000		5.6	2.8	mg/Kg	1	*	6010B	Total/NA
Calcium	110000	B	110	19	mg/Kg	10	*	6010B	Total/NA
Manganese	330		0.56	0.082	mg/Kg	1	*	6010B	Total/NA
Nickel	18		0.56	0.16	mg/Kg	1	*	6010B	Total/NA
Vanadium	12		0.28	0.066	mg/Kg	1	*	6010B	Total/NA
Zinc	55		1.1	0.49	mg/Kg	1	*	6010B	Total/NA
Potassium	1100		28	10	mg/Kg	1	*	6010B	Total/NA
Sodium	350		56	8.3	mg/Kg	1	*	6010B	Total/NA
Barium	0.25	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0028	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	940		50	5.0	mg/L	10		6010B	TCLP
Copper	0.024	J	0.025	0.010	mg/L	1		6010B	TCLP
Iron	0.21	J	0.40	0.20	mg/L	1		6010B	TCLP
Magnesium	28		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.34		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	1.6	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.061	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.050		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.021		0.019	0.0064	mg/Kg	1	*	7471B	Total/NA
pH	9.0		0.20	0.20	SU	1		9045D	Total/NA

## Client Sample ID: 2696V-9-B06 (0-5)

## Lab Sample ID: 500-136670-7

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B06 (0-5) (Continued)**

**Lab Sample ID: 500-136670-7**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Methylene Chloride	3.1	cn	2.7	0.88	mg/Kg	500		☼	8260B	Total/NA
Anthracene	2.2		0.039	0.0066	mg/Kg	1		☼	8270D	Total/NA
Benzo[a]anthracene	2.7		0.039	0.0053	mg/Kg	1		☼	8270D	Total/NA
Benzo[a]pyrene	1.3		0.039	0.0076	mg/Kg	1		☼	8270D	Total/NA
Benzo[b]fluoranthene	2.3		0.039	0.0085	mg/Kg	1		☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.29		0.039	0.013	mg/Kg	1		☼	8270D	Total/NA
Benzo[k]fluoranthene	0.85		0.039	0.012	mg/Kg	1		☼	8270D	Total/NA
Carbazole	1.4		0.20	0.098	mg/Kg	1		☼	8270D	Total/NA
Chrysene	2.1		0.039	0.011	mg/Kg	1		☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.14		0.039	0.0076	mg/Kg	1		☼	8270D	Total/NA
Dibenzofuran	1.6		0.20	0.046	mg/Kg	1		☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.39		0.039	0.010	mg/Kg	1		☼	8270D	Total/NA
2-Methylnaphthalene	0.54		0.079	0.0072	mg/Kg	1		☼	8270D	Total/NA
Acenaphthene - DL	4.9		0.20	0.035	mg/Kg	5		☼	8270D	Total/NA
Fluoranthene - DL	11		0.20	0.037	mg/Kg	5		☼	8270D	Total/NA
Fluorene - DL	3.6		0.20	0.028	mg/Kg	5		☼	8270D	Total/NA
Phenanthrene - DL	7.5		0.20	0.027	mg/Kg	5		☼	8270D	Total/NA
Pyrene - DL	7.4		0.20	0.039	mg/Kg	5		☼	8270D	Total/NA
Antimony	0.29	J B	1.2	0.23	mg/Kg	1		☼	6010B	Total/NA
Arsenic	4.8		0.59	0.20	mg/Kg	1		☼	6010B	Total/NA
Barium	27		0.59	0.068	mg/Kg	1		☼	6010B	Total/NA
Beryllium	0.28		0.24	0.055	mg/Kg	1		☼	6010B	Total/NA
Cadmium	0.14	B	0.12	0.021	mg/Kg	1		☼	6010B	Total/NA
Chromium	7.4		0.59	0.29	mg/Kg	1		☼	6010B	Total/NA
Cobalt	4.5		0.30	0.078	mg/Kg	1		☼	6010B	Total/NA
Copper	11	B	0.59	0.17	mg/Kg	1		☼	6010B	Total/NA
Iron	8600	B	12	6.2	mg/Kg	1		☼	6010B	Total/NA
Lead	19		0.30	0.14	mg/Kg	1		☼	6010B	Total/NA
Magnesium	12000		5.9	2.9	mg/Kg	1		☼	6010B	Total/NA
Calcium	27000	B	12	2.0	mg/Kg	1		☼	6010B	Total/NA
Manganese	130		0.59	0.086	mg/Kg	1		☼	6010B	Total/NA
Nickel	11		0.59	0.17	mg/Kg	1		☼	6010B	Total/NA
Vanadium	11		0.30	0.070	mg/Kg	1		☼	6010B	Total/NA
Zinc	40		1.2	0.52	mg/Kg	1		☼	6010B	Total/NA
Potassium	590		30	11	mg/Kg	1		☼	6010B	Total/NA
Sodium	200		59	8.8	mg/Kg	1		☼	6010B	Total/NA
Barium	0.52		0.50	0.050	mg/L	1			6010B	TCLP
Calcium	360		5.0	0.50	mg/L	1			6010B	TCLP
Cobalt	0.029		0.025	0.010	mg/L	1			6010B	TCLP
Copper	0.021	J	0.025	0.010	mg/L	1			6010B	TCLP
Iron	0.98		0.40	0.20	mg/L	1			6010B	TCLP
Lead	0.059		0.0075	0.0075	mg/L	1			6010B	TCLP
Magnesium	20		2.5	0.50	mg/L	1			6010B	TCLP
Manganese	2.4		0.025	0.010	mg/L	1			6010B	TCLP
Nickel	0.045		0.025	0.010	mg/L	1			6010B	TCLP
Potassium	3.2		2.5	0.50	mg/L	1			6010B	TCLP
Zinc	0.15	J	0.50	0.020	mg/L	1			6010B	TCLP
Lead	0.054		0.0075	0.0075	mg/L	1			6010B	SPLP East
Manganese	0.038		0.025	0.010	mg/L	1			6010B	SPLP East
Mercury	0.0098	J	0.019	0.0063	mg/Kg	1		☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

## Client Sample ID: 2696V-9-B06 (0-5) (Continued)

## Lab Sample ID: 500-136670-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH	8.4		0.20	0.20	SU	1		9045D	Total/NA

## Client Sample ID: 2696V-9-G01

## Lab Sample ID: 500-136670-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.0076		0.0050	0.0017	mg/L	1		8260B	Total/NA
Benzene	0.0024		0.00050	0.00015	mg/L	1		8260B	Total/NA
Ethylbenzene	0.0044		0.00050	0.00018	mg/L	1		8260B	Total/NA
Toluene	0.00087		0.00050	0.00015	mg/L	1		8260B	Total/NA
Xylenes, Total	0.0076		0.0010	0.00022	mg/L	1		8260B	Total/NA
2-Methylnaphthalene	0.00069	J	0.0015	0.000050	mg/L	1		8270D	Total/NA
Naphthalene	0.0018		0.00077	0.00024	mg/L	1		8270D	Total/NA
Arsenic	0.0061		0.0010	0.00023	mg/L	1		6020A	Total Recoverable
Barium	1.1		0.0025	0.00073	mg/L	1		6020A	Total Recoverable
Cadmium	0.00056		0.00050	0.00017	mg/L	1		6020A	Total Recoverable
Calcium	290		0.40	0.089	mg/L	2		6020A	Total Recoverable
Chromium	0.027		0.010	0.0023	mg/L	2		6020A	Total Recoverable
Cobalt	0.0069		0.0020	0.00080	mg/L	2		6020A	Total Recoverable
Copper	0.015		0.0020	0.00050	mg/L	1		6020A	Total Recoverable
Iron	21		0.20	0.093	mg/L	2		6020A	Total Recoverable
Lead	0.014		0.00050	0.00019	mg/L	1		6020A	Total Recoverable
Magnesium	130		0.40	0.099	mg/L	2		6020A	Total Recoverable
Manganese	0.69		0.0050	0.0016	mg/L	2		6020A	Total Recoverable
Nickel	0.018		0.0040	0.0013	mg/L	2		6020A	Total Recoverable
Potassium	13		1.0	0.22	mg/L	2		6020A	Total Recoverable
Selenium	0.0014	J	0.0025	0.00098	mg/L	1		6020A	Total Recoverable
Sodium	220		0.40	0.15	mg/L	2		6020A	Total Recoverable
Thallium	0.00059	J	0.0020	0.00057	mg/L	1		6020A	Total Recoverable
Vanadium	0.020		0.010	0.0043	mg/L	2		6020A	Total Recoverable
Zinc	0.041		0.020	0.0069	mg/L	1		6020A	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136670-1	2696V-9-B05 (0-5)	Solid	11/01/17 09:40	11/02/17 10:05
500-136670-2	2696V-9-B04 (0-5)	Solid	11/01/17 10:00	11/02/17 10:05
500-136670-3	2696V-9-B04 (0-5) Dup	Solid	11/01/17 00:00	11/02/17 10:05
500-136670-4	2696V-9-B03 (10-15)	Solid	11/01/17 11:30	11/02/17 10:05
500-136670-5	2696V-9-B02 (0-5)	Solid	11/01/17 13:45	11/02/17 10:05
500-136670-6	2696V-9-B01 (0-5)	Solid	11/01/17 14:05	11/02/17 10:05
500-136670-7	2696V-9-B06 (0-5)	Solid	11/01/17 14:30	11/02/17 10:05
500-136670-8	2696V-9-G01	Water	11/01/17 12:10	11/02/17 10:05



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B05 (0-5)**

**Lab Sample ID: 500-136670-1**

**Date Collected: 11/01/17 09:40**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 82.6**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.3		3.3	1.1	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
<b>Benzene</b>	<b>18</b>		0.16	0.096	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
Bromodichloromethane	<0.66		0.66	0.24	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
Bromoform	<0.66		0.66	0.32	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
Bromomethane	<1.3		1.3	0.52	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
2-Butanone (MEK)	<3.3		3.3	1.4	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
Carbon disulfide	<1.3		1.3	0.53	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
Carbon tetrachloride	<0.66		0.66	0.25	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
Chlorobenzene	<0.66		0.66	0.25	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
Chloroethane	<0.66		0.66	0.33	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
Chloroform	<1.3		1.3	0.24	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
Chloromethane	<0.66		0.66	0.21	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
cis-1,2-Dichloroethene	<0.66		0.66	0.27	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
cis-1,3-Dichloropropene	<0.66		0.66	0.27	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
Dibromochloromethane	<0.66		0.66	0.32	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
1,1-Dichloroethane	<0.66		0.66	0.27	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
1,2-Dichloroethane	<0.66		0.66	0.26	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
1,1-Dichloroethene	<0.66		0.66	0.26	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
1,2-Dichloropropane	<0.66		0.66	0.28	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
1,3-Dichloropropene, Total	<0.66		0.66	0.27	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
<b>Ethylbenzene</b>	<b>7.7</b>		0.16	0.12	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
2-Hexanone	<3.3		3.3	1.0	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
Methylene Chloride	<3.3		3.3	1.1	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
4-Methyl-2-pentanone (MIBK)	<3.3		3.3	1.4	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
Methyl tert-butyl ether	<0.66		0.66	0.26	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
Styrene	<0.66		0.66	0.25	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
1,1,2,2-Tetrachloroethane	<0.66		0.66	0.26	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
Tetrachloroethene	<0.66		0.66	0.24	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
<b>Toluene</b>	<b>0.42</b>		0.16	0.097	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
trans-1,2-Dichloroethene	<0.66		0.66	0.23	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
trans-1,3-Dichloropropene	<0.66		0.66	0.24	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
1,1,1-Trichloroethane	<0.66		0.66	0.25	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
1,1,2-Trichloroethane	<0.66		0.66	0.23	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
Trichloroethene	<0.33		0.33	0.11	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
Vinyl acetate	<1.3		1.3	0.60	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
Vinyl chloride	<0.33		0.33	0.17	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500
<b>Xylenes, Total</b>	<b>1.9</b>		0.33	0.14	mg/Kg	☼	11/01/17 09:40	11/12/17 11:09	500

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		72 - 124	11/01/17 09:40	11/12/17 11:09	500
Dibromofluoromethane	89		75 - 120	11/01/17 09:40	11/12/17 11:09	500
1,2-Dichloroethane-d4 (Surr)	87		75 - 126	11/01/17 09:40	11/12/17 11:09	500
Toluene-d8 (Surr)	98		75 - 120	11/01/17 09:40	11/12/17 11:09	500

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acenaphthene</b>	<b>0.38</b>		0.038	0.0069	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
Acenaphthylene	<0.038		0.038	0.0051	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
<b>Anthracene</b>	<b>0.69</b>		0.038	0.0064	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
<b>Benzo[a]anthracene</b>	<b>0.93</b>		0.038	0.0052	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B05 (0-5)**

**Lab Sample ID: 500-136670-1**

**Date Collected: 11/01/17 09:40**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 82.6**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.52</b>		0.038	0.0075	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
<b>Benzo[b]fluoranthene</b>	<b>0.82</b>		0.038	0.0083	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
<b>Benzo[g,h,i]perylene</b>	<b>0.16</b>		0.038	0.012	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
<b>Benzo[k]fluoranthene</b>	<b>0.28</b>		0.038	0.011	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.058	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.070	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.051	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
Butyl benzyl phthalate	<0.19		0.19	0.073	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
<b>Carbazole</b>	<b>1.4</b>		0.19	0.096	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
4-Chloroaniline	<0.78		0.78	0.18	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
2-Chloronaphthalene	<0.19		0.19	0.043	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
2-Chlorophenol	<0.19		0.19	0.066	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
<b>Chrysene</b>	<b>0.87</b>		0.038	0.011	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
<b>Dibenz(a,h)anthracene</b>	<b>0.060</b>		0.038	0.0074	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
1,2-Dichlorobenzene	<0.19		0.19	0.046	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.054	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
2,4-Dichlorophenol	<0.38		0.38	0.092	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
Diethyl phthalate	<0.19		0.19	0.065	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
2,4-Dimethylphenol	<0.38		0.38	0.15	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
Di-n-butyl phthalate	<0.19		0.19	0.059	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
4,6-Dinitro-2-methylphenol	<0.78		0.78	0.31	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
2,4-Dinitrophenol	<0.78		0.78	0.68	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
2,4-Dinitrotoluene	<0.19		0.19	0.061	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
2,6-Dinitrotoluene	<0.19		0.19	0.076	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
Di-n-octyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
<b>Fluoranthene</b>	<b>2.7</b>		0.038	0.0071	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
<b>Fluorene</b>	<b>0.55</b>		0.038	0.0054	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
Hexachlorobenzene	<0.078		0.078	0.0089	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
Hexachlorobutadiene	<0.19		0.19	0.061	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
Hexachlorocyclopentadiene	<0.78		0.78	0.22	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
Hexachloroethane	<0.19		0.19	0.059	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.18</b>		0.038	0.010	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
2-Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
3 & 4 Methylphenol	<0.19		0.19	0.064	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
2-Nitroaniline	<0.19		0.19	0.052	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
Nitrobenzene	<0.038		0.038	0.0096	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
2-Nitrophenol	<0.38		0.38	0.091	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
4-Nitrophenol	<0.78		0.78	0.37	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
N-Nitrosodi-n-propylamine	<0.078		0.078	0.047	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B05 (0-5)**

**Lab Sample ID: 500-136670-1**

**Date Collected: 11/01/17 09:40**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 82.6**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.045	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
Pentachlorophenol	<0.78		0.78	0.62	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
Phenol	<0.19		0.19	0.086	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
<b>Pyrene</b>	<b>2.1</b>		0.038	0.0077	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
2,4,5-Trichlorophenol	<0.38		0.38	0.088	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	11/09/17 17:53	11/10/17 16:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	67		44 - 121				11/09/17 17:53	11/10/17 16:36	1
2-Fluorophenol	92		46 - 133				11/09/17 17:53	11/10/17 16:36	1
Nitrobenzene-d5	101		41 - 120				11/09/17 17:53	11/10/17 16:36	1
Phenol-d5	90		46 - 125				11/09/17 17:53	11/10/17 16:36	1
Terphenyl-d14	80		35 - 160				11/09/17 17:53	11/10/17 16:36	1
2,4,6-Tribromophenol	85		25 - 139				11/09/17 17:53	11/10/17 16:36	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>2-Methylnaphthalene</b>	<b>33</b>		1.6	0.14	mg/Kg	☼	11/09/17 17:53	11/14/17 14:18	20
<b>Naphthalene</b>	<b>11</b>		0.77	0.12	mg/Kg	☼	11/09/17 17:53	11/14/17 14:18	20
<b>Phenanthrene</b>	<b>3.7</b>		0.77	0.11	mg/Kg	☼	11/09/17 17:53	11/14/17 14:18	20

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.37</b>	<b>J B</b>	1.2	0.23	mg/Kg	☼	11/02/17 15:42	11/05/17 20:14	1
<b>Arsenic</b>	<b>4.6</b>		0.58	0.20	mg/Kg	☼	11/02/17 15:42	11/03/17 14:48	1
<b>Barium</b>	<b>44</b>		0.58	0.066	mg/Kg	☼	11/02/17 15:42	11/03/17 14:48	1
<b>Beryllium</b>	<b>0.51</b>		0.23	0.054	mg/Kg	☼	11/02/17 15:42	11/03/17 14:48	1
<b>Cadmium</b>	<b>0.12</b>	<b>B</b>	0.12	0.021	mg/Kg	☼	11/02/17 15:42	11/03/17 14:48	1
<b>Chromium</b>	<b>13</b>		0.58	0.29	mg/Kg	☼	11/02/17 15:42	11/03/17 14:48	1
<b>Cobalt</b>	<b>9.5</b>		0.29	0.076	mg/Kg	☼	11/02/17 15:42	11/03/17 14:48	1
<b>Copper</b>	<b>12</b>	<b>B</b>	0.58	0.16	mg/Kg	☼	11/02/17 15:42	11/03/17 14:48	1
<b>Iron</b>	<b>13000</b>	<b>B</b>	12	6.0	mg/Kg	☼	11/02/17 15:42	11/03/17 14:48	1
<b>Lead</b>	<b>17</b>		0.29	0.13	mg/Kg	☼	11/02/17 15:42	11/03/17 14:48	1
<b>Magnesium</b>	<b>46000</b>		5.8	2.9	mg/Kg	☼	11/02/17 15:42	11/03/17 14:48	1
<b>Calcium</b>	<b>110000</b>	<b>B</b>	120	20	mg/Kg	☼	11/02/17 15:42	11/05/17 20:18	10
<b>Manganese</b>	<b>250</b>		0.58	0.084	mg/Kg	☼	11/02/17 15:42	11/03/17 14:48	1
<b>Nickel</b>	<b>20</b>		0.58	0.17	mg/Kg	☼	11/02/17 15:42	11/03/17 14:48	1
Selenium	<0.58		0.58	0.34	mg/Kg	☼	11/02/17 15:42	11/05/17 20:14	1
Silver	<0.29		0.29	0.075	mg/Kg	☼	11/02/17 15:42	11/03/17 14:48	1
Thallium	<0.58		0.58	0.29	mg/Kg	☼	11/02/17 15:42	11/03/17 14:48	1
<b>Vanadium</b>	<b>18</b>		0.29	0.068	mg/Kg	☼	11/02/17 15:42	11/03/17 14:48	1
<b>Zinc</b>	<b>39</b>		1.2	0.51	mg/Kg	☼	11/02/17 15:42	11/03/17 14:48	1
<b>Potassium</b>	<b>1500</b>		29	10	mg/Kg	☼	11/02/17 15:42	11/03/17 14:48	1
<b>Sodium</b>	<b>180</b>		58	8.6	mg/Kg	☼	11/02/17 15:42	11/03/17 14:48	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L	☼	11/06/17 11:00	11/07/17 10:27	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B05 (0-5)**

**Lab Sample ID: 500-136670-1**

Date Collected: 11/01/17 09:40

Matrix: Solid

Date Received: 11/02/17 10:05

Percent Solids: 82.6

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.41</b>	<b>J</b>	0.50	0.050	mg/L		11/06/17 11:00	11/07/17 10:27	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/06/17 11:00	11/07/17 10:27	1
<b>Cadmium</b>	<b>0.0023</b>	<b>J</b>	0.0050	0.0020	mg/L		11/06/17 11:00	11/07/17 10:27	1
<b>Calcium</b>	<b>290</b>		5.0	0.50	mg/L		11/06/17 11:00	11/07/17 10:27	1
Chromium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:27	1
<b>Cobalt</b>	<b>0.016</b>	<b>J</b>	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:27	1
<b>Copper</b>	<b>0.020</b>	<b>J</b>	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:27	1
<b>Iron</b>	<b>0.43</b>		0.40	0.20	mg/L		11/06/17 11:00	11/07/17 10:27	1
<b>Lead</b>	<b>0.021</b>		0.0075	0.0075	mg/L		11/06/17 11:00	11/07/17 10:27	1
<b>Magnesium</b>	<b>160</b>		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:27	1
<b>Manganese</b>	<b>4.0</b>		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:27	1
<b>Nickel</b>	<b>0.021</b>	<b>J</b>	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:27	1
<b>Potassium</b>	<b>2.3</b>	<b>J</b>	2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:27	1
Selenium	<0.050		0.050	0.020	mg/L		11/06/17 11:00	11/07/17 10:27	1
Silver	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:27	1
Vanadium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:27	1
<b>Zinc</b>	<b>0.066</b>	<b>J</b>	0.50	0.020	mg/L		11/06/17 11:00	11/07/17 10:27	1

**Method: 6010B - SPLP Metals - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lead</b>	<b>0.012</b>		0.0075	0.0075	mg/L		11/06/17 10:45	11/07/17 14:01	1
<b>Manganese</b>	<b>0.048</b>		0.025	0.010	mg/L		11/06/17 10:45	11/07/17 14:01	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/06/17 11:00	11/07/17 14:09	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/06/17 11:00	11/07/17 14:09	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/06/17 14:30	11/07/17 08:51	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.022</b>		0.020	0.0066	mg/Kg	☼	11/03/17 15:15	11/06/17 10:43	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.46		0.46	0.16	mg/Kg	☼	11/11/17 10:00	11/11/17 13:38	1
<b>pH</b>	<b>8.0</b>		0.20	0.20	SU			11/08/17 17:14	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B04 (0-5)**

**Lab Sample ID: 500-136670-2**

**Date Collected: 11/01/17 10:00**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 81.4**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.046</b>		0.020	0.0087	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Benzene	<0.0020		0.0020	0.00051	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Bromodichloromethane	<0.0020		0.0020	0.00041	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Bromoform	<0.0020		0.0020	0.00059	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Bromomethane	<0.0050		0.0050	0.0019	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
2-Butanone (MEK)	<0.0050		0.0050	0.0022	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Carbon disulfide	<0.0050		0.0050	0.0010	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Carbon tetrachloride	<0.0020		0.0020	0.00058	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Chlorobenzene	<0.0020		0.0020	0.00074	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Chloroethane	<0.0050	*	0.0050	0.0015	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Chloroform	<0.0020		0.0020	0.00070	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Chloromethane	<0.0050		0.0050	0.0020	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
cis-1,2-Dichloroethene	<0.0020		0.0020	0.00056	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
cis-1,3-Dichloropropene	<0.0020		0.0020	0.00061	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Dibromochloromethane	<0.0020		0.0020	0.00066	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
1,1-Dichloroethane	<0.0020		0.0020	0.00069	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
1,2-Dichloroethane	<0.0050		0.0050	0.0016	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
1,1-Dichloroethene	<0.0020		0.0020	0.00069	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
1,2-Dichloropropane	<0.0020		0.0020	0.00052	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
1,3-Dichloropropane, Total	<0.0020		0.0020	0.00070	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Ethylbenzene	<0.0020		0.0020	0.00096	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
2-Hexanone	<0.0050		0.0050	0.0016	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Methylene Chloride	<0.0050		0.0050	0.0020	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
4-Methyl-2-pentanone (MIBK)	<0.0050		0.0050	0.0015	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Methyl tert-butyl ether	<0.0020		0.0020	0.00059	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Styrene	<0.0020		0.0020	0.00061	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
1,1,2,2-Tetrachloroethane	<0.0020		0.0020	0.00064	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Tetrachloroethene	<0.0020		0.0020	0.00068	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Toluene	<0.0020		0.0020	0.00051	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
trans-1,2-Dichloroethene	<0.0020		0.0020	0.00089	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
trans-1,3-Dichloropropene	<0.0020		0.0020	0.00070	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
1,1,1-Trichloroethane	<0.0020		0.0020	0.00067	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
1,1,2-Trichloroethane	<0.0020		0.0020	0.00086	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Trichloroethene	<0.0020		0.0020	0.00068	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Vinyl acetate	<0.0050		0.0050	0.0017	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Vinyl chloride	<0.0020		0.0020	0.00089	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1
Xylenes, Total	<0.0040		0.0040	0.00064	mg/Kg	☼	11/02/17 18:18	11/14/17 13:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		75 - 131	11/02/17 18:18	11/14/17 13:56	1
Dibromofluoromethane	100		75 - 126	11/02/17 18:18	11/14/17 13:56	1
1,2-Dichloroethane-d4 (Surr)	99		70 - 134	11/02/17 18:18	11/14/17 13:56	1
Toluene-d8 (Surr)	96		75 - 124	11/02/17 18:18	11/14/17 13:56	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acenaphthene</b>	<b>0.017</b>	<b>J</b>	0.039	0.0071	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Acenaphthylene	<0.039		0.039	0.0052	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
<b>Anthracene</b>	<b>0.021</b>	<b>J</b>	0.039	0.0066	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
<b>Benzo[a]anthracene</b>	<b>0.025</b>	<b>J</b>	0.039	0.0053	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B04 (0-5)**

**Lab Sample ID: 500-136670-2**

**Date Collected: 11/01/17 10:00**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 81.4**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.028</b>	<b>J</b>	0.039	0.0076	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
<b>Benzo[b]fluoranthene</b>	<b>0.037</b>	<b>J</b>	0.039	0.0085	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
<b>Benzo[g,h,i]perylene</b>	<b>0.015</b>	<b>J</b>	0.039	0.013	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Benzo[k]fluoranthene	<0.039		0.039	0.012	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.072	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Butyl benzyl phthalate	<0.20		0.20	0.075	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Carbazole	<0.20		0.20	0.099	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
4-Chloroaniline	<0.80		0.80	0.19	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
<b>Chrysene</b>	<b>0.030</b>	<b>J</b>	0.039	0.011	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Dibenz(a,h)anthracene	<0.039		0.039	0.0076	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
1,2-Dichlorobenzene	<0.20		0.20	0.047	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
2,4-Dichlorophenol	<0.39		0.39	0.094	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Diethyl phthalate	<0.20		0.20	0.067	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Dimethyl phthalate	<0.20		0.20	0.052	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
4,6-Dinitro-2-methylphenol	<0.80		0.80	0.32	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
2,4-Dinitrophenol	<0.80		0.80	0.69	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
2,4-Dinitrotoluene	<0.20		0.20	0.063	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
2,6-Dinitrotoluene	<0.20		0.20	0.078	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
<b>Fluoranthene</b>	<b>0.078</b>		0.039	0.0073	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
<b>Fluorene</b>	<b>0.013</b>	<b>J</b>	0.039	0.0055	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Hexachlorobenzene	<0.080		0.080	0.0091	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Hexachlorocyclopentadiene	<0.80		0.80	0.23	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.011</b>	<b>J</b>	0.039	0.010	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
<b>2-Methylnaphthalene</b>	<b>0.22</b>		0.080	0.0073	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
3 & 4 Methylphenol	<0.20		0.20	0.066	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
<b>Naphthalene</b>	<b>0.027</b>	<b>J</b>	0.039	0.0061	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Nitrobenzene	<0.039		0.039	0.0098	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
2-Nitrophenol	<0.39		0.39	0.093	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B04 (0-5)**

**Lab Sample ID: 500-136670-2**

Date Collected: 11/01/17 10:00

Matrix: Solid

Date Received: 11/02/17 10:05

Percent Solids: 81.4

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.80		0.80	0.38	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
N-Nitrosodi-n-propylamine	<0.080		0.080	0.048	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Pentachlorophenol	<0.80		0.80	0.63	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
<b>Phenanthrene</b>	<b>0.088</b>		0.039	0.0055	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
Phenol	<0.20		0.20	0.088	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
<b>Pyrene</b>	<b>0.062</b>		0.039	0.0078	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
2,4,5-Trichlorophenol	<0.39		0.39	0.090	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1
2,4,6-Trichlorophenol	<0.39		0.39	0.14	mg/Kg	☼	11/09/17 17:53	11/10/17 17:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	85		44 - 121	11/09/17 17:53	11/10/17 17:03	1
2-Fluorophenol	77		46 - 133	11/09/17 17:53	11/10/17 17:03	1
Nitrobenzene-d5	68		41 - 120	11/09/17 17:53	11/10/17 17:03	1
Phenol-d5	82		46 - 125	11/09/17 17:53	11/10/17 17:03	1
Terphenyl-d14	80		35 - 160	11/09/17 17:53	11/10/17 17:03	1
2,4,6-Tribromophenol	70		25 - 139	11/09/17 17:53	11/10/17 17:03	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.39</b>	<b>J B</b>	1.2	0.24	mg/Kg	☼	11/02/17 15:42	11/05/17 20:22	1
<b>Arsenic</b>	<b>12</b>		0.61	0.21	mg/Kg	☼	11/02/17 15:42	11/03/17 14:52	1
<b>Barium</b>	<b>51</b>		0.61	0.069	mg/Kg	☼	11/02/17 15:42	11/03/17 14:52	1
<b>Beryllium</b>	<b>0.64</b>		0.24	0.057	mg/Kg	☼	11/02/17 15:42	11/03/17 14:52	1
<b>Cadmium</b>	<b>0.045</b>	<b>J B</b>	0.12	0.022	mg/Kg	☼	11/02/17 15:42	11/03/17 14:52	1
<b>Chromium</b>	<b>17</b>		0.61	0.30	mg/Kg	☼	11/02/17 15:42	11/03/17 14:52	1
<b>Cobalt</b>	<b>14</b>		0.30	0.080	mg/Kg	☼	11/02/17 15:42	11/03/17 14:52	1
<b>Copper</b>	<b>25</b>	<b>B</b>	0.61	0.17	mg/Kg	☼	11/02/17 15:42	11/03/17 14:52	1
<b>Iron</b>	<b>26000</b>	<b>B</b>	12	6.3	mg/Kg	☼	11/02/17 15:42	11/03/17 14:52	1
<b>Lead</b>	<b>18</b>		0.30	0.14	mg/Kg	☼	11/02/17 15:42	11/03/17 14:52	1
<b>Magnesium</b>	<b>15000</b>		6.1	3.0	mg/Kg	☼	11/02/17 15:42	11/03/17 14:52	1
<b>Calcium</b>	<b>23000</b>	<b>B</b>	12	2.1	mg/Kg	☼	11/02/17 15:42	11/03/17 14:52	1
<b>Manganese</b>	<b>380</b>		0.61	0.088	mg/Kg	☼	11/02/17 15:42	11/03/17 14:52	1
<b>Nickel</b>	<b>31</b>		0.61	0.18	mg/Kg	☼	11/02/17 15:42	11/03/17 14:52	1
<b>Selenium</b>	<b>0.42</b>	<b>J</b>	0.61	0.36	mg/Kg	☼	11/02/17 15:42	11/05/17 20:22	1
Silver	<0.30		0.30	0.078	mg/Kg	☼	11/02/17 15:42	11/03/17 14:52	1
Thallium	<0.61		0.61	0.30	mg/Kg	☼	11/02/17 15:42	11/03/17 14:52	1
<b>Vanadium</b>	<b>23</b>		0.30	0.072	mg/Kg	☼	11/02/17 15:42	11/03/17 14:52	1
<b>Zinc</b>	<b>58</b>		1.2	0.53	mg/Kg	☼	11/02/17 15:42	11/03/17 14:52	1
<b>Potassium</b>	<b>2000</b>		30	11	mg/Kg	☼	11/02/17 15:42	11/03/17 14:52	1
<b>Sodium</b>	<b>240</b>		61	9.0	mg/Kg	☼	11/02/17 15:42	11/03/17 14:52	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/06/17 11:00	11/07/17 10:31	1
<b>Barium</b>	<b>0.64</b>		0.50	0.050	mg/L		11/06/17 11:00	11/07/17 10:31	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/06/17 11:00	11/07/17 10:31	1
<b>Cadmium</b>	<b>0.0031</b>	<b>J</b>	0.0050	0.0020	mg/L		11/06/17 11:00	11/07/17 10:31	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B04 (0-5)**

**Lab Sample ID: 500-136670-2**

**Date Collected: 11/01/17 10:00**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 81.4**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	330		5.0	0.50	mg/L		11/06/17 11:00	11/07/17 10:31	1
Chromium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:31	1
Cobalt	0.030		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:31	1
Copper	0.016	J	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:31	1
Iron	0.43		0.40	0.20	mg/L		11/06/17 11:00	11/07/17 10:31	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/06/17 11:00	11/07/17 10:31	1
Magnesium	140		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:31	1
Manganese	7.4		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:31	1
Nickel	0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:31	1
Potassium	2.3	J	2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:31	1
Selenium	<0.050		0.050	0.020	mg/L		11/06/17 11:00	11/07/17 10:31	1
Silver	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:31	1
Vanadium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:31	1
Zinc	0.051	J	0.50	0.020	mg/L		11/06/17 11:00	11/07/17 10:31	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.12		0.025	0.010	mg/L		11/06/17 10:45	11/07/17 14:05	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/06/17 11:00	11/07/17 14:13	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/06/17 11:00	11/07/17 14:13	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/06/17 14:30	11/07/17 08:53	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.032		0.019	0.0063	mg/Kg	☼	11/03/17 15:15	11/06/17 10:46	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.45		0.45	0.15	mg/Kg	☼	11/11/17 10:00	11/11/17 13:39	1
pH	8.3		0.20	0.20	SU			11/08/17 17:14	1



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B04 (0-5) Dup**

**Lab Sample ID: 500-136670-3**

Date Collected: 11/01/17 00:00

Matrix: Solid

Date Received: 11/02/17 10:05

Percent Solids: 81.7

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.039</b>		0.018	0.0078	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Benzene	<0.0018		0.0018	0.00046	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Bromodichloromethane	<0.0018		0.0018	0.00036	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Bromoform	<0.0018		0.0018	0.00052	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Bromomethane	<0.0045		0.0045	0.0017	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
2-Butanone (MEK)	<0.0045		0.0045	0.0020	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Carbon disulfide	<0.0045		0.0045	0.00093	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Carbon tetrachloride	<0.0018		0.0018	0.00052	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Chlorobenzene	<0.0018		0.0018	0.00066	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Chloroethane	<0.0045 *		0.0045	0.0013	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Chloroform	<0.0018		0.0018	0.00062	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Chloromethane	<0.0045		0.0045	0.0018	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
cis-1,2-Dichloroethene	<0.0018		0.0018	0.00050	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
cis-1,3-Dichloropropene	<0.0018		0.0018	0.00054	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Dibromochloromethane	<0.0018		0.0018	0.00058	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
1,1-Dichloroethane	<0.0018		0.0018	0.00061	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
1,2-Dichloroethane	<0.0045		0.0045	0.0014	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
1,1-Dichloroethene	<0.0018		0.0018	0.00062	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
1,2-Dichloropropane	<0.0018		0.0018	0.00046	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
1,3-Dichloropropane, Total	<0.0018		0.0018	0.00063	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Ethylbenzene	<0.0018		0.0018	0.00086	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
2-Hexanone	<0.0045		0.0045	0.0014	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Methylene Chloride	<0.0045		0.0045	0.0018	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
4-Methyl-2-pentanone (MIBK)	<0.0045		0.0045	0.0013	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Methyl tert-butyl ether	<0.0018		0.0018	0.00052	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Styrene	<0.0018		0.0018	0.00054	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
1,1,2,2-Tetrachloroethane	<0.0018		0.0018	0.00057	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Tetrachloroethene	<0.0018		0.0018	0.00061	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Toluene	<0.0018		0.0018	0.00045	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
trans-1,2-Dichloroethene	<0.0018		0.0018	0.00079	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
trans-1,3-Dichloropropene	<0.0018		0.0018	0.00063	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
1,1,1-Trichloroethane	<0.0018		0.0018	0.00060	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
1,1,2-Trichloroethane	<0.0018		0.0018	0.00077	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Trichloroethene	<0.0018		0.0018	0.00060	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Vinyl acetate	<0.0045		0.0045	0.0016	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Vinyl chloride	<0.0018		0.0018	0.00079	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1
Xylenes, Total	<0.0036		0.0036	0.00057	mg/Kg	☼	11/02/17 18:18	11/14/17 14:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		75 - 131	11/02/17 18:18	11/14/17 14:21	1
Dibromofluoromethane	102		75 - 126	11/02/17 18:18	11/14/17 14:21	1
1,2-Dichloroethane-d4 (Surr)	99		70 - 134	11/02/17 18:18	11/14/17 14:21	1
Toluene-d8 (Surr)	93		75 - 124	11/02/17 18:18	11/14/17 14:21	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.039		0.039	0.0070	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
<b>Acenaphthylene</b>	<b>0.0058</b>	<b>J</b>	0.039	0.0052	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
<b>Anthracene</b>	<b>0.0095</b>	<b>J</b>	0.039	0.0065	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
<b>Benzo[a]anthracene</b>	<b>0.024</b>	<b>J</b>	0.039	0.0053	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B04 (0-5) Dup**

**Lab Sample ID: 500-136670-3**

**Date Collected: 11/01/17 00:00**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 81.7**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.059</b>		0.039	0.0076	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
<b>Benzo[b]fluoranthene</b>	<b>0.10</b>		0.039	0.0085	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
<b>Benzo[g,h,i]perylene</b>	<b>0.039</b>		0.039	0.013	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
<b>Benzo[k]fluoranthene</b>	<b>0.033</b>	<b>J</b>	0.039	0.012	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.072	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Butyl benzyl phthalate	<0.20		0.20	0.075	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Carbazole	<0.20		0.20	0.098	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
4-Chloroaniline	<0.79		0.79	0.18	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
<b>Chrysene</b>	<b>0.049</b>		0.039	0.011	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
<b>Dibenz(a,h)anthracene</b>	<b>0.011</b>	<b>J</b>	0.039	0.0076	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
1,2-Dichlorobenzene	<0.20		0.20	0.047	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
2,4-Dichlorophenol	<0.39		0.39	0.093	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Diethyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
4,6-Dinitro-2-methylphenol	<0.79		0.79	0.31	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
2,4-Dinitrophenol	<0.79		0.79	0.69	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
2,6-Dinitrotoluene	<0.20		0.20	0.077	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
<b>Fluoranthene</b>	<b>0.041</b>		0.039	0.0073	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Fluorene	<0.039		0.039	0.0055	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Hexachlorobenzene	<0.079		0.079	0.0091	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Hexachlorocyclopentadiene	<0.79		0.79	0.23	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.034</b>	<b>J</b>	0.039	0.010	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
<b>2-Methylnaphthalene</b>	<b>0.019</b>	<b>J</b>	0.079	0.0072	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Naphthalene	<0.039		0.039	0.0060	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Nitrobenzene	<0.039		0.039	0.0098	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
2-Nitrophenol	<0.39		0.39	0.093	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B04 (0-5) Dup**

**Lab Sample ID: 500-136670-3**

Date Collected: 11/01/17 00:00

Matrix: Solid

Date Received: 11/02/17 10:05

Percent Solids: 81.7

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.79		0.79	0.37	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
N-Nitrosodi-n-propylamine	<0.079		0.079	0.048	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.045	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Pentachlorophenol	<0.79		0.79	0.63	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
<b>Phenanthrene</b>	<b>0.024</b>	<b>J</b>	0.039	0.0055	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
Phenol	<0.20		0.20	0.087	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
<b>Pyrene</b>	<b>0.036</b>	<b>J</b>	0.039	0.0078	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
2,4,5-Trichlorophenol	<0.39		0.39	0.089	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	11/09/17 17:53	11/10/17 17:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	83		44 - 121	11/09/17 17:53	11/10/17 17:29	1
2-Fluorophenol	80		46 - 133	11/09/17 17:53	11/10/17 17:29	1
Nitrobenzene-d5	77		41 - 120	11/09/17 17:53	11/10/17 17:29	1
Phenol-d5	87		46 - 125	11/09/17 17:53	11/10/17 17:29	1
Terphenyl-d14	85		35 - 160	11/09/17 17:53	11/10/17 17:29	1
2,4,6-Tribromophenol	75		25 - 139	11/09/17 17:53	11/10/17 17:29	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.24</b>	<b>J</b>	1.2	0.23	mg/Kg	☼	11/03/17 16:27	11/05/17 15:50	1
<b>Arsenic</b>	<b>14</b>		0.59	0.20	mg/Kg	☼	11/03/17 16:27	11/06/17 13:26	1
<b>Barium</b>	<b>56</b>		0.59	0.067	mg/Kg	☼	11/03/17 16:27	11/05/17 15:50	1
<b>Beryllium</b>	<b>0.60</b>		0.24	0.055	mg/Kg	☼	11/03/17 16:27	11/05/17 15:50	1
<b>Cadmium</b>	<b>0.20</b>	<b>B</b>	0.12	0.021	mg/Kg	☼	11/03/17 16:27	11/05/17 15:50	1
<b>Chromium</b>	<b>16</b>		0.59	0.29	mg/Kg	☼	11/03/17 16:27	11/05/17 15:50	1
<b>Cobalt</b>	<b>18</b>		0.29	0.077	mg/Kg	☼	11/03/17 16:27	11/05/17 15:50	1
<b>Copper</b>	<b>25</b>	<b>B</b>	0.59	0.16	mg/Kg	☼	11/03/17 16:27	11/05/17 15:50	1
<b>Iron</b>	<b>19000</b>	<b>B</b>	9.7	5.0	mg/Kg	☼	11/07/17 07:53	11/07/17 14:49	1
<b>Lead</b>	<b>29</b>		0.29	0.14	mg/Kg	☼	11/03/17 16:27	11/05/17 15:50	1
<b>Magnesium</b>	<b>13000</b>		5.9	2.9	mg/Kg	☼	11/03/17 16:27	11/05/17 15:50	1
<b>Calcium</b>	<b>21000</b>	<b>B</b>	12	2.0	mg/Kg	☼	11/03/17 16:27	11/05/17 15:50	1
<b>Manganese</b>	<b>460</b>	<b>B</b>	0.59	0.085	mg/Kg	☼	11/03/17 16:27	11/05/17 15:50	1
<b>Nickel</b>	<b>31</b>		0.59	0.17	mg/Kg	☼	11/03/17 16:27	11/05/17 15:50	1
Selenium	<0.59		0.59	0.35	mg/Kg	☼	11/03/17 16:27	11/05/17 15:50	1
Silver	<0.29		0.29	0.076	mg/Kg	☼	11/03/17 16:27	11/05/17 15:50	1
Thallium	<0.59		0.59	0.29	mg/Kg	☼	11/03/17 16:27	11/06/17 13:26	1
<b>Vanadium</b>	<b>21</b>		0.29	0.069	mg/Kg	☼	11/03/17 16:27	11/05/17 15:50	1
<b>Zinc</b>	<b>68</b>	<b>B</b>	1.2	0.52	mg/Kg	☼	11/03/17 16:27	11/05/17 15:50	1
<b>Potassium</b>	<b>1700</b>		29	10	mg/Kg	☼	11/03/17 16:27	11/05/17 15:50	1
<b>Sodium</b>	<b>240</b>		59	8.7	mg/Kg	☼	11/03/17 16:27	11/05/17 15:50	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/06/17 11:00	11/07/17 10:35	1
<b>Barium</b>	<b>0.60</b>		0.50	0.050	mg/L		11/06/17 11:00	11/07/17 10:35	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/06/17 11:00	11/07/17 10:35	1
<b>Cadmium</b>	<b>0.0033</b>	<b>J</b>	0.0050	0.0020	mg/L		11/06/17 11:00	11/07/17 10:35	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B04 (0-5) Dup**

**Lab Sample ID: 500-136670-3**

Date Collected: 11/01/17 00:00

Matrix: Solid

Date Received: 11/02/17 10:05

Percent Solids: 81.7

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	340		5.0	0.50	mg/L		11/06/17 11:00	11/07/17 10:35	1
Chromium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:35	1
Cobalt	0.026		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:35	1
Copper	0.017	J	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:35	1
Iron	0.43		0.40	0.20	mg/L		11/06/17 11:00	11/07/17 10:35	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/06/17 11:00	11/07/17 10:35	1
Magnesium	120		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:35	1
Manganese	5.6		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:35	1
Nickel	0.027		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:35	1
Potassium	2.4	J	2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:35	1
Selenium	<0.050		0.050	0.020	mg/L		11/06/17 11:00	11/07/17 10:35	1
Silver	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:35	1
Vanadium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:35	1
Zinc	0.067	J	0.50	0.020	mg/L		11/06/17 11:00	11/07/17 10:35	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.068		0.025	0.010	mg/L		11/06/17 10:45	11/07/17 14:09	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/06/17 11:00	11/07/17 14:18	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/06/17 11:00	11/07/17 14:18	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/06/17 14:30	11/07/17 08:54	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.033		0.020	0.0065	mg/Kg	☼	11/03/17 15:15	11/06/17 10:48	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.61		0.61	0.21	mg/Kg	☼	11/11/17 10:00	11/11/17 13:39	1
pH	8.3		0.20	0.20	SU			11/08/17 17:14	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B03 (10-15)**

**Lab Sample ID: 500-136670-4**

**Date Collected: 11/01/17 11:30**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 86.8**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.25		0.25	0.086	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
<b>Benzene</b>	<b>0.019</b>		0.012	0.0073	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
Bromodichloromethane	<0.050		0.050	0.018	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
Bromoform	<0.050		0.050	0.024	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
Bromomethane	<0.099		0.099	0.040	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
2-Butanone (MEK)	<0.25		0.25	0.11	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
Carbon disulfide	<0.099		0.099	0.040	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
Carbon tetrachloride	<0.050		0.050	0.019	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
Chlorobenzene	<0.050		0.050	0.019	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
Chloroethane	<0.050		0.050	0.025	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
Chloroform	<0.099		0.099	0.018	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
Chloromethane	<0.050		0.050	0.016	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
cis-1,2-Dichloroethene	<0.050		0.050	0.020	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
cis-1,3-Dichloropropene	<0.050		0.050	0.021	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
Dibromochloromethane	<0.050		0.050	0.024	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
1,1-Dichloroethane	<0.050		0.050	0.020	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
1,2-Dichloroethane	<0.050		0.050	0.019	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
1,1-Dichloroethene	<0.050		0.050	0.019	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
1,2-Dichloropropane	<0.050		0.050	0.021	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
1,3-Dichloropropane, Total	<0.050		0.050	0.021	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
<b>Ethylbenzene</b>	<b>3.4</b>		0.012	0.0091	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
2-Hexanone	<0.25		0.25	0.078	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
Methylene Chloride	<0.25		0.25	0.081	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
4-Methyl-2-pentanone (MIBK)	<0.25		0.25	0.11	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
Methyl tert-butyl ether	<0.050		0.050	0.020	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
Styrene	<0.050		0.050	0.019	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
1,1,2,2-Tetrachloroethane	<0.050		0.050	0.020	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
Tetrachloroethene	<0.050		0.050	0.018	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
<b>Toluene</b>	<b>0.023</b>		0.012	0.0073	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
trans-1,2-Dichloroethene	<0.050		0.050	0.017	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
trans-1,3-Dichloropropene	<0.050		0.050	0.018	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
1,1,1-Trichloroethane	<0.050		0.050	0.019	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
1,1,2-Trichloroethane	<0.050		0.050	0.017	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
Trichloroethene	<0.025		0.025	0.0081	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
Vinyl acetate	<0.099		0.099	0.045	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
Vinyl chloride	<0.025		0.025	0.013	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50
<b>Xylenes, Total</b>	<b>1.9</b>		0.025	0.011	mg/Kg	☼	11/01/17 11:30	11/12/17 12:33	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		72 - 124	11/01/17 11:30	11/12/17 12:33	50
Dibromofluoromethane	92		75 - 120	11/01/17 11:30	11/12/17 12:33	50
1,2-Dichloroethane-d4 (Surr)	89		75 - 126	11/01/17 11:30	11/12/17 12:33	50
Toluene-d8 (Surr)	93		75 - 120	11/01/17 11:30	11/12/17 12:33	50

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.036		0.036	0.0065	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Acenaphthylene	<0.036		0.036	0.0048	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Anthracene	<0.036		0.036	0.0061	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Benzo[a]anthracene	<0.036		0.036	0.0049	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B03 (10-15)**

**Lab Sample ID: 500-136670-4**

**Date Collected: 11/01/17 11:30**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 86.8**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.014</b>	<b>J</b>	0.036	0.0070	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Benzo[b]fluoranthene	<0.036		0.036	0.0078	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Benzo[g,h,i]perylene	<0.036		0.036	0.012	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Benzo[k]fluoranthene	<0.036		0.036	0.011	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.066	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Butyl benzyl phthalate	<0.18		0.18	0.069	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Carbazole	<0.18		0.18	0.091	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
4-Chloroaniline	<0.73		0.73	0.17	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Chrysene	<0.036		0.036	0.0099	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0070	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
1,2-Dichlorobenzene	<0.18		0.18	0.043	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
2,4-Dichlorophenol	<0.36		0.36	0.086	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Di-n-butyl phthalate	<0.18		0.18	0.055	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
4,6-Dinitro-2-methylphenol	<0.73		0.73	0.29	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
2,4-Dinitrophenol	<0.73		0.73	0.64	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
2,6-Dinitrotoluene	<0.18		0.18	0.071	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Fluoranthene	<0.036		0.036	0.0067	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Fluorene	<0.036		0.036	0.0051	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Hexachlorobenzene	<0.073		0.073	0.0084	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Hexachlorocyclopentadiene	<0.73		0.73	0.21	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Indeno[1,2,3-cd]pyrene	<0.036		0.036	0.0094	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
<b>2-Methylnaphthalene</b>	<b>0.45</b>		0.073	0.0067	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
<b>Naphthalene</b>	<b>0.59</b>		0.036	0.0056	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Nitrobenzene	<0.036		0.036	0.0090	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
2-Nitrophenol	<0.36		0.36	0.086	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B03 (10-15)**

**Lab Sample ID: 500-136670-4**

Date Collected: 11/01/17 11:30

Matrix: Solid

Date Received: 11/02/17 10:05

Percent Solids: 86.8

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.73		0.73	0.34	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
N-Nitrosodi-n-propylamine	<0.073		0.073	0.044	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Pentachlorophenol	<0.73		0.73	0.58	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
<b>Phenanthrene</b>	<b>0.010</b>	<b>J</b>	0.036	0.0050	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
Phenol	<0.18		0.18	0.080	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
<b>Pyrene</b>	<b>0.011</b>	<b>J</b>	0.036	0.0072	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
2,4,5-Trichlorophenol	<0.36		0.36	0.083	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	11/09/17 17:53	11/10/17 17:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	74		44 - 121	11/09/17 17:53	11/10/17 17:55	1
2-Fluorophenol	61		46 - 133	11/09/17 17:53	11/10/17 17:55	1
Nitrobenzene-d5	61		41 - 120	11/09/17 17:53	11/10/17 17:55	1
Phenol-d5	73		46 - 125	11/09/17 17:53	11/10/17 17:55	1
Terphenyl-d14	81		35 - 160	11/09/17 17:53	11/10/17 17:55	1
2,4,6-Tribromophenol	66		25 - 139	11/09/17 17:53	11/10/17 17:55	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.50</b>	<b>J B</b>	1.1	0.22	mg/Kg	☼	11/02/17 15:42	11/05/17 20:26	1
<b>Arsenic</b>	<b>9.4</b>		0.56	0.19	mg/Kg	☼	11/02/17 15:42	11/03/17 14:56	1
<b>Barium</b>	<b>11</b>		0.56	0.064	mg/Kg	☼	11/02/17 15:42	11/03/17 14:56	1
<b>Beryllium</b>	<b>0.26</b>		0.23	0.053	mg/Kg	☼	11/02/17 15:42	11/03/17 14:56	1
<b>Cadmium</b>	<b>0.16</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/02/17 15:42	11/03/17 14:56	1
<b>Chromium</b>	<b>6.5</b>		0.56	0.28	mg/Kg	☼	11/02/17 15:42	11/03/17 14:56	1
<b>Cobalt</b>	<b>6.6</b>		0.28	0.074	mg/Kg	☼	11/02/17 15:42	11/03/17 14:56	1
<b>Copper</b>	<b>21</b>	<b>B</b>	0.56	0.16	mg/Kg	☼	11/02/17 15:42	11/03/17 14:56	1
<b>Iron</b>	<b>14000</b>	<b>B</b>	11	5.9	mg/Kg	☼	11/02/17 15:42	11/03/17 14:56	1
<b>Lead</b>	<b>12</b>		0.28	0.13	mg/Kg	☼	11/02/17 15:42	11/03/17 14:56	1
<b>Magnesium</b>	<b>37000</b>		5.6	2.8	mg/Kg	☼	11/02/17 15:42	11/03/17 14:56	1
<b>Calcium</b>	<b>120000</b>	<b>B</b>	110	19	mg/Kg	☼	11/02/17 15:42	11/05/17 20:30	10
<b>Manganese</b>	<b>360</b>		0.56	0.082	mg/Kg	☼	11/02/17 15:42	11/03/17 14:56	1
<b>Nickel</b>	<b>15</b>		0.56	0.16	mg/Kg	☼	11/02/17 15:42	11/03/17 14:56	1
Selenium	<0.56		0.56	0.33	mg/Kg	☼	11/02/17 15:42	11/05/17 20:26	1
Silver	<0.28		0.28	0.073	mg/Kg	☼	11/02/17 15:42	11/03/17 14:56	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	11/02/17 15:42	11/03/17 14:56	1
<b>Vanadium</b>	<b>9.1</b>		0.28	0.066	mg/Kg	☼	11/02/17 15:42	11/03/17 14:56	1
<b>Zinc</b>	<b>55</b>		1.1	0.49	mg/Kg	☼	11/02/17 15:42	11/03/17 14:56	1
<b>Potassium</b>	<b>860</b>		28	10	mg/Kg	☼	11/02/17 15:42	11/03/17 14:56	1
<b>Sodium</b>	<b>200</b>		56	8.3	mg/Kg	☼	11/02/17 15:42	11/03/17 14:56	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/06/17 11:00	11/07/17 10:39	1
<b>Barium</b>	<b>0.26</b>	<b>J</b>	0.50	0.050	mg/L		11/06/17 11:00	11/07/17 10:39	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/06/17 11:00	11/07/17 10:39	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/06/17 11:00	11/07/17 10:39	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B03 (10-15)**

**Lab Sample ID: 500-136670-4**

**Date Collected: 11/01/17 11:30**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 86.8**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	520		5.0	0.50	mg/L		11/06/17 11:00	11/07/17 10:39	1
Chromium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:39	1
Cobalt	0.021	J	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:39	1
Copper	0.019	J	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:39	1
Iron	0.23	J	0.40	0.20	mg/L		11/06/17 11:00	11/07/17 10:39	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/06/17 11:00	11/07/17 10:39	1
Magnesium	24		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:39	1
Manganese	1.6		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:39	1
Nickel	0.043		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:39	1
Potassium	3.1		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:39	1
Selenium	<0.050		0.050	0.020	mg/L		11/06/17 11:00	11/07/17 10:39	1
Silver	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:39	1
Vanadium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:39	1
Zinc	0.061	J	0.50	0.020	mg/L		11/06/17 11:00	11/07/17 10:39	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.030		0.025	0.010	mg/L		11/06/17 10:45	11/07/17 14:13	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/06/17 11:00	11/07/17 14:32	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/06/17 11:00	11/07/17 14:32	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/06/17 14:30	11/07/17 08:55	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.021		0.018	0.0061	mg/Kg	☼	11/03/17 15:15	11/06/17 10:54	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.52		0.52	0.18	mg/Kg	☼	11/11/17 10:00	11/11/17 13:40	1
pH	8.0		0.20	0.20	SU			11/08/17 17:14	1



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B02 (0-5)**

**Lab Sample ID: 500-136670-5**

**Date Collected: 11/01/17 13:45**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 77.9**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.72		0.72	0.25	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
<b>Benzene</b>	<b>0.022</b>	<b>J</b>	0.036	0.021	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
Bromodichloromethane	<0.14		0.14	0.053	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
Bromoform	<0.14		0.14	0.070	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
Bromomethane	<0.29		0.29	0.11	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
2-Butanone (MEK)	<0.72		0.72	0.30	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
Carbon disulfide	<0.29		0.29	0.12	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
Carbon tetrachloride	<0.14		0.14	0.055	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
Chlorobenzene	<0.14		0.14	0.055	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
Chloroethane	<0.14		0.14	0.072	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
Chloroform	<0.29		0.29	0.053	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
Chloromethane	<0.14		0.14	0.046	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
cis-1,2-Dichloroethene	<0.14		0.14	0.059	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
cis-1,3-Dichloropropene	<0.14		0.14	0.060	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
Dibromochloromethane	<0.14		0.14	0.070	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
1,1-Dichloroethane	<0.14		0.14	0.059	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
1,2-Dichloroethane	<0.14		0.14	0.056	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
1,1-Dichloroethene	<0.14		0.14	0.056	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
1,2-Dichloropropane	<0.14		0.14	0.062	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
1,3-Dichloropropane, Total	<0.14		0.14	0.060	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
<b>Ethylbenzene</b>	<b>0.044</b>		0.036	0.026	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
2-Hexanone	<0.72		0.72	0.22	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
Methylene Chloride	<0.72		0.72	0.23	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
4-Methyl-2-pentanone (MIBK)	<0.72		0.72	0.31	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
Methyl tert-butyl ether	<0.14		0.14	0.057	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
Styrene	<0.14		0.14	0.055	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
1,1,2,2-Tetrachloroethane	<0.14		0.14	0.057	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
Tetrachloroethene	<0.14		0.14	0.053	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
Toluene	<0.036		0.036	0.021	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
trans-1,2-Dichloroethene	<0.14		0.14	0.050	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
trans-1,3-Dichloropropene	<0.14		0.14	0.052	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
1,1,1-Trichloroethane	<0.14		0.14	0.055	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
1,1,2-Trichloroethane	<0.14		0.14	0.051	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
Trichloroethene	<0.072		0.072	0.024	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
Vinyl acetate	<0.29		0.29	0.13	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
Vinyl chloride	<0.072		0.072	0.038	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100
<b>Xylenes, Total</b>	<b>0.22</b>		0.072	0.032	mg/Kg	☼	11/01/17 13:45	11/12/17 13:00	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		72 - 124	11/01/17 13:45	11/12/17 13:00	100
Dibromofluoromethane	90		75 - 120	11/01/17 13:45	11/12/17 13:00	100
1,2-Dichloroethane-d4 (Surr)	88		75 - 126	11/01/17 13:45	11/12/17 13:00	100
Toluene-d8 (Surr)	95		75 - 120	11/01/17 13:45	11/12/17 13:00	100

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.042		0.042	0.0076	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Acenaphthylene	<0.042		0.042	0.0056	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Anthracene	<0.042		0.042	0.0070	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
<b>Benzo[a]anthracene</b>	<b>0.086</b>		0.042	0.0057	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B02 (0-5)**

**Lab Sample ID: 500-136670-5**

**Date Collected: 11/01/17 13:45**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 77.9**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.097</b>		0.042	0.0082	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
<b>Benzo[b]fluoranthene</b>	<b>0.097</b>		0.042	0.0091	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
<b>Benzo[g,h,i]perylene</b>	<b>0.045</b>		0.042	0.014	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
<b>Benzo[k]fluoranthene</b>	<b>0.025</b>	<b>J</b>	0.042	0.012	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.043	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.063	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Bis(2-ethylhexyl) phthalate	<0.21		0.21	0.077	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.056	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Butyl benzyl phthalate	<0.21		0.21	0.080	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Carbazole	<0.21		0.21	0.11	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
4-Chloroaniline	<0.85		0.85	0.20	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
4-Chloro-3-methylphenol	<0.42		0.42	0.14	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
2-Chloronaphthalene	<0.21		0.21	0.047	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
2-Chlorophenol	<0.21		0.21	0.072	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.049	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
<b>Chrysene</b>	<b>0.22</b>		0.042	0.011	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Dibenz(a,h)anthracene	<0.042		0.042	0.0081	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Dibenzofuran	<0.21		0.21	0.049	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
1,2-Dichlorobenzene	<0.21		0.21	0.050	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
1,3-Dichlorobenzene	<0.21		0.21	0.047	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
1,4-Dichlorobenzene	<0.21		0.21	0.054	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
3,3'-Dichlorobenzidine	<0.21		0.21	0.059	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
2,4-Dichlorophenol	<0.42		0.42	0.10	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Diethyl phthalate	<0.21		0.21	0.071	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
2,4-Dimethylphenol	<0.42		0.42	0.16	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Dimethyl phthalate	<0.21		0.21	0.055	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Di-n-butyl phthalate	<0.21		0.21	0.064	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
4,6-Dinitro-2-methylphenol	<0.85		0.85	0.34	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
2,4-Dinitrophenol	<0.85		0.85	0.74	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
2,4-Dinitrotoluene	<0.21		0.21	0.067	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
2,6-Dinitrotoluene	<0.21		0.21	0.083	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Di-n-octyl phthalate	<0.21		0.21	0.069	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
<b>Fluoranthene</b>	<b>0.092</b>		0.042	0.0078	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
<b>Fluorene</b>	<b>0.029</b>	<b>J</b>	0.042	0.0059	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Hexachlorobenzene	<0.085		0.085	0.0098	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Hexachlorobutadiene	<0.21		0.21	0.066	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Hexachlorocyclopentadiene	<0.85		0.85	0.24	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Hexachloroethane	<0.21		0.21	0.064	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.021</b>	<b>J</b>	0.042	0.011	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Isophorone	<0.21		0.21	0.047	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
2-Methylnaphthalene	<0.085		0.085	0.0077	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
2-Methylphenol	<0.21		0.21	0.068	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
3 & 4 Methylphenol	<0.21		0.21	0.070	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Naphthalene	<0.042		0.042	0.0065	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
2-Nitroaniline	<0.21		0.21	0.057	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
3-Nitroaniline	<0.42		0.42	0.13	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
4-Nitroaniline	<0.42		0.42	0.18	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Nitrobenzene	<0.042		0.042	0.011	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
2-Nitrophenol	<0.42		0.42	0.10	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B02 (0-5)**

**Lab Sample ID: 500-136670-5**

Date Collected: 11/01/17 13:45

Matrix: Solid

Date Received: 11/02/17 10:05

Percent Solids: 77.9

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.85		0.85	0.40	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
N-Nitrosodi-n-propylamine	<0.085		0.085	0.051	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
N-Nitrosodiphenylamine	<0.21		0.21	0.050	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.049	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Pentachlorophenol	<0.85		0.85	0.68	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
<b>Phenanthrene</b>	<b>0.22</b>		0.042	0.0059	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
Phenol	<0.21		0.21	0.094	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
<b>Pyrene</b>	<b>0.37</b>		0.042	0.0084	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.045	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
2,4,5-Trichlorophenol	<0.42		0.42	0.096	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1
2,4,6-Trichlorophenol	<0.42		0.42	0.14	mg/Kg	☼	11/09/17 17:53	11/10/17 18:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	70		44 - 121	11/09/17 17:53	11/10/17 18:47	1
2-Fluorophenol	72		46 - 133	11/09/17 17:53	11/10/17 18:47	1
Nitrobenzene-d5	66		41 - 120	11/09/17 17:53	11/10/17 18:47	1
Phenol-d5	81		46 - 125	11/09/17 17:53	11/10/17 18:47	1
Terphenyl-d14	84		35 - 160	11/09/17 17:53	11/10/17 18:47	1
2,4,6-Tribromophenol	84		25 - 139	11/09/17 17:53	11/10/17 18:47	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.26</b>	<b>J B</b>	1.2	0.24	mg/Kg	☼	11/02/17 15:42	11/05/17 20:34	1
<b>Arsenic</b>	<b>8.4</b>		0.61	0.21	mg/Kg	☼	11/02/17 15:42	11/03/17 15:00	1
<b>Barium</b>	<b>58</b>		0.61	0.070	mg/Kg	☼	11/02/17 15:42	11/03/17 15:00	1
<b>Beryllium</b>	<b>0.63</b>		0.25	0.057	mg/Kg	☼	11/02/17 15:42	11/03/17 15:00	1
<b>Cadmium</b>	<b>0.22</b>	<b>B</b>	0.12	0.022	mg/Kg	☼	11/02/17 15:42	11/03/17 15:00	1
<b>Chromium</b>	<b>16</b>		0.61	0.30	mg/Kg	☼	11/02/17 15:42	11/03/17 15:00	1
<b>Cobalt</b>	<b>9.2</b>		0.31	0.080	mg/Kg	☼	11/02/17 15:42	11/03/17 15:00	1
<b>Copper</b>	<b>34</b>	<b>B</b>	0.61	0.17	mg/Kg	☼	11/02/17 15:42	11/03/17 15:00	1
<b>Iron</b>	<b>18000</b>	<b>B</b>	12	6.4	mg/Kg	☼	11/02/17 15:42	11/03/17 15:00	1
<b>Lead</b>	<b>1300</b>		0.31	0.14	mg/Kg	☼	11/02/17 15:42	11/03/17 15:00	1
<b>Magnesium</b>	<b>4000</b>		6.1	3.0	mg/Kg	☼	11/02/17 15:42	11/03/17 15:00	1
<b>Calcium</b>	<b>7900</b>	<b>B</b>	12	2.1	mg/Kg	☼	11/02/17 15:42	11/03/17 15:00	1
<b>Manganese</b>	<b>380</b>		0.61	0.089	mg/Kg	☼	11/02/17 15:42	11/03/17 15:00	1
<b>Nickel</b>	<b>20</b>		0.61	0.18	mg/Kg	☼	11/02/17 15:42	11/03/17 15:00	1
<b>Selenium</b>	<b>0.51</b>	<b>J</b>	0.61	0.36	mg/Kg	☼	11/02/17 15:42	11/05/17 20:34	1
Silver	<0.31		0.31	0.079	mg/Kg	☼	11/02/17 15:42	11/03/17 15:00	1
Thallium	<0.61		0.61	0.31	mg/Kg	☼	11/02/17 15:42	11/03/17 15:00	1
<b>Vanadium</b>	<b>21</b>		0.31	0.072	mg/Kg	☼	11/02/17 15:42	11/03/17 15:00	1
<b>Zinc</b>	<b>75</b>		1.2	0.54	mg/Kg	☼	11/02/17 15:42	11/03/17 15:00	1
<b>Potassium</b>	<b>1700</b>		31	11	mg/Kg	☼	11/02/17 15:42	11/03/17 15:00	1
<b>Sodium</b>	<b>850</b>		61	9.1	mg/Kg	☼	11/02/17 15:42	11/03/17 15:00	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/06/17 11:00	11/07/17 10:43	1
<b>Barium</b>	<b>0.38</b>	<b>J</b>	0.50	0.050	mg/L		11/06/17 11:00	11/07/17 10:43	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/06/17 11:00	11/07/17 10:43	1
<b>Cadmium</b>	<b>0.0027</b>	<b>J</b>	0.0050	0.0020	mg/L		11/06/17 11:00	11/07/17 10:43	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B02 (0-5)**

**Lab Sample ID: 500-136670-5**

Date Collected: 11/01/17 13:45

Matrix: Solid

Date Received: 11/02/17 10:05

Percent Solids: 77.9

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	150		5.0	0.50	mg/L		11/06/17 11:00	11/07/17 10:43	1
Chromium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:43	1
Cobalt	0.029		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:43	1
Copper	0.019	J	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:43	1
Iron	2.1		0.40	0.20	mg/L		11/06/17 11:00	11/07/17 10:43	1
Lead	0.43		0.0075	0.0075	mg/L		11/06/17 11:00	11/07/17 10:43	1
Magnesium	32		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:43	1
Manganese	4.9		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:43	1
Nickel	0.027		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:43	1
Potassium	7.1		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:43	1
Selenium	<0.050		0.050	0.020	mg/L		11/06/17 11:00	11/07/17 10:43	1
Silver	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:43	1
Vanadium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:43	1
Zinc	0.13	J	0.50	0.020	mg/L		11/06/17 11:00	11/07/17 10:43	1

**Method: 6010B - SPLP Metals - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.15		0.0075	0.0075	mg/L		11/06/17 10:45	11/07/17 14:17	1
Manganese	0.043		0.025	0.010	mg/L		11/06/17 10:45	11/07/17 14:17	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/06/17 11:00	11/07/17 14:36	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/06/17 11:00	11/07/17 14:36	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/06/17 14:30	11/07/17 08:57	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.048		0.019	0.0062	mg/Kg	☼	11/03/17 15:15	11/06/17 10:57	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.57		0.57	0.19	mg/Kg	☼	11/11/17 10:00	11/11/17 13:40	1
pH	8.2		0.20	0.20	SU			11/08/17 17:14	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B01 (0-5)**

**Lab Sample ID: 500-136670-6**

**Date Collected: 11/01/17 14:05**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 85.5**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.017		0.017	0.0074	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Benzene	<0.0017		0.0017	0.00043	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Bromodichloromethane	<0.0017		0.0017	0.00035	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Bromoform	<0.0017		0.0017	0.00050	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Bromomethane	<0.0043		0.0043	0.0016	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
2-Butanone (MEK)	<0.0043		0.0043	0.0019	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Carbon disulfide	<0.0043		0.0043	0.00089	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Carbon tetrachloride	<0.0017		0.0017	0.00049	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Chlorobenzene	<0.0017		0.0017	0.00063	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Chloroethane	<0.0043		0.0043	0.0013	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Chloroform	<0.0017		0.0017	0.00059	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Chloromethane	<0.0043		0.0043	0.0017	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
cis-1,2-Dichloroethene	<0.0017		0.0017	0.00048	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
cis-1,3-Dichloropropene	<0.0017		0.0017	0.00051	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Dibromochloromethane	<0.0017		0.0017	0.00056	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
1,1-Dichloroethane	<0.0017		0.0017	0.00058	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
1,2-Dichloroethane	<0.0043		0.0043	0.0013	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
1,1-Dichloroethene	<0.0017		0.0017	0.00059	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
1,2-Dichloropropane	<0.0017		0.0017	0.00044	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
1,3-Dichloropropene, Total	<0.0017		0.0017	0.00060	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Ethylbenzene	<0.0017		0.0017	0.00081	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
2-Hexanone	<0.0043		0.0043	0.0013	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Methylene Chloride	<0.0043		0.0043	0.0017	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
4-Methyl-2-pentanone (MIBK)	<0.0043		0.0043	0.0013	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Methyl tert-butyl ether	<0.0017		0.0017	0.00050	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Styrene	<0.0017		0.0017	0.00051	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
1,1,2,2-Tetrachloroethane	<0.0017		0.0017	0.00054	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Tetrachloroethene	<0.0017		0.0017	0.00058	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Toluene	<0.0017		0.0017	0.00043	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
trans-1,2-Dichloroethene	<0.0017		0.0017	0.00075	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
trans-1,3-Dichloropropene	<0.0017		0.0017	0.00060	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
1,1,1-Trichloroethane	<0.0017		0.0017	0.00057	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
1,1,2-Trichloroethane	<0.0017		0.0017	0.00073	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Trichloroethene	<0.0017		0.0017	0.00058	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Vinyl acetate	<0.0043		0.0043	0.0015	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Vinyl chloride	<0.0017		0.0017	0.00075	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1
Xylenes, Total	<0.0034		0.0034	0.00054	mg/Kg	☼	11/02/17 18:18	11/06/17 17:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		75 - 131	11/02/17 18:18	11/06/17 17:18	1
Dibromofluoromethane	100		75 - 126	11/02/17 18:18	11/06/17 17:18	1
1,2-Dichloroethane-d4 (Surr)	92		70 - 134	11/02/17 18:18	11/06/17 17:18	1
Toluene-d8 (Surr)	97		75 - 124	11/02/17 18:18	11/06/17 17:18	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.038		0.038	0.0068	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Acenaphthylene	<0.038		0.038	0.0050	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
<b>Anthracene</b>	<b>0.0069</b>	<b>J</b>	0.038	0.0064	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
<b>Benzo[a]anthracene</b>	<b>0.0096</b>	<b>J</b>	0.038	0.0051	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B01 (0-5)**

**Lab Sample ID: 500-136670-6**

**Date Collected: 11/01/17 14:05**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 85.5**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.019</b>	<b>J</b>	0.038	0.0074	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
<b>Benzo[b]fluoranthene</b>	<b>0.0088</b>	<b>J</b>	0.038	0.0082	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Benzo[g,h,i]perylene	<0.038		0.038	0.012	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Benzo[k]fluoranthene	<0.038		0.038	0.011	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.069	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Carbazole	<0.19		0.19	0.095	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
4-Chloroaniline	<0.77	F2	0.77	0.18	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
2-Chlorophenol	<0.19		0.19	0.065	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Chrysene	<0.038		0.038	0.010	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Dibenz(a,h)anthracene	<0.038		0.038	0.0073	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
2,4-Dichlorophenol	<0.38		0.38	0.090	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
2,4-Dimethylphenol	<0.38		0.38	0.14	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
4,6-Dinitro-2-methylphenol	<0.77	F2	0.77	0.31	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
2,4-Dinitrophenol	<0.77	F2	0.77	0.67	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
2,6-Dinitrotoluene	<0.19		0.19	0.075	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
<b>Fluoranthene</b>	<b>0.022</b>	<b>J</b>	0.038	0.0071	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Fluorene	<0.038		0.038	0.0053	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Hexachlorobenzene	<0.077		0.077	0.0088	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Hexachlorocyclopentadiene	<0.77		0.77	0.22	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Indeno[1,2,3-cd]pyrene	<0.038		0.038	0.0099	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
2-Methylnaphthalene	<0.077		0.077	0.0070	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Naphthalene	<0.038		0.038	0.0058	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Nitrobenzene	<0.038		0.038	0.0095	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
2-Nitrophenol	<0.38		0.38	0.090	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B01 (0-5)**

**Lab Sample ID: 500-136670-6**

Date Collected: 11/01/17 14:05

Matrix: Solid

Date Received: 11/02/17 10:05

Percent Solids: 85.5

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.77		0.77	0.36	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
N-Nitrosodi-n-propylamine	<0.077		0.077	0.046	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Pentachlorophenol	<0.77		0.77	0.61	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
<b>Phenanthrene</b>	<b>0.029</b>	<b>J</b>	0.038	0.0053	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
Phenol	<0.19		0.19	0.084	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
<b>Pyrene</b>	<b>0.020</b>	<b>J</b>	0.038	0.0076	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
2,4,5-Trichlorophenol	<0.38		0.38	0.087	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	11/09/17 17:53	11/10/17 15:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	76		44 - 121	11/09/17 17:53	11/10/17 15:18	1
2-Fluorophenol	71		46 - 133	11/09/17 17:53	11/10/17 15:18	1
Nitrobenzene-d5	66		41 - 120	11/09/17 17:53	11/10/17 15:18	1
Phenol-d5	81		46 - 125	11/09/17 17:53	11/10/17 15:18	1
Terphenyl-d14	89		35 - 160	11/09/17 17:53	11/10/17 15:18	1
2,4,6-Tribromophenol	80		25 - 139	11/09/17 17:53	11/10/17 15:18	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.41</b>	<b>J B</b>	1.1	0.22	mg/Kg	☼	11/02/17 15:42	11/05/17 20:38	1
<b>Arsenic</b>	<b>8.4</b>		0.56	0.19	mg/Kg	☼	11/02/17 15:42	11/03/17 15:04	1
<b>Barium</b>	<b>17</b>		0.56	0.064	mg/Kg	☼	11/02/17 15:42	11/03/17 15:04	1
<b>Beryllium</b>	<b>0.34</b>		0.23	0.053	mg/Kg	☼	11/02/17 15:42	11/03/17 15:04	1
<b>Cadmium</b>	<b>0.13</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/02/17 15:42	11/03/17 15:04	1
<b>Chromium</b>	<b>9.5</b>		0.56	0.28	mg/Kg	☼	11/02/17 15:42	11/03/17 15:04	1
<b>Cobalt</b>	<b>7.4</b>		0.28	0.074	mg/Kg	☼	11/02/17 15:42	11/03/17 15:04	1
<b>Copper</b>	<b>22</b>	<b>B</b>	0.56	0.16	mg/Kg	☼	11/02/17 15:42	11/03/17 15:04	1
<b>Iron</b>	<b>16000</b>	<b>B</b>	11	5.9	mg/Kg	☼	11/02/17 15:42	11/03/17 15:04	1
<b>Lead</b>	<b>12</b>		0.28	0.13	mg/Kg	☼	11/02/17 15:42	11/03/17 15:04	1
<b>Magnesium</b>	<b>33000</b>		5.6	2.8	mg/Kg	☼	11/02/17 15:42	11/03/17 15:04	1
<b>Calcium</b>	<b>110000</b>	<b>B</b>	110	19	mg/Kg	☼	11/02/17 15:42	11/05/17 20:42	10
<b>Manganese</b>	<b>330</b>		0.56	0.082	mg/Kg	☼	11/02/17 15:42	11/03/17 15:04	1
<b>Nickel</b>	<b>18</b>		0.56	0.16	mg/Kg	☼	11/02/17 15:42	11/03/17 15:04	1
Selenium	<0.56		0.56	0.33	mg/Kg	☼	11/02/17 15:42	11/05/17 20:38	1
Silver	<0.28		0.28	0.073	mg/Kg	☼	11/02/17 15:42	11/03/17 15:04	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	11/02/17 15:42	11/03/17 15:04	1
<b>Vanadium</b>	<b>12</b>		0.28	0.066	mg/Kg	☼	11/02/17 15:42	11/03/17 15:04	1
<b>Zinc</b>	<b>55</b>		1.1	0.49	mg/Kg	☼	11/02/17 15:42	11/03/17 15:04	1
<b>Potassium</b>	<b>1100</b>		28	10	mg/Kg	☼	11/02/17 15:42	11/03/17 15:04	1
<b>Sodium</b>	<b>350</b>		56	8.3	mg/Kg	☼	11/02/17 15:42	11/03/17 15:04	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/06/17 11:00	11/07/17 10:47	1
<b>Barium</b>	<b>0.25</b>	<b>J</b>	0.50	0.050	mg/L		11/06/17 11:00	11/07/17 10:47	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/06/17 11:00	11/07/17 10:47	1
<b>Cadmium</b>	<b>0.0028</b>	<b>J</b>	0.0050	0.0020	mg/L		11/06/17 11:00	11/07/17 10:47	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B01 (0-5)**

**Lab Sample ID: 500-136670-6**

**Date Collected: 11/01/17 14:05**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 85.5**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>940</b>		50	5.0	mg/L		11/06/17 11:00	11/08/17 13:52	10
Chromium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:47	1
Cobalt	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:47	1
<b>Copper</b>	<b>0.024</b>	<b>J</b>	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:47	1
<b>Iron</b>	<b>0.21</b>	<b>J</b>	0.40	0.20	mg/L		11/06/17 11:00	11/07/17 10:47	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/06/17 11:00	11/07/17 10:47	1
<b>Magnesium</b>	<b>28</b>		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:47	1
<b>Manganese</b>	<b>0.34</b>		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:47	1
Nickel	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:47	1
<b>Potassium</b>	<b>1.6</b>	<b>J</b>	2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:47	1
Selenium	<0.050		0.050	0.020	mg/L		11/06/17 11:00	11/07/17 10:47	1
Silver	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:47	1
Vanadium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:47	1
<b>Zinc</b>	<b>0.061</b>	<b>J</b>	0.50	0.020	mg/L		11/06/17 11:00	11/07/17 10:47	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.050</b>		0.025	0.010	mg/L		11/06/17 10:45	11/07/17 14:21	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/06/17 11:00	11/07/17 14:41	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/06/17 11:00	11/07/17 14:41	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/06/17 14:30	11/07/17 08:58	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.021</b>		0.019	0.0064	mg/Kg	☼	11/03/17 15:15	11/06/17 10:59	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.45		0.45	0.15	mg/Kg	☼	11/11/17 10:00	11/11/17 13:42	1
<b>pH</b>	<b>9.0</b>		0.20	0.20	SU			11/08/17 17:14	1



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B06 (0-5)**

**Lab Sample ID: 500-136670-7**

**Date Collected: 11/01/17 14:30**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 81.3**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<2.7		2.7	0.94	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Benzene	<0.14		0.14	0.079	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Bromodichloromethane	<0.54		0.54	0.20	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Bromoform	<0.54		0.54	0.26	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Bromomethane	<1.1	*	1.1	0.43	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
2-Butanone (MEK)	<2.7		2.7	1.1	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Carbon disulfide	<1.1		1.1	0.43	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Carbon tetrachloride	<0.54		0.54	0.21	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Chlorobenzene	<0.54		0.54	0.21	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Chloroethane	<0.54	*	0.54	0.27	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Chloroform	<1.1		1.1	0.20	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Chloromethane	<0.54		0.54	0.17	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
cis-1,2-Dichloroethene	<0.54		0.54	0.22	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
cis-1,3-Dichloropropene	<0.54		0.54	0.23	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Dibromochloromethane	<0.54		0.54	0.26	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
1,1-Dichloroethane	<0.54		0.54	0.22	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
1,2-Dichloroethane	<0.54		0.54	0.21	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
1,1-Dichloroethene	<0.54		0.54	0.21	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
1,2-Dichloropropane	<0.54		0.54	0.23	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
1,3-Dichloropropene, Total	<0.54		0.54	0.23	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Ethylbenzene	<0.14		0.14	0.099	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
2-Hexanone	<2.7		2.7	0.84	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
<b>Methylene Chloride</b>	<b>3.1</b>	<b>cn</b>	2.7	0.88	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
4-Methyl-2-pentanone (MIBK)	<2.7		2.7	1.2	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Methyl tert-butyl ether	<0.54		0.54	0.21	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Styrene	<0.54		0.54	0.21	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
1,1,2,2-Tetrachloroethane	<0.54		0.54	0.22	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Tetrachloroethene	<0.54		0.54	0.20	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Toluene	<0.14		0.14	0.080	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
trans-1,2-Dichloroethene	<0.54		0.54	0.19	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
trans-1,3-Dichloropropene	<0.54		0.54	0.20	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
1,1,1-Trichloroethane	<0.54		0.54	0.21	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
1,1,2-Trichloroethane	<0.54		0.54	0.19	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Trichloroethene	<0.27		0.27	0.089	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Vinyl acetate	<1.1		1.1	0.49	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Vinyl chloride	<0.27		0.27	0.14	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500
Xylenes, Total	<0.27		0.27	0.12	mg/Kg	☼	11/01/17 14:30	11/13/17 10:47	500

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		72 - 124	11/01/17 14:30	11/13/17 10:47	500
Dibromofluoromethane	93		75 - 120	11/01/17 14:30	11/13/17 10:47	500
1,2-Dichloroethane-d4 (Surr)	82		75 - 126	11/01/17 14:30	11/13/17 10:47	500
Toluene-d8 (Surr)	89		75 - 120	11/01/17 14:30	11/13/17 10:47	500

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	<0.039		0.039	0.0052	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
<b>Anthracene</b>	<b>2.2</b>		0.039	0.0066	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
<b>Benzo[a]anthracene</b>	<b>2.7</b>		0.039	0.0053	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
<b>Benzo[a]pyrene</b>	<b>1.3</b>		0.039	0.0076	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B06 (0-5)**

**Lab Sample ID: 500-136670-7**

**Date Collected: 11/01/17 14:30**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 81.3**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[b]fluoranthene</b>	<b>2.3</b>		0.039	0.0085	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
<b>Benzo[g,h,i]perylene</b>	<b>0.29</b>		0.039	0.013	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
<b>Benzo[k]fluoranthene</b>	<b>0.85</b>		0.039	0.012	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.072	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
Butyl benzyl phthalate	<0.20		0.20	0.075	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
<b>Carbazole</b>	<b>1.4</b>		0.20	0.098	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
4-Chloroaniline	<0.79		0.79	0.18	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
<b>Chrysene</b>	<b>2.1</b>		0.039	0.011	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
<b>Dibenz(a,h)anthracene</b>	<b>0.14</b>		0.039	0.0076	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
<b>Dibenzofuran</b>	<b>1.6</b>		0.20	0.046	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
1,2-Dichlorobenzene	<0.20		0.20	0.047	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
2,4-Dichlorophenol	<0.39		0.39	0.094	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
Diethyl phthalate	<0.20		0.20	0.067	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
4,6-Dinitro-2-methylphenol	<0.79		0.79	0.32	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
2,4-Dinitrophenol	<0.79		0.79	0.69	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
2,4-Dinitrotoluene	<0.20		0.20	0.063	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
2,6-Dinitrotoluene	<0.20		0.20	0.077	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
Hexachlorobenzene	<0.079		0.079	0.0091	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
Hexachlorocyclopentadiene	<0.79		0.79	0.23	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.39</b>		0.039	0.010	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
<b>2-Methylnaphthalene</b>	<b>0.54</b>		0.079	0.0072	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
3 & 4 Methylphenol	<0.20		0.20	0.066	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
Naphthalene	<0.039		0.039	0.0061	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
Nitrobenzene	<0.039		0.039	0.0098	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
2-Nitrophenol	<0.39		0.39	0.093	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
4-Nitrophenol	<0.79		0.79	0.37	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
N-Nitrosodi-n-propylamine	<0.079		0.079	0.048	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B06 (0-5)**

**Lab Sample ID: 500-136670-7**

**Date Collected: 11/01/17 14:30**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 81.3**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
Pentachlorophenol	<0.79		0.79	0.63	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
Phenol	<0.20		0.20	0.087	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
2,4,5-Trichlorophenol	<0.39		0.39	0.090	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1
2,4,6-Trichlorophenol	<0.39		0.39	0.14	mg/Kg	☼	11/09/17 17:53	11/10/17 18:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	76		44 - 121	11/09/17 17:53	11/10/17 18:21	1
2-Fluorophenol	90		46 - 133	11/09/17 17:53	11/10/17 18:21	1
Nitrobenzene-d5	73		41 - 120	11/09/17 17:53	11/10/17 18:21	1
Phenol-d5	97		46 - 125	11/09/17 17:53	11/10/17 18:21	1
Terphenyl-d14	96		35 - 160	11/09/17 17:53	11/10/17 18:21	1
2,4,6-Tribromophenol	96		25 - 139	11/09/17 17:53	11/10/17 18:21	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	4.9		0.20	0.035	mg/Kg	☼	11/09/17 17:53	11/14/17 12:28	5
Fluoranthene	11		0.20	0.037	mg/Kg	☼	11/09/17 17:53	11/14/17 12:28	5
Fluorene	3.6		0.20	0.028	mg/Kg	☼	11/09/17 17:53	11/14/17 12:28	5
Phenanthrene	7.5		0.20	0.027	mg/Kg	☼	11/09/17 17:53	11/14/17 12:28	5
Pyrene	7.4		0.20	0.039	mg/Kg	☼	11/09/17 17:53	11/14/17 12:28	5

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.29	J B	1.2	0.23	mg/Kg	☼	11/02/17 15:42	11/05/17 20:46	1
Arsenic	4.8		0.59	0.20	mg/Kg	☼	11/02/17 15:42	11/03/17 15:08	1
Barium	27		0.59	0.068	mg/Kg	☼	11/02/17 15:42	11/03/17 15:08	1
Beryllium	0.28		0.24	0.055	mg/Kg	☼	11/02/17 15:42	11/03/17 15:08	1
Cadmium	0.14	B	0.12	0.021	mg/Kg	☼	11/02/17 15:42	11/03/17 15:08	1
Chromium	7.4		0.59	0.29	mg/Kg	☼	11/02/17 15:42	11/03/17 15:08	1
Cobalt	4.5		0.30	0.078	mg/Kg	☼	11/02/17 15:42	11/03/17 15:08	1
Copper	11	B	0.59	0.17	mg/Kg	☼	11/02/17 15:42	11/03/17 15:08	1
Iron	8600	B	12	6.2	mg/Kg	☼	11/02/17 15:42	11/03/17 15:08	1
Lead	19		0.30	0.14	mg/Kg	☼	11/02/17 15:42	11/03/17 15:08	1
Magnesium	12000		5.9	2.9	mg/Kg	☼	11/02/17 15:42	11/03/17 15:08	1
Calcium	27000	B	12	2.0	mg/Kg	☼	11/02/17 15:42	11/03/17 15:08	1
Manganese	130		0.59	0.086	mg/Kg	☼	11/02/17 15:42	11/03/17 15:08	1
Nickel	11		0.59	0.17	mg/Kg	☼	11/02/17 15:42	11/03/17 15:08	1
Selenium	<0.59		0.59	0.35	mg/Kg	☼	11/02/17 15:42	11/05/17 20:46	1
Silver	<0.30		0.30	0.077	mg/Kg	☼	11/02/17 15:42	11/03/17 15:08	1
Thallium	<0.59		0.59	0.30	mg/Kg	☼	11/02/17 15:42	11/03/17 15:08	1
Vanadium	11		0.30	0.070	mg/Kg	☼	11/02/17 15:42	11/03/17 15:08	1
Zinc	40		1.2	0.52	mg/Kg	☼	11/02/17 15:42	11/03/17 15:08	1
Potassium	590		30	11	mg/Kg	☼	11/02/17 15:42	11/03/17 15:08	1
Sodium	200		59	8.8	mg/Kg	☼	11/02/17 15:42	11/03/17 15:08	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L	☼	11/06/17 11:00	11/07/17 10:51	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-B06 (0-5)**

**Lab Sample ID: 500-136670-7**

Date Collected: 11/01/17 14:30

Matrix: Solid

Date Received: 11/02/17 10:05

Percent Solids: 81.3

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.52</b>		0.50	0.050	mg/L		11/06/17 11:00	11/07/17 10:51	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/06/17 11:00	11/07/17 10:51	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/06/17 11:00	11/07/17 10:51	1
<b>Calcium</b>	<b>360</b>		5.0	0.50	mg/L		11/06/17 11:00	11/07/17 10:51	1
Chromium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:51	1
<b>Cobalt</b>	<b>0.029</b>		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:51	1
<b>Copper</b>	<b>0.021</b>	<b>J</b>	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:51	1
<b>Iron</b>	<b>0.98</b>		0.40	0.20	mg/L		11/06/17 11:00	11/07/17 10:51	1
<b>Lead</b>	<b>0.059</b>		0.0075	0.0075	mg/L		11/06/17 11:00	11/07/17 10:51	1
<b>Magnesium</b>	<b>20</b>		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:51	1
<b>Manganese</b>	<b>2.4</b>		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:51	1
<b>Nickel</b>	<b>0.045</b>		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:51	1
<b>Potassium</b>	<b>3.2</b>		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:51	1
Selenium	<0.050		0.050	0.020	mg/L		11/06/17 11:00	11/07/17 10:51	1
Silver	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:51	1
Vanadium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:51	1
<b>Zinc</b>	<b>0.15</b>	<b>J</b>	0.50	0.020	mg/L		11/06/17 11:00	11/07/17 10:51	1

**Method: 6010B - SPLP Metals - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lead</b>	<b>0.054</b>		0.0075	0.0075	mg/L		11/06/17 10:45	11/07/17 14:25	1
<b>Manganese</b>	<b>0.038</b>		0.025	0.010	mg/L		11/06/17 10:45	11/07/17 14:25	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/06/17 11:00	11/07/17 14:46	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/06/17 11:00	11/07/17 14:46	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/06/17 14:30	11/07/17 09:00	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.0098</b>	<b>J</b>	0.019	0.0063	mg/Kg	☼	11/03/17 15:15	11/06/17 11:01	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.52		0.52	0.18	mg/Kg	☼	11/11/17 10:00	11/11/17 13:42	1
<b>pH</b>	<b>8.4</b>		0.20	0.20	SU			11/08/17 17:14	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-G01**

**Lab Sample ID: 500-136670-8**

**Date Collected: 11/01/17 12:10**

**Matrix: Water**

**Date Received: 11/02/17 10:05**

## Method: 8260B - VOC

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.0076</b>		0.0050	0.0017	mg/L			11/12/17 13:27	1
<b>Benzene</b>	<b>0.0024</b>		0.00050	0.00015	mg/L			11/12/17 13:27	1
Bromodichloromethane	<0.0010		0.0010	0.00037	mg/L			11/12/17 13:27	1
Bromoform	<0.0010		0.0010	0.00048	mg/L			11/12/17 13:27	1
Bromomethane	<0.0020		0.0020	0.00080	mg/L			11/12/17 13:27	1
Carbon disulfide	<0.0020		0.0020	0.00045	mg/L			11/12/17 13:27	1
Carbon tetrachloride	<0.0010		0.0010	0.00038	mg/L			11/12/17 13:27	1
Chlorobenzene	<0.0010		0.0010	0.00039	mg/L			11/12/17 13:27	1
Chloroethane	<0.0010		0.0010	0.00051	mg/L			11/12/17 13:27	1
Chloroform	<0.0020		0.0020	0.00037	mg/L			11/12/17 13:27	1
Chloromethane	<0.0010		0.0010	0.00032	mg/L			11/12/17 13:27	1
cis-1,2-Dichloroethene	<0.0010		0.0010	0.00041	mg/L			11/12/17 13:27	1
cis-1,3-Dichloropropene	<0.0010		0.0010	0.00042	mg/L			11/12/17 13:27	1
Dibromochloromethane	<0.0010		0.0010	0.00049	mg/L			11/12/17 13:27	1
1,1-Dichloroethane	<0.0010		0.0010	0.00041	mg/L			11/12/17 13:27	1
1,2-Dichloroethane	<0.0010		0.0010	0.00039	mg/L			11/12/17 13:27	1
1,1-Dichloroethene	<0.0010		0.0010	0.00039	mg/L			11/12/17 13:27	1
1,2-Dichloropropane	<0.0010		0.0010	0.00043	mg/L			11/12/17 13:27	1
1,3-Dichloropropene, Total	<0.0010		0.0010	0.00042	mg/L			11/12/17 13:27	1
<b>Ethylbenzene</b>	<b>0.0044</b>		0.00050	0.00018	mg/L			11/12/17 13:27	1
2-Hexanone	<0.0050		0.0050	0.0016	mg/L			11/12/17 13:27	1
Methylene Chloride	<0.0050		0.0050	0.0016	mg/L			11/12/17 13:27	1
Methyl Ethyl Ketone	<0.0050		0.0050	0.0021	mg/L			11/12/17 13:27	1
methyl isobutyl ketone	<0.0050		0.0050	0.0022	mg/L			11/12/17 13:27	1
Methyl tert-butyl ether	<0.0010		0.0010	0.00039	mg/L			11/12/17 13:27	1
Styrene	<0.0010		0.0010	0.00039	mg/L			11/12/17 13:27	1
1,1,2,2-Tetrachloroethane	<0.0010		0.0010	0.00040	mg/L			11/12/17 13:27	1
Tetrachloroethene	<0.0010		0.0010	0.00037	mg/L			11/12/17 13:27	1
<b>Toluene</b>	<b>0.00087</b>		0.00050	0.00015	mg/L			11/12/17 13:27	1
trans-1,2-Dichloroethene	<0.0010		0.0010	0.00035	mg/L			11/12/17 13:27	1
trans-1,3-Dichloropropene	<0.0010		0.0010	0.00036	mg/L			11/12/17 13:27	1
1,1,1-Trichloroethane	<0.0010		0.0010	0.00038	mg/L			11/12/17 13:27	1
1,1,2-Trichloroethane	<0.0010		0.0010	0.00035	mg/L			11/12/17 13:27	1
Trichloroethene	<0.00050		0.00050	0.00016	mg/L			11/12/17 13:27	1
Vinyl acetate	<0.0020		0.0020	0.00091	mg/L			11/12/17 13:27	1
Vinyl chloride	<0.00050		0.00050	0.00020	mg/L			11/12/17 13:27	1
<b>Xylenes, Total</b>	<b>0.0076</b>		0.0010	0.00022	mg/L			11/12/17 13:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		72 - 124		11/12/17 13:27	1
Dibromofluoromethane	91		75 - 120		11/12/17 13:27	1
1,2-Dichloroethane-d4 (Surr)	88		75 - 126		11/12/17 13:27	1
Toluene-d8 (Surr)	93		75 - 120		11/12/17 13:27	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.00077		0.00077	0.00024	mg/L		11/03/17 07:27	11/05/17 20:03	1
Acenaphthylene	<0.00077		0.00077	0.00021	mg/L		11/03/17 07:27	11/05/17 20:03	1
Anthracene	<0.00077		0.00077	0.00026	mg/L		11/03/17 07:27	11/05/17 20:03	1
Benzo[a]anthracene	<0.00012		0.00012	0.000044	mg/L		11/03/17 07:27	11/05/17 20:03	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-G01**

**Lab Sample ID: 500-136670-8**

**Date Collected: 11/01/17 12:10**

**Matrix: Water**

**Date Received: 11/02/17 10:05**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.00015		0.00015	0.000076	mg/L		11/03/17 07:27	11/05/17 20:03	1
Benzo[b]fluoranthene	<0.00015		0.00015	0.000062	mg/L		11/03/17 07:27	11/05/17 20:03	1
Benzo[g,h,i]perylene	<0.00077		0.00077	0.00029	mg/L		11/03/17 07:27	11/05/17 20:03	1
Benzo[k]fluoranthene	<0.00015		0.00015	0.000049	mg/L		11/03/17 07:27	11/05/17 20:03	1
Bis(2-chloroethoxy)methane	<0.0015		0.0015	0.00022	mg/L		11/03/17 07:27	11/05/17 20:03	1
Bis(2-chloroethyl)ether	<0.0015		0.0015	0.00022	mg/L		11/03/17 07:27	11/05/17 20:03	1
Bis(2-ethylhexyl) phthalate	<0.0077		0.0077	0.0013	mg/L		11/03/17 07:27	11/05/17 20:03	1
4-Bromophenyl phenyl ether	<0.0038		0.0038	0.00042	mg/L		11/03/17 07:27	11/05/17 20:03	1
Butyl benzyl phthalate	<0.0015		0.0015	0.00037	mg/L		11/03/17 07:27	11/05/17 20:03	1
Carbazole	<0.0038		0.0038	0.00027	mg/L		11/03/17 07:27	11/05/17 20:03	1
4-Chloroaniline	<0.0077		0.0077	0.0015	mg/L		11/03/17 07:27	11/05/17 20:03	1
4-Chloro-3-methylphenol	<0.0077		0.0077	0.0018	mg/L		11/03/17 07:27	11/05/17 20:03	1
2-Chloronaphthalene	<0.0015		0.0015	0.00018	mg/L		11/03/17 07:27	11/05/17 20:03	1
2-Chlorophenol	<0.0038		0.0038	0.00043	mg/L		11/03/17 07:27	11/05/17 20:03	1
4-Chlorophenyl phenyl ether	<0.0038		0.0038	0.00049	mg/L		11/03/17 07:27	11/05/17 20:03	1
Chrysene	<0.00015		0.00015	0.000052	mg/L		11/03/17 07:27	11/05/17 20:03	1
Dibenz(a,h)anthracene	<0.00023		0.00023	0.000039	mg/L		11/03/17 07:27	11/05/17 20:03	1
Dibenzofuran	<0.0015		0.0015	0.00020	mg/L		11/03/17 07:27	11/05/17 20:03	1
1,2-Dichlorobenzene	<0.0015		0.0015	0.00019	mg/L		11/03/17 07:27	11/05/17 20:03	1
1,3-Dichlorobenzene	<0.0015		0.0015	0.00016	mg/L		11/03/17 07:27	11/05/17 20:03	1
1,4-Dichlorobenzene	<0.0015		0.0015	0.00016	mg/L		11/03/17 07:27	11/05/17 20:03	1
3,3'-Dichlorobenzidine	<0.0038		0.0038	0.0013	mg/L		11/03/17 07:27	11/05/17 20:03	1
2,4-Dichlorophenol	<0.0077		0.0077	0.0020	mg/L		11/03/17 07:27	11/05/17 20:03	1
Diethyl phthalate	<0.0038		0.0038	0.00028	mg/L		11/03/17 07:27	11/05/17 20:03	1
2,4-Dimethylphenol	<0.0077		0.0077	0.0014	mg/L		11/03/17 07:27	11/05/17 20:03	1
Dimethyl phthalate	<0.0038		0.0038	0.00024	mg/L		11/03/17 07:27	11/05/17 20:03	1
Di-n-butyl phthalate	<0.0038		0.0038	0.00056	mg/L		11/03/17 07:27	11/05/17 20:03	1
4,6-Dinitro-2-methylphenol	<0.015		0.015	0.0045	mg/L		11/03/17 07:27	11/05/17 20:03	1
2,4-Dinitrophenol	<0.015		0.015	0.0066	mg/L		11/03/17 07:27	11/05/17 20:03	1
2,4-Dinitrotoluene	<0.00077		0.00077	0.00019	mg/L		11/03/17 07:27	11/05/17 20:03	1
2,6-Dinitrotoluene	<0.00077		0.00077	0.000057	mg/L		11/03/17 07:27	11/05/17 20:03	1
Di-n-octyl phthalate	<0.0077		0.0077	0.00081	mg/L		11/03/17 07:27	11/05/17 20:03	1
Fluoranthene	<0.00077		0.00077	0.00035	mg/L		11/03/17 07:27	11/05/17 20:03	1
Fluorene	<0.00077		0.00077	0.00019	mg/L		11/03/17 07:27	11/05/17 20:03	1
Hexachlorobenzene	<0.00038		0.00038	0.000061	mg/L		11/03/17 07:27	11/05/17 20:03	1
Hexachlorobutadiene	<0.0038		0.0038	0.00040	mg/L		11/03/17 07:27	11/05/17 20:03	1
Hexachlorocyclopentadiene	<0.015		0.015	0.0049	mg/L		11/03/17 07:27	11/05/17 20:03	1
Hexachloroethane	<0.0038		0.0038	0.00046	mg/L		11/03/17 07:27	11/05/17 20:03	1
Indeno[1,2,3-cd]pyrene	<0.00015		0.00015	0.000057	mg/L		11/03/17 07:27	11/05/17 20:03	1
Isophorone	<0.0015		0.0015	0.00029	mg/L		11/03/17 07:27	11/05/17 20:03	1
<b>2-Methylnaphthalene</b>	<b>0.00069</b>	<b>J</b>	0.0015	0.000050	mg/L		11/03/17 07:27	11/05/17 20:03	1
2-Methylphenol	<0.0015		0.0015	0.00023	mg/L		11/03/17 07:27	11/05/17 20:03	1
3 & 4 Methylphenol	<0.0015		0.0015	0.00035	mg/L		11/03/17 07:27	11/05/17 20:03	1
<b>Naphthalene</b>	<b>0.0018</b>		0.00077	0.00024	mg/L		11/03/17 07:27	11/05/17 20:03	1
2-Nitroaniline	<0.0038		0.0038	0.00099	mg/L		11/03/17 07:27	11/05/17 20:03	1
3-Nitroaniline	<0.0077		0.0077	0.0014	mg/L		11/03/17 07:27	11/05/17 20:03	1
4-Nitroaniline	<0.0077		0.0077	0.0013	mg/L		11/03/17 07:27	11/05/17 20:03	1
Nitrobenzene	<0.00077		0.00077	0.00035	mg/L		11/03/17 07:27	11/05/17 20:03	1
2-Nitrophenol	<0.0077		0.0077	0.0019	mg/L		11/03/17 07:27	11/05/17 20:03	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-G01**

**Lab Sample ID: 500-136670-8**

**Date Collected: 11/01/17 12:10**

**Matrix: Water**

**Date Received: 11/02/17 10:05**

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.015		0.015	0.0057	mg/L		11/03/17 07:27	11/05/17 20:03	1
N-Nitrosodi-n-propylamine	<0.00038		0.00038	0.00012	mg/L		11/03/17 07:27	11/05/17 20:03	1
N-Nitrosodiphenylamine	<0.0015		0.0015	0.00028	mg/L		11/03/17 07:27	11/05/17 20:03	1
2,2'-oxybis[1-chloropropane]	<0.0015		0.0015	0.00029	mg/L		11/03/17 07:27	11/05/17 20:03	1
Pentachlorophenol	<0.015		0.015	0.0030	mg/L		11/03/17 07:27	11/05/17 20:03	1
Phenanthrene	<0.00077		0.00077	0.00023	mg/L		11/03/17 07:27	11/05/17 20:03	1
Phenol	<0.0038		0.0038	0.00052	mg/L		11/03/17 07:27	11/05/17 20:03	1
Pyrene	<0.00077		0.00077	0.00033	mg/L		11/03/17 07:27	11/05/17 20:03	1
1,2,4-Trichlorobenzene	<0.0015		0.0015	0.00018	mg/L		11/03/17 07:27	11/05/17 20:03	1
2,4,5-Trichlorophenol	<0.0077		0.0077	0.0020	mg/L		11/03/17 07:27	11/05/17 20:03	1
2,4,6-Trichlorophenol	<0.0038		0.0038	0.00055	mg/L		11/03/17 07:27	11/05/17 20:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	53		34 - 110				11/03/17 07:27	11/05/17 20:03	1
2-Fluorophenol	49		27 - 110				11/03/17 07:27	11/05/17 20:03	1
Nitrobenzene-d5	61		36 - 120				11/03/17 07:27	11/05/17 20:03	1
Phenol-d5	28		20 - 100				11/03/17 07:27	11/05/17 20:03	1
Terphenyl-d14	68		40 - 145				11/03/17 07:27	11/05/17 20:03	1
2,4,6-Tribromophenol	54		40 - 145				11/03/17 07:27	11/05/17 20:03	1

## Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0030		0.0030	0.0013	mg/L		11/03/17 07:22	11/03/17 14:12	1
<b>Arsenic</b>	<b>0.0061</b>		0.0010	0.00023	mg/L		11/03/17 07:22	11/03/17 14:12	1
<b>Barium</b>	<b>1.1</b>		0.0025	0.00073	mg/L		11/03/17 07:22	11/03/17 14:12	1
Beryllium	<0.0020		0.0020	0.0011	mg/L		11/03/17 07:22	11/07/17 11:35	2
<b>Cadmium</b>	<b>0.00056</b>		0.00050	0.00017	mg/L		11/03/17 07:22	11/03/17 14:12	1
<b>Calcium</b>	<b>290</b>		0.40	0.089	mg/L		11/03/17 07:22	11/07/17 11:35	2
<b>Chromium</b>	<b>0.027</b>		0.010	0.0023	mg/L		11/03/17 07:22	11/07/17 11:35	2
<b>Cobalt</b>	<b>0.0069</b>		0.0020	0.00080	mg/L		11/03/17 07:22	11/07/17 11:35	2
<b>Copper</b>	<b>0.015</b>		0.0020	0.00050	mg/L		11/03/17 07:22	11/03/17 14:12	1
<b>Iron</b>	<b>21</b>		0.20	0.093	mg/L		11/03/17 07:22	11/07/17 11:35	2
<b>Lead</b>	<b>0.014</b>		0.00050	0.00019	mg/L		11/03/17 07:22	11/03/17 14:12	1
<b>Magnesium</b>	<b>130</b>		0.40	0.099	mg/L		11/03/17 07:22	11/07/17 11:35	2
<b>Manganese</b>	<b>0.69</b>		0.0050	0.0016	mg/L		11/03/17 07:22	11/07/17 11:35	2
<b>Nickel</b>	<b>0.018</b>		0.0040	0.0013	mg/L		11/03/17 07:22	11/07/17 11:35	2
<b>Potassium</b>	<b>13</b>		1.0	0.22	mg/L		11/03/17 07:22	11/07/17 11:35	2
<b>Selenium</b>	<b>0.0014</b>	J	0.0025	0.00098	mg/L		11/03/17 07:22	11/03/17 14:12	1
Silver	<0.00050		0.00050	0.00012	mg/L		11/03/17 07:22	11/03/17 14:12	1
<b>Sodium</b>	<b>220</b>		0.40	0.15	mg/L		11/03/17 07:22	11/07/17 11:35	2
<b>Thallium</b>	<b>0.00059</b>	J	0.0020	0.00057	mg/L		11/03/17 07:22	11/03/17 14:12	1
<b>Vanadium</b>	<b>0.020</b>		0.010	0.0043	mg/L		11/03/17 07:22	11/07/17 11:35	2
<b>Zinc</b>	<b>0.041</b>		0.020	0.0069	mg/L		11/03/17 07:22	11/03/17 14:12	1

## Method: 7470A - Mercury

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.000098	mg/L		11/03/17 12:20	11/06/17 11:45	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

**Client Sample ID: 2696V-9-G01**

**Lab Sample ID: 500-136670-8**

**Date Collected: 11/01/17 12:10**

**Matrix: Water**

**Date Received: 11/02/17 10:05**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.010		0.010	0.0035	mg/L		11/14/17 11:10	11/14/17 15:27	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
cn	Refer to Case Narrative for further detail

### GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F2	MS/MSD RPD exceeds control limits

### Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-1

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B		Water	1,3-Dichloropropene, Total
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids



# TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 604  
Phone: 708.534.5200 Fax: 708.534.5200



500-136670 COC

Report To (optional)  
Contact: MATT WEISS  
Company: TERRACON  
Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
E-Mail: \_\_\_\_\_

Bill To (optional)  
Contact: \_\_\_\_\_  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-136670  
Chain of Custody Number: \_\_\_\_\_  
Page 1 of 1  
Temperature °C of Cooler: 32.27

Client		Client Project #		Preservative		Parameter		Matrix		Comments	
TERRACON		11177029M								Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name		Lab Project #		Date		Time		# of Containers		Matrix	
WORK ORDER 038A											
Project Location/State		Lab Project #		Date		Time		# of Containers		Matrix	
MARKHAM, IL											
Sampler		Lab PM		Date		Time		# of Containers		Matrix	
CRAIG VARLAND		DICK WRIGHT									
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	VOCs	SVOCs	23 TAL METALS, PH	TCLP 23 TAL METALS	Comments
1		2696V-9-805-(0-5)	11-1-17	0940	5	S	X	X	X	X	
2		2696V-9-804-(0-5)	11-1-17	1000	5	S	X	X	X	X	
3		2696V-9-804-DUP	11-1-17	-	5	S	X	X	X	X	
4		2696V-9-803-(10-15)	11-1-17	1130	5	S	X	X	X	X	
5		2696V-9-802-(0-5)	11-1-17	1345	5	S	X	X	X	X	
6		2696V-9-801-(0-5)	11-1-17	1405	5	S	X	X	X	X	
7		2696V-9-806-(0-5)	11-1-17	1430	5	S	X	X	X	X	

Turnaround Time Required (Business Days)

\_\_\_ 1 Day \_\_\_ 2 Days \_\_\_ 5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRACON</u> Date: <u>11-2-17</u> Time: <u>0838</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/2/17</u> Time: <u>0838</u>
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/2/17</u> Time: <u>1005</u>	Received By: <u>[Signature]</u> Company: <u>TA-CPT</u> Date: <u>11/2/17</u> Time: <u>1005</u>
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____

Lab Courier: TA  
Shipped: \_\_\_\_\_  
Hand Delivered: \_\_\_\_\_

- Matrix Key
- WW - Wastewater
  - W - Water
  - S - Soil
  - SL - Sludge
  - MS - Miscellaneous
  - OL - Oil
  - A - Air
  - SE - Sediment
  - SO - Soil
  - L - Leachate
  - WI - Wipe
  - DW - Drinking Water
  - O - Other

Client Comments: NO ALUMINUM

Lab Comments: \_\_\_\_\_

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)  
 Contact: MATT WEISS  
 Company: TERRALON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-136670

Chain of Custody Number: \_\_\_\_\_

Page 1 of 1

Temperature °C of Cooler: \_\_\_\_\_

Client		Client Project #		Preservative		Parameter													
<u>TERRALON</u>		<u>11177029M</u>																	
Project Name		Project Location/State		Lab Project #		Parameter													
<u>WORK ORDER 038A</u>		<u>MARKHAM, IL</u>																	
Sampler		Lab PM																	
<u>CRAIG VARLAND</u>		<u>DICK WRIGHT</u>																	
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	VOCS	SVOCs	TOTAL 23 INORGANICS										Preservative Key
			Date	Time															
<u>8</u>		<u>2696V-9-601</u>	<u>11-1-17</u>	<u>1210</u>	<u>6</u>	<u>W</u>	<u>X</u>	<u>X</u>	<u>X</u>										1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other
																			Comments

Turnaround Time Required (Business Days)

1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRALON</u> Date: <u>11-2-17</u> Time: <u>0838</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/2/17</u> Time: <u>0838</u>	Lab Courier: <u>TA</u>
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/2/17</u> Time: <u>1005</u>	Received By: <u>[Signature]</u> Company: <u>TA-CHE</u> Date: <u>11/2/17</u> Time: <u>1005</u>	Shipped: _____
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Hand Delivered: _____

Matrix Key

WW - Wastewater SE - Sediment  
 W - Water SO - Soil  
 S - Soil L - Leachate  
 SL - Sludge WI - Wipe  
 MS - Miscellaneous DW - Drinking Water  
 OL - Oil O - Other  
 A - Air

Client Comments

NO ALUMINUM

Lab Comments:

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136670-1

**Login Number: 136670**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Scott, Sherri L**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.2.2.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

TestAmerica Job ID: 500-136893-5  
Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:  
Terracon Consulting Eng & Scientists  
135 Ambassador Drive  
Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:  
11/17/2017 5:13:13 PM  
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### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-5

**Job ID: 500-136893-5**

**Laboratory: TestAmerica Chicago**

## Narrative

### Job Narrative 500-136893-5

#### Receipt

The samples were received on 11/7/2017 4:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.9° C, 4.0° C and 5.5° C.

#### Receipt Exceptions

Per communication with Terracon on 11/8/17, sample ID for lab sample 8 was modified.

#### GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 409863: Chloroethane. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-409604 recovered above the upper control limit for Zinc. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: 2696V-9-B03 (0-5) (500-136893-6), 2696V-9-B03 (5-10) (500-136893-7), and 2696V-9-B03 (15-21) (500-136893-8).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-5

**Client Sample ID: 2696V-9-B03 (0-5)**

**Lab Sample ID: 500-136893-6**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.010	J	0.041	0.0074	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.014	J	0.041	0.0054	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.014	J	0.041	0.0068	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.064		0.041	0.0055	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.10		0.041	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.16		0.041	0.0088	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.055		0.041	0.013	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.067		0.041	0.012	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.094		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.016	J	0.041	0.0079	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.096		0.041	0.0076	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.054		0.041	0.011	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.034	J	0.041	0.0057	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.10		0.041	0.0081	mg/Kg	1	☼	8270D	Total/NA
Arsenic	13		0.60	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	62		0.60	0.068	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.62		0.24	0.056	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.32	B	0.12	0.021	mg/Kg	1	☼	6010B	Total/NA
Chromium	14		0.60	0.30	mg/Kg	1	☼	6010B	Total/NA
Cobalt	12		0.30	0.078	mg/Kg	1	☼	6010B	Total/NA
Copper	25		0.60	0.17	mg/Kg	1	☼	6010B	Total/NA
Iron	23000	B	12	6.2	mg/Kg	1	☼	6010B	Total/NA
Lead	29		0.30	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	5700		6.0	3.0	mg/Kg	1	☼	6010B	Total/NA
Calcium	7800	B	12	2.0	mg/Kg	1	☼	6010B	Total/NA
Manganese	600	B	0.60	0.086	mg/Kg	1	☼	6010B	Total/NA
Nickel	26		0.60	0.17	mg/Kg	1	☼	6010B	Total/NA
Selenium	1.0		0.60	0.35	mg/Kg	1	☼	6010B	Total/NA
Vanadium	23		0.30	0.070	mg/Kg	1	☼	6010B	Total/NA
Zinc	63		1.2	0.52	mg/Kg	1	☼	6010B	Total/NA
Potassium	1400		30	11	mg/Kg	1	☼	6010B	Total/NA
Sodium	100		60	8.8	mg/Kg	1	☼	6010B	Total/NA
Barium	0.43	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0022	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	230		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.023	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	92		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.33		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	3.2		2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.067	J ^	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.080		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.026		0.018	0.0061	mg/Kg	1	☼	7471B	Total/NA
pH	8.0		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-9-B03 (5-10)**

**Lab Sample ID: 500-136893-7**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.028		0.016	0.0071	mg/Kg	1	☼	8260B	Total/NA
Benzo[a]anthracene	0.0067	J	0.040	0.0054	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.0078	J	0.040	0.0077	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-5

**Client Sample ID: 2696V-9-B03 (5-10) (Continued)**

**Lab Sample ID: 500-136893-7**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzof[g,h,i]perylene	0.015	J	0.040	0.013	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.014	J	0.040	0.011	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.0091	J	0.081	0.0074	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.010	J	0.040	0.0056	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.019	J	0.040	0.0079	mg/Kg	1	☼	8270D	Total/NA
Arsenic	9.1		0.58	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	13		0.58	0.066	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.35		0.23	0.054	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.14	B	0.12	0.021	mg/Kg	1	☼	6010B	Total/NA
Chromium	7.9		0.58	0.29	mg/Kg	1	☼	6010B	Total/NA
Cobalt	8.3		0.29	0.076	mg/Kg	1	☼	6010B	Total/NA
Copper	20		0.58	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	17000	B	12	6.0	mg/Kg	1	☼	6010B	Total/NA
Lead	12		0.29	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	28000		5.8	2.9	mg/Kg	1	☼	6010B	Total/NA
Calcium	87000	B	120	20	mg/Kg	10	☼	6010B	Total/NA
Manganese	340	B	0.58	0.084	mg/Kg	1	☼	6010B	Total/NA
Nickel	19		0.58	0.17	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.51	J	0.58	0.34	mg/Kg	1	☼	6010B	Total/NA
Vanadium	10		0.29	0.068	mg/Kg	1	☼	6010B	Total/NA
Zinc	44		1.2	0.51	mg/Kg	1	☼	6010B	Total/NA
Potassium	1100		29	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	230		58	8.6	mg/Kg	1	☼	6010B	Total/NA
Barium	0.26	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0020	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	530		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.024	J	0.025	0.010	mg/L	1		6010B	TCLP
Copper	0.042		0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	20		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	1.7		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.048		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	3.3		2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.097	J ^	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.037		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.015	J	0.018	0.0061	mg/Kg	1	☼	7471B	Total/NA
pH	8.1		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-9-B03 (15-21)**

**Lab Sample ID: 500-136893-8**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	4.0		0.52	0.18	mg/Kg	1	☼	6010B	Total/NA
Barium	13		0.52	0.059	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.20	J	0.21	0.048	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.14	B	0.10	0.019	mg/Kg	1	☼	6010B	Total/NA
Chromium	4.0		0.52	0.26	mg/Kg	1	☼	6010B	Total/NA
Cobalt	2.7		0.26	0.068	mg/Kg	1	☼	6010B	Total/NA
Copper	13		0.52	0.14	mg/Kg	1	☼	6010B	Total/NA
Iron	8000	B	10	5.4	mg/Kg	1	☼	6010B	Total/NA
Lead	4.0		0.26	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	37000		5.2	2.6	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-5

**Client Sample ID: 2696V-9-B03 (15-21) (Continued)**

**Lab Sample ID: 500-136893-8**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	100000	B	100	18	mg/Kg	10	☼	6010B	Total/NA
Manganese	240	B	0.52	0.075	mg/Kg	1	☼	6010B	Total/NA
Nickel	7.2		0.52	0.15	mg/Kg	1	☼	6010B	Total/NA
Vanadium	6.1		0.26	0.061	mg/Kg	1	☼	6010B	Total/NA
Zinc	30		1.0	0.45	mg/Kg	1	☼	6010B	Total/NA
Potassium	770		26	9.1	mg/Kg	1	☼	6010B	Total/NA
Sodium	140		52	7.6	mg/Kg	1	☼	6010B	Total/NA
Barium	0.42	J	0.50	0.050	mg/L	1		6010B	TCLP
Calcium	500		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.010	J	0.025	0.010	mg/L	1		6010B	TCLP
Copper	0.021	J	0.025	0.010	mg/L	1		6010B	TCLP
Iron	0.47		0.40	0.20	mg/L	1		6010B	TCLP
Magnesium	53		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	1.2		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.025		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	3.5		2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.050	J ^	0.50	0.020	mg/L	1		6010B	TCLP
pH	8.0		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-5

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136893-6	2696V-9-B03 (0-5)	Solid	11/06/17 13:30	11/07/17 16:20
500-136893-7	2696V-9-B03 (5-10)	Solid	11/06/17 13:45	11/07/17 16:20
500-136893-8	2696V-9-B03 (15-21)	Solid	11/06/17 14:00	11/07/17 16:20

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-5

**Client Sample ID: 2696V-9-B03 (0-5)**

**Lab Sample ID: 500-136893-6**

**Date Collected: 11/06/17 13:30**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 80.7**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.022		0.022	0.0094	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Benzene	<0.0022		0.0022	0.00055	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Bromodichloromethane	<0.0022		0.0022	0.00044	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Bromoform	<0.0022		0.0022	0.00063	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Bromomethane	<0.0054		0.0054	0.0020	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
2-Butanone (MEK)	<0.0054		0.0054	0.0024	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Carbon disulfide	<0.0054		0.0054	0.0011	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Carbon tetrachloride	<0.0022		0.0022	0.00063	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Chlorobenzene	<0.0022		0.0022	0.00080	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Chloroethane	<0.0054		0.0054	0.0016	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Chloroform	<0.0022		0.0022	0.00075	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Chloromethane	<0.0054		0.0054	0.0022	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
cis-1,2-Dichloroethene	<0.0022		0.0022	0.00060	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
cis-1,3-Dichloropropene	<0.0022		0.0022	0.00065	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Dibromochloromethane	<0.0022		0.0022	0.00071	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
1,1-Dichloroethane	<0.0022		0.0022	0.00074	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
1,2-Dichloroethane	<0.0054		0.0054	0.0017	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
1,1-Dichloroethene	<0.0022		0.0022	0.00074	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
1,2-Dichloropropane	<0.0022		0.0022	0.00056	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
1,3-Dichloropropane, Total	<0.0022		0.0022	0.00076	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Ethylbenzene	<0.0022		0.0022	0.0010	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
2-Hexanone	<0.0054		0.0054	0.0017	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Methylene Chloride	<0.0054		0.0054	0.0021	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
4-Methyl-2-pentanone (MIBK)	<0.0054		0.0054	0.0016	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Methyl tert-butyl ether	<0.0022		0.0022	0.00063	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Styrene	<0.0022		0.0022	0.00065	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
1,1,2,2-Tetrachloroethane	<0.0022		0.0022	0.00069	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Tetrachloroethene	<0.0022		0.0022	0.00074	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Toluene	<0.0022		0.0022	0.00055	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
trans-1,2-Dichloroethene	<0.0022		0.0022	0.00096	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
trans-1,3-Dichloropropene	<0.0022		0.0022	0.00076	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
1,1,1-Trichloroethane	<0.0022		0.0022	0.00072	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
1,1,2-Trichloroethane	<0.0022		0.0022	0.00093	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Trichloroethene	<0.0022		0.0022	0.00073	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Vinyl acetate	<0.0054		0.0054	0.0019	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Vinyl chloride	<0.0022		0.0022	0.00096	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1
Xylenes, Total	<0.0043		0.0043	0.00069	mg/Kg	☼	11/07/17 17:56	11/10/17 15:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		75 - 131	11/07/17 17:56	11/10/17 15:36	1
Dibromofluoromethane	102		75 - 126	11/07/17 17:56	11/10/17 15:36	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 134	11/07/17 17:56	11/10/17 15:36	1
Toluene-d8 (Surr)	101		75 - 124	11/07/17 17:56	11/10/17 15:36	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.010	J	0.041	0.0074	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Acenaphthylene	0.014	J	0.041	0.0054	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Anthracene	0.014	J	0.041	0.0068	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Benzo[a]anthracene	0.064		0.041	0.0055	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-5

**Client Sample ID: 2696V-9-B03 (0-5)**

**Lab Sample ID: 500-136893-6**

Date Collected: 11/06/17 13:30

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 80.7

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.10		0.041	0.0079	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Benzo[b]fluoranthene	0.16		0.041	0.0088	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Benzo[g,h,i]perylene	0.055		0.041	0.013	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Benzo[k]fluoranthene	0.067		0.041	0.012	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.042	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.061	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Bis(2-ethylhexyl) phthalate	<0.21		0.21	0.075	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.054	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Butyl benzyl phthalate	<0.21		0.21	0.078	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Carbazole	<0.21		0.21	0.10	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
4-Chloroaniline	<0.83		0.83	0.19	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
4-Chloro-3-methylphenol	<0.41		0.41	0.14	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
2-Chloronaphthalene	<0.21		0.21	0.045	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
2-Chlorophenol	<0.21		0.21	0.070	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.048	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Chrysene	0.094		0.041	0.011	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Dibenz(a,h)anthracene	0.016	J	0.041	0.0079	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Dibenzofuran	<0.21		0.21	0.048	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
1,2-Dichlorobenzene	<0.21		0.21	0.049	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
1,3-Dichlorobenzene	<0.21		0.21	0.046	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
1,4-Dichlorobenzene	<0.21		0.21	0.053	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
3,3'-Dichlorobenzidine	<0.21		0.21	0.057	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
2,4-Dichlorophenol	<0.41		0.41	0.097	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Diethyl phthalate	<0.21		0.21	0.069	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
2,4-Dimethylphenol	<0.41		0.41	0.16	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Dimethyl phthalate	<0.21		0.21	0.053	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Di-n-butyl phthalate	<0.21		0.21	0.062	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
4,6-Dinitro-2-methylphenol	<0.83		0.83	0.33	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
2,4-Dinitrophenol	<0.83		0.83	0.72	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
2,4-Dinitrotoluene	<0.21		0.21	0.065	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
2,6-Dinitrotoluene	<0.21		0.21	0.080	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Di-n-octyl phthalate	<0.21		0.21	0.067	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Fluoranthene	0.096		0.041	0.0076	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Fluorene	<0.041		0.041	0.0058	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Hexachlorobenzene	<0.083		0.083	0.0095	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Hexachlorobutadiene	<0.21		0.21	0.064	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Hexachlorocyclopentadiene	<0.83		0.83	0.24	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Hexachloroethane	<0.21		0.21	0.062	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Indeno[1,2,3-cd]pyrene	0.054		0.041	0.011	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Isophorone	<0.21		0.21	0.046	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
2-Methylnaphthalene	<0.083		0.083	0.0075	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
2-Methylphenol	<0.21		0.21	0.066	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
3 & 4 Methylphenol	<0.21		0.21	0.068	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Naphthalene	<0.041		0.041	0.0063	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
2-Nitroaniline	<0.21		0.21	0.055	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
3-Nitroaniline	<0.41		0.41	0.13	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
4-Nitroaniline	<0.41		0.41	0.17	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Nitrobenzene	<0.041		0.041	0.010	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
2-Nitrophenol	<0.41		0.41	0.097	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-5

**Client Sample ID: 2696V-9-B03 (0-5)**

**Lab Sample ID: 500-136893-6**

Date Collected: 11/06/17 13:30

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 80.7

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.83		0.83	0.39	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
N-Nitrosodi-n-propylamine	<0.083		0.083	0.050	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
N-Nitrosodiphenylamine	<0.21		0.21	0.048	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.047	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Pentachlorophenol	<0.83		0.83	0.66	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
<b>Phenanthrene</b>	<b>0.034</b>	<b>J</b>	0.041	0.0057	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
Phenol	<0.21		0.21	0.091	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
<b>Pyrene</b>	<b>0.10</b>		0.041	0.0081	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.044	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
2,4,5-Trichlorophenol	<0.41		0.41	0.093	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1
2,4,6-Trichlorophenol	<0.41		0.41	0.14	mg/Kg	☼	11/14/17 07:55	11/15/17 21:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	96		44 - 121	11/14/17 07:55	11/15/17 21:59	1
2-Fluorophenol	96		46 - 133	11/14/17 07:55	11/15/17 21:59	1
Nitrobenzene-d5	102		41 - 120	11/14/17 07:55	11/15/17 21:59	1
Phenol-d5	94		46 - 125	11/14/17 07:55	11/15/17 21:59	1
Terphenyl-d14	100		35 - 160	11/14/17 07:55	11/15/17 21:59	1
2,4,6-Tribromophenol	86		25 - 139	11/14/17 07:55	11/15/17 21:59	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.23	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
<b>Arsenic</b>	<b>13</b>		0.60	0.20	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
<b>Barium</b>	<b>62</b>		0.60	0.068	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
<b>Beryllium</b>	<b>0.62</b>		0.24	0.056	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
<b>Cadmium</b>	<b>0.32</b>	<b>B</b>	0.12	0.021	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
<b>Chromium</b>	<b>14</b>		0.60	0.30	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
<b>Cobalt</b>	<b>12</b>		0.30	0.078	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
<b>Copper</b>	<b>25</b>		0.60	0.17	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
<b>Iron</b>	<b>23000</b>	<b>B</b>	12	6.2	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
<b>Lead</b>	<b>29</b>		0.30	0.14	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
<b>Magnesium</b>	<b>5700</b>		6.0	3.0	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
<b>Calcium</b>	<b>7800</b>	<b>B</b>	12	2.0	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
<b>Manganese</b>	<b>600</b>	<b>B</b>	0.60	0.086	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
<b>Nickel</b>	<b>26</b>		0.60	0.17	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
<b>Selenium</b>	<b>1.0</b>		0.60	0.35	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
Silver	<0.30		0.30	0.077	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
Thallium	<0.60		0.60	0.30	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
<b>Vanadium</b>	<b>23</b>		0.30	0.070	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
<b>Zinc</b>	<b>63</b>		1.2	0.52	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
<b>Potassium</b>	<b>1400</b>		30	11	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1
<b>Sodium</b>	<b>100</b>		60	8.8	mg/Kg	☼	11/08/17 16:57	11/10/17 01:35	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 14:43	11/11/17 17:10	1
<b>Barium</b>	<b>0.43</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 14:43	11/11/17 17:10	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 14:43	11/11/17 17:10	1
<b>Cadmium</b>	<b>0.0022</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 14:43	11/11/17 17:10	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-5

**Client Sample ID: 2696V-9-B03 (0-5)**

**Lab Sample ID: 500-136893-6**

Date Collected: 11/06/17 13:30

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 80.7

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>230</b>		5.0	0.50	mg/L		11/10/17 14:43	11/11/17 17:10	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:10	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:10	1
<b>Copper</b>	<b>0.023</b>	<b>J</b>	0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:10	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 14:43	11/11/17 17:10	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 14:43	11/11/17 17:10	1
<b>Magnesium</b>	<b>92</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 17:10	1
<b>Manganese</b>	<b>0.33</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:10	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:10	1
<b>Potassium</b>	<b>3.2</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 17:10	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 14:43	11/11/17 17:10	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:10	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:10	1
<b>Zinc</b>	<b>0.067</b>	<b>J ^</b>	0.50	0.020	mg/L		11/10/17 14:43	11/11/17 17:10	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.080</b>		0.025	0.010	mg/L		11/10/17 14:42	11/11/17 23:55	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 14:43	11/13/17 13:10	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 14:43	11/13/17 13:10	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/13/17 16:00	11/14/17 15:03	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.026</b>		0.018	0.0061	mg/Kg	☼	11/09/17 16:15	11/10/17 09:37	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.52		0.52	0.18	mg/Kg	☼	11/15/17 13:10	11/15/17 16:39	1
<b>pH</b>	<b>8.0</b>		0.20	0.20	SU			11/14/17 17:36	1



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-5

**Client Sample ID: 2696V-9-B03 (5-10)**

**Lab Sample ID: 500-136893-7**

Date Collected: 11/06/17 13:45

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 83.0

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.028</b>		0.016	0.0071	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Benzene	<0.0016		0.0016	0.00042	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Bromodichloromethane	<0.0016		0.0016	0.00033	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Bromoform	<0.0016		0.0016	0.00048	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Bromomethane	<0.0041		0.0041	0.0015	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
2-Butanone (MEK)	<0.0041		0.0041	0.0018	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Carbon disulfide	<0.0041		0.0041	0.00085	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Carbon tetrachloride	<0.0016		0.0016	0.00048	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Chlorobenzene	<0.0016		0.0016	0.00060	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Chloroethane	<0.0041	*	0.0041	0.0012	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Chloroform	<0.0016		0.0016	0.00057	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Chloromethane	<0.0041		0.0041	0.0016	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
cis-1,2-Dichloroethene	<0.0016		0.0016	0.00046	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
cis-1,3-Dichloropropene	<0.0016		0.0016	0.00049	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Dibromochloromethane	<0.0016		0.0016	0.00054	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
1,1-Dichloroethane	<0.0016		0.0016	0.00056	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
1,2-Dichloroethane	<0.0041		0.0041	0.0013	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
1,1-Dichloroethene	<0.0016		0.0016	0.00056	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
1,2-Dichloropropane	<0.0016		0.0016	0.00042	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
1,3-Dichloropropane, Total	<0.0016		0.0016	0.00058	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Ethylbenzene	<0.0016		0.0016	0.00078	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
2-Hexanone	<0.0041		0.0041	0.0013	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Methylene Chloride	<0.0041		0.0041	0.0016	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
4-Methyl-2-pentanone (MIBK)	<0.0041		0.0041	0.0012	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Methyl tert-butyl ether	<0.0016		0.0016	0.00048	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Styrene	<0.0016		0.0016	0.00049	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
1,1,2,2-Tetrachloroethane	<0.0016		0.0016	0.00052	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Tetrachloroethene	<0.0016		0.0016	0.00056	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Toluene	<0.0016		0.0016	0.00041	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
trans-1,2-Dichloroethene	<0.0016		0.0016	0.00073	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
trans-1,3-Dichloropropene	<0.0016		0.0016	0.00058	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
1,1,1-Trichloroethane	<0.0016		0.0016	0.00055	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
1,1,2-Trichloroethane	<0.0016		0.0016	0.00070	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Trichloroethene	<0.0016		0.0016	0.00055	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Vinyl acetate	<0.0041		0.0041	0.0014	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Vinyl chloride	<0.0016		0.0016	0.00073	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1
Xylenes, Total	<0.0033		0.0033	0.00052	mg/Kg	☼	11/07/17 17:56	11/14/17 15:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		75 - 131	11/07/17 17:56	11/14/17 15:11	1
Dibromofluoromethane	99		75 - 126	11/07/17 17:56	11/14/17 15:11	1
1,2-Dichloroethane-d4 (Surr)	94		70 - 134	11/07/17 17:56	11/14/17 15:11	1
Toluene-d8 (Surr)	97		75 - 124	11/07/17 17:56	11/14/17 15:11	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.040		0.040	0.0072	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Acenaphthylene	<0.040		0.040	0.0053	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Anthracene	<0.040		0.040	0.0067	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
<b>Benzo[a]anthracene</b>	<b>0.0067</b>	<b>J</b>	0.040	0.0054	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-5

**Client Sample ID: 2696V-9-B03 (5-10)**

**Lab Sample ID: 500-136893-7**

**Date Collected: 11/06/17 13:45**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 83.0**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.0078</b>	<b>J</b>	0.040	0.0077	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Benzo[b]fluoranthene	<0.040		0.040	0.0086	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
<b>Benzo[g,h,i]perylene</b>	<b>0.015</b>	<b>J</b>	0.040	0.013	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Benzo[k]fluoranthene	<0.040		0.040	0.012	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.060	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.073	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.053	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Butyl benzyl phthalate	<0.20		0.20	0.076	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Carbazole	<0.20		0.20	0.10	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
4-Chloroaniline	<0.81		0.81	0.19	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
4-Chloro-3-methylphenol	<0.40		0.40	0.14	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
2-Chlorophenol	<0.20		0.20	0.068	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.047	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
<b>Chrysene</b>	<b>0.014</b>	<b>J</b>	0.040	0.011	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Dibenz(a,h)anthracene	<0.040		0.040	0.0077	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
1,2-Dichlorobenzene	<0.20		0.20	0.048	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.056	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
2,4-Dichlorophenol	<0.40		0.40	0.095	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Diethyl phthalate	<0.20		0.20	0.068	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
2,4-Dimethylphenol	<0.40		0.40	0.15	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Dimethyl phthalate	<0.20		0.20	0.052	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Di-n-butyl phthalate	<0.20		0.20	0.061	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
4,6-Dinitro-2-methylphenol	<0.81		0.81	0.32	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
2,4-Dinitrophenol	<0.81		0.81	0.70	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
2,4-Dinitrotoluene	<0.20		0.20	0.064	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
2,6-Dinitrotoluene	<0.20		0.20	0.079	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Di-n-octyl phthalate	<0.20		0.20	0.065	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Fluoranthene	<0.040		0.040	0.0074	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Fluorene	<0.040		0.040	0.0056	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Hexachlorobenzene	<0.081		0.081	0.0093	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Hexachlorobutadiene	<0.20		0.20	0.063	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Hexachlorocyclopentadiene	<0.81		0.81	0.23	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Hexachloroethane	<0.20		0.20	0.061	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Indeno[1,2,3-cd]pyrene	<0.040		0.040	0.010	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Isophorone	<0.20		0.20	0.045	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
<b>2-Methylnaphthalene</b>	<b>0.0091</b>	<b>J</b>	0.081	0.0074	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
2-Methylphenol	<0.20		0.20	0.064	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
3 & 4 Methylphenol	<0.20		0.20	0.067	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Naphthalene	<0.040		0.040	0.0061	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
2-Nitroaniline	<0.20		0.20	0.054	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
3-Nitroaniline	<0.40		0.40	0.12	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Nitrobenzene	<0.040		0.040	0.010	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
2-Nitrophenol	<0.40		0.40	0.094	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-5

**Client Sample ID: 2696V-9-B03 (5-10)**

**Lab Sample ID: 500-136893-7**

Date Collected: 11/06/17 13:45

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 83.0

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.81		0.81	0.38	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
N-Nitrosodi-n-propylamine	<0.081		0.081	0.049	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Pentachlorophenol	<0.81		0.81	0.64	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
<b>Phenanthrene</b>	<b>0.010</b>	<b>J</b>	0.040	0.0056	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
Phenol	<0.20		0.20	0.089	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
<b>Pyrene</b>	<b>0.019</b>	<b>J</b>	0.040	0.0079	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
2,4,5-Trichlorophenol	<0.40		0.40	0.091	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1
2,4,6-Trichlorophenol	<0.40		0.40	0.14	mg/Kg	☼	11/14/17 07:55	11/15/17 22:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	93		44 - 121	11/14/17 07:55	11/15/17 22:24	1
2-Fluorophenol	114		46 - 133	11/14/17 07:55	11/15/17 22:24	1
Nitrobenzene-d5	90		41 - 120	11/14/17 07:55	11/15/17 22:24	1
Phenol-d5	106		46 - 125	11/14/17 07:55	11/15/17 22:24	1
Terphenyl-d14	104		35 - 160	11/14/17 07:55	11/15/17 22:24	1
2,4,6-Tribromophenol	73		25 - 139	11/14/17 07:55	11/15/17 22:24	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.23	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1
<b>Arsenic</b>	<b>9.1</b>		0.58	0.20	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1
<b>Barium</b>	<b>13</b>		0.58	0.066	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1
<b>Beryllium</b>	<b>0.35</b>		0.23	0.054	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1
<b>Cadmium</b>	<b>0.14</b>	<b>B</b>	0.12	0.021	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1
<b>Chromium</b>	<b>7.9</b>		0.58	0.29	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1
<b>Cobalt</b>	<b>8.3</b>		0.29	0.076	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1
<b>Copper</b>	<b>20</b>		0.58	0.16	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1
<b>Iron</b>	<b>17000</b>	<b>B</b>	12	6.0	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1
<b>Lead</b>	<b>12</b>		0.29	0.13	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1
<b>Magnesium</b>	<b>28000</b>		5.8	2.9	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1
<b>Calcium</b>	<b>87000</b>	<b>B</b>	120	20	mg/Kg	☼	11/08/17 16:57	11/11/17 00:42	10
<b>Manganese</b>	<b>340</b>	<b>B</b>	0.58	0.084	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1
<b>Nickel</b>	<b>19</b>		0.58	0.17	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1
<b>Selenium</b>	<b>0.51</b>	<b>J</b>	0.58	0.34	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1
Silver	<0.29		0.29	0.075	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1
Thallium	<0.58		0.58	0.29	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1
<b>Vanadium</b>	<b>10</b>		0.29	0.068	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1
<b>Zinc</b>	<b>44</b>		1.2	0.51	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1
<b>Potassium</b>	<b>1100</b>		29	10	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1
<b>Sodium</b>	<b>230</b>		58	8.6	mg/Kg	☼	11/08/17 16:57	11/10/17 01:39	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 14:43	11/11/17 17:14	1
<b>Barium</b>	<b>0.26</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 14:43	11/11/17 17:14	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 14:43	11/11/17 17:14	1
<b>Cadmium</b>	<b>0.0020</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 14:43	11/11/17 17:14	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-5

**Client Sample ID: 2696V-9-B03 (5-10)**

**Lab Sample ID: 500-136893-7**

Date Collected: 11/06/17 13:45

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 83.0

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	530		5.0	0.50	mg/L		11/10/17 14:43	11/11/17 17:14	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:14	1
Cobalt	0.024	J	0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:14	1
Copper	0.042		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:14	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 14:43	11/11/17 17:14	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 14:43	11/11/17 17:14	1
Magnesium	20		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 17:14	1
Manganese	1.7		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:14	1
Nickel	0.048		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:14	1
Potassium	3.3		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 17:14	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 14:43	11/11/17 17:14	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:14	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:14	1
Zinc	0.097	J ^	0.50	0.020	mg/L		11/10/17 14:43	11/11/17 17:14	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.037		0.025	0.010	mg/L		11/10/17 14:42	11/11/17 23:59	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 14:43	11/13/17 13:13	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 14:43	11/13/17 13:13	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/13/17 16:00	11/14/17 15:05	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.015	J	0.018	0.0061	mg/Kg	☼	11/09/17 16:15	11/10/17 09:39	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.46		0.46	0.16	mg/Kg	☼	11/15/17 13:10	11/15/17 16:39	1
pH	8.1		0.20	0.20	SU			11/14/17 17:36	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-5

**Client Sample ID: 2696V-9-B03 (15-21)**

**Lab Sample ID: 500-136893-8**

**Date Collected: 11/06/17 14:00**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 90.3**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.017		0.017	0.0076	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Benzene	<0.0017		0.0017	0.00045	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Bromodichloromethane	<0.0017		0.0017	0.00036	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Bromoform	<0.0017		0.0017	0.00051	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Bromomethane	<0.0044		0.0044	0.0016	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
2-Butanone (MEK)	<0.0044		0.0044	0.0019	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Carbon disulfide	<0.0044		0.0044	0.00091	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Carbon tetrachloride	<0.0017		0.0017	0.00051	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Chlorobenzene	<0.0017		0.0017	0.00064	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Chloroethane	<0.0044		0.0044	0.0013	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Chloroform	<0.0017		0.0017	0.00061	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Chloromethane	<0.0044		0.0044	0.0018	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
cis-1,2-Dichloroethene	<0.0017		0.0017	0.00049	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
cis-1,3-Dichloropropene	<0.0017		0.0017	0.00053	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Dibromochloromethane	<0.0017		0.0017	0.00057	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
1,1-Dichloroethane	<0.0017		0.0017	0.00060	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
1,2-Dichloroethane	<0.0044		0.0044	0.0014	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
1,1-Dichloroethene	<0.0017		0.0017	0.00060	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
1,2-Dichloropropane	<0.0017		0.0017	0.00045	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
1,3-Dichloropropane, Total	<0.0017		0.0017	0.00061	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Ethylbenzene	<0.0017		0.0017	0.00084	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
2-Hexanone	<0.0044		0.0044	0.0014	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Methylene Chloride	<0.0044		0.0044	0.0017	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
4-Methyl-2-pentanone (MIBK)	<0.0044		0.0044	0.0013	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Methyl tert-butyl ether	<0.0017		0.0017	0.00051	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Styrene	<0.0017		0.0017	0.00053	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
1,1,2,2-Tetrachloroethane	<0.0017		0.0017	0.00056	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Tetrachloroethene	<0.0017		0.0017	0.00059	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Toluene	<0.0017		0.0017	0.00044	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
trans-1,2-Dichloroethene	<0.0017		0.0017	0.00077	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
trans-1,3-Dichloropropene	<0.0017		0.0017	0.00061	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
1,1,1-Trichloroethane	<0.0017		0.0017	0.00059	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
1,1,2-Trichloroethane	<0.0017		0.0017	0.00075	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Trichloroethene	<0.0017		0.0017	0.00059	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Vinyl acetate	<0.0044		0.0044	0.0015	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Vinyl chloride	<0.0017		0.0017	0.00077	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1
Xylenes, Total	<0.0035		0.0035	0.00056	mg/Kg	☼	11/07/17 17:56	11/10/17 16:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		75 - 131	11/07/17 17:56	11/10/17 16:02	1
Dibromofluoromethane	101		75 - 126	11/07/17 17:56	11/10/17 16:02	1
1,2-Dichloroethane-d4 (Surr)	91		70 - 134	11/07/17 17:56	11/10/17 16:02	1
Toluene-d8 (Surr)	99		75 - 124	11/07/17 17:56	11/10/17 16:02	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.036		0.036	0.0066	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Acenaphthylene	<0.036		0.036	0.0048	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Anthracene	<0.036		0.036	0.0061	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Benzo[a]anthracene	<0.036		0.036	0.0049	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-5

**Client Sample ID: 2696V-9-B03 (15-21)**

**Lab Sample ID: 500-136893-8**

**Date Collected: 11/06/17 14:00**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 90.3**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.036		0.036	0.0071	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Benzo[b]fluoranthene	<0.036		0.036	0.0079	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Benzo[g,h,i]perylene	<0.036		0.036	0.012	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Benzo[k]fluoranthene	<0.036		0.036	0.011	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Butyl benzyl phthalate	<0.18		0.18	0.069	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Carbazole	<0.18		0.18	0.091	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Chrysene	<0.036		0.036	0.0099	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0070	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
1,2-Dichlorobenzene	<0.18		0.18	0.044	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
2,4-Dichlorophenol	<0.36		0.36	0.087	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.29	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
2,4-Dinitrophenol	<0.74		0.74	0.64	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Fluoranthene	<0.036		0.036	0.0068	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Fluorene	<0.036		0.036	0.0051	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Hexachlorobenzene	<0.074		0.074	0.0084	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Indeno[1,2,3-cd]pyrene	<0.036		0.036	0.0094	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
2-Methylnaphthalene	<0.074		0.074	0.0067	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Nitrobenzene	<0.036		0.036	0.0091	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
2-Nitrophenol	<0.36		0.36	0.086	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-5

**Client Sample ID: 2696V-9-B03 (15-21)**

**Lab Sample ID: 500-136893-8**

Date Collected: 11/06/17 14:00

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 90.3

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Pentachlorophenol	<0.74		0.74	0.58	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Phenanthrene	<0.036		0.036	0.0051	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Phenol	<0.18		0.18	0.081	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
Pyrene	<0.036		0.036	0.0072	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
2,4,5-Trichlorophenol	<0.36		0.36	0.083	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1
2,4,6-Trichlorophenol	<0.36		0.36	0.13	mg/Kg	☼	11/14/17 07:55	11/15/17 22:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	87		44 - 121	11/14/17 07:55	11/15/17 22:48	1
2-Fluorophenol	100		46 - 133	11/14/17 07:55	11/15/17 22:48	1
Nitrobenzene-d5	94		41 - 120	11/14/17 07:55	11/15/17 22:48	1
Phenol-d5	96		46 - 125	11/14/17 07:55	11/15/17 22:48	1
Terphenyl-d14	93		35 - 160	11/14/17 07:55	11/15/17 22:48	1
2,4,6-Tribromophenol	77		25 - 139	11/14/17 07:55	11/15/17 22:48	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		1.0	0.20	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1
<b>Arsenic</b>	<b>4.0</b>		0.52	0.18	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1
<b>Barium</b>	<b>13</b>		0.52	0.059	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1
<b>Beryllium</b>	<b>0.20</b>	<b>J</b>	0.21	0.048	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1
<b>Cadmium</b>	<b>0.14</b>	<b>B</b>	0.10	0.019	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1
<b>Chromium</b>	<b>4.0</b>		0.52	0.26	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1
<b>Cobalt</b>	<b>2.7</b>		0.26	0.068	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1
<b>Copper</b>	<b>13</b>		0.52	0.14	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1
<b>Iron</b>	<b>8000</b>	<b>B</b>	10	5.4	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1
<b>Lead</b>	<b>4.0</b>		0.26	0.12	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1
<b>Magnesium</b>	<b>37000</b>		5.2	2.6	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1
<b>Calcium</b>	<b>100000</b>	<b>B</b>	100	18	mg/Kg	☼	11/08/17 16:57	11/11/17 00:46	10
<b>Manganese</b>	<b>240</b>	<b>B</b>	0.52	0.075	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1
<b>Nickel</b>	<b>7.2</b>		0.52	0.15	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1
Selenium	<0.52		0.52	0.30	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1
Silver	<0.26		0.26	0.067	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1
Thallium	<0.52		0.52	0.26	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1
<b>Vanadium</b>	<b>6.1</b>		0.26	0.061	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1
<b>Zinc</b>	<b>30</b>		1.0	0.45	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1
<b>Potassium</b>	<b>770</b>		26	9.1	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1
<b>Sodium</b>	<b>140</b>		52	7.6	mg/Kg	☼	11/08/17 16:57	11/10/17 01:43	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 14:43	11/11/17 17:18	1
<b>Barium</b>	<b>0.42</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 14:43	11/11/17 17:18	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 14:43	11/11/17 17:18	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/10/17 14:43	11/11/17 17:18	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-5

**Client Sample ID: 2696V-9-B03 (15-21)**

**Lab Sample ID: 500-136893-8**

**Date Collected: 11/06/17 14:00**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 90.3**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	500		5.0	0.50	mg/L		11/10/17 14:43	11/11/17 17:18	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:18	1
Cobalt	0.010	J	0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:18	1
Copper	0.021	J	0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:18	1
Iron	0.47		0.40	0.20	mg/L		11/10/17 14:43	11/11/17 17:18	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 14:43	11/11/17 17:18	1
Magnesium	53		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 17:18	1
Manganese	1.2		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:18	1
Nickel	0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:18	1
Potassium	3.5		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 17:18	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 14:43	11/11/17 17:18	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:18	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:18	1
Zinc	0.050	J ^	0.50	0.020	mg/L		11/10/17 14:43	11/11/17 17:18	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	<0.025		0.025	0.010	mg/L		11/10/17 14:42	11/12/17 00:03	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 14:43	11/13/17 13:17	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 14:43	11/13/17 13:17	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/13/17 16:00	11/14/17 15:07	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.018		0.018	0.0059	mg/Kg	☼	11/09/17 16:15	11/10/17 09:41	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.51		0.51	0.18	mg/Kg	☼	11/15/17 13:10	11/15/17 16:40	1
pH	8.0		0.20	0.20	SU			11/14/17 17:36	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-5

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-5

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)  
 Contact: MATT WEISS  
 Company: TERRACON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-136893  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: 5.5, 29.40

Client		Client Project #		Preservative		Parameter		Matrix		Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
<u>TERRACON</u>		<u>11177029 M</u>									
Project Name <u>WORK ORDER 037</u>		Lab Project #									
Project Location/State <u>MARKHAM, IL</u>		Lab PM <u>DICK WRIGHT</u>									
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix					Comments
			Date	Time							
<u>6</u>		<u>2696V-9-B03-(0-5)</u>	<u>11-6-17</u>	<u>1330</u>	<u>5</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>7</u>		<u>2696V-9-B03-(5-10)</u>	<u>11-6-17</u>	<u>1345</u>	<u>5</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>8</u>		<u>2696V-9-B03-(15-20)</u>	<u>11-6-17</u>	<u>1400</u>	<u>5</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	

Turnaround Time Required (Business Days)

1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other

Requested Due Date \_\_\_\_\_

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By <u>[Signature]</u> Company <u>TERRACON</u>	Date <u>11-7-17</u>	Time <u>1550</u>	Received By <u>[Signature]</u> Company <u>TA</u>	Date <u>11/7/17</u>	Time <u>1550</u>
Relinquished By <u>[Signature]</u> Company <u>TA</u>	Date <u>11/7/17</u>	Time <u>1620</u>	Received By <u>[Signature]</u> Company <u>TACME</u>	Date <u>11/7/17</u>	Time <u>1620</u>

Lab Courier: TA  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

Matrix Key

WW - Wastewater SE - Sediment  
 W - Water SO - Soil  
 S - Soil L - Leachate  
 SL - Sludge WL - Wipe  
 MS - Miscellaneous DW - Drinking Water  
 OL - Oil O - Other  
 A - Air

Client Comments

NO ALUMINUM

Lab Comments:

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136893-5

**Login Number: 136893**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9, 4.0, 5.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

US Route 6 (Eastbound) IDOT STA 52+65 to 53+30 (ISGS Site 2696V-11)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a):

Soil from boring B01 was sampled adjacent to ISGS Site No 2696V-11.  
See Exhibits 7, 7A, and Table 20 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136670-2.  
Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County (excluding Chicago).

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

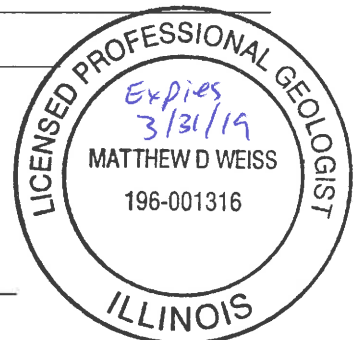
**Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))**

Company Name: Terracon Consultants, Inc  
 Street Address: 135 Ambassador Drive  
 City: Naperville State: IL Zip Code: 60540  
 Phone: 630-717-4263

Matt Weiss  
 Printed Name:

[Signature]  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

7/24/18  
 Date:





**Detected Constituents to MACs-PTB 174-009;Work Order:037A**  
**Preliminary Site Investigation**  
**FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-11)**  
**Oak Forest/Markham, Cook County, IL**  
**Terracon Project No. 11177029M**  
**Page 1 of 2**

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-11-B01 (0-1)
				CCDD	Sample Depth (feet)	(0-1)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/01/2017
<b>Semivolatile Organic Analytical Parameters</b>						
Acenaphthene	mg/kg	0.09	0.13	570		0.036
Acenaphthylene	mg/kg	0.03	0.07	85		0.055
Anthracene	mg/kg	0.25	0.4	12000		0.2
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		1.3
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		1.3
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		2
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.8
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		0.64
Chrysene	mg/kg	1.2	2.7	88		1.5
Dibenzo(a,h)anthracene	mg/kg	0.2	0.42	0.09		0.26
Fluoranthene	mg/kg	2.7	4.1	3100		2.8
Fluorene	mg/kg	0.1	0.18	560		0.055
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.85
Naphthalene	mg/kg	0.04	0.2	1.8		0.0089
Phenanthrene	mg/kg	1.3	2.5	210		1
Pyrene	mg/kg	1.9	3.0	2300		1.9
bis(2-Ethylhexyl)phthalate	mg/kg	---	---	46		0.26
Carbazole	mg/kg	---	---	0.6		0.12
2-Methylnaphthalene	mg/kg	---	0.14	---		0.0076
<b>Inorganic Analytical Parameters</b>						
Arsenic	mg/kg	---	13	11.3		5.5
Barium	mg/kg	---	110	1500		52
Cadmium	mg/kg	---	0.6	5.2		0.2
Chromium, total	mg/kg	---	16.2	21		13
Lead	mg/kg	---	36	107		26
Mercury	mg/kg	---	0.06	0.1		0.025
Selenium	mg/kg	---	0.48	1.3		<0.58
Silver	mg/kg	---	0.55	4.4		<0.29
Antimony	mg/kg	---	4.0	5		0.4
Beryllium	mg/kg	---	0.59	22		0.46
Calcium	mg/kg	---	9,300	---		16000
Cobalt	mg/kg	---	8.9	20		7.2
Copper	mg/kg	---	19.6	2900		16
Cyanide	mg/kg	---	0.51	---		<0.49
Iron	mg/kg	---	15,900	15000		13000
Magnesium	mg/kg	---	4,820	325000		9700
Manganese	mg/kg	---	636	630		300
Nickel	mg/kg	---	18	100		15
Potassium	mg/kg	---	1,268	---		1000
Sodium	mg/kg	---	130	---		69
Thallium	mg/kg	---	0.32	2.6		<0.58
Vanadium	mg/kg	---	25.2	550		18
Zinc	mg/kg	---	95	5100		69
pH			6.25	9		7.9

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-11-B01 (0-1)
				CCDD	Sample Depth (feet)	(0-1)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/01/2017
<b>Inorganic Analytical Parameters (SPLP)</b>						
Antimony,SPLP	mg/L	---	---	---		--
Arsenic,SPLP	mg/L	---	---	---		--
Barium,SPLP	mg/L	---	---	---		--
Beryllium,SPLP	mg/L	---	---	---		--
Cadmium,SPLP	mg/L	---	---	---		--
Calcium,SPLP	mg/L	---	---	---		--
Chromium,SPLP	mg/L	---	---	---		--
Cobalt,SPLP	mg/L	---	---	---		--
Copper,SPLP	mg/L	---	---	---		--
Iron,SPLP	mg/L	---	---	---		--
Lead,SPLP	mg/L	---	---	---		--
Magnesium,SPLP	mg/L	---	---	---		--
Manganese,SPLP	mg/L	---	---	---		0.22
Mercury,SPLP	mg/L	---	---	---		--
Nickel,SPLP	mg/L	---	---	---		--
Potassium,SPLP	mg/L	---	---	---		--
Selenium,SPLP	mg/L	---	---	---		--
Silver,SPLP	mg/L	---	---	---		--
Sodium,SPLP	mg/L	---	---	---		--
Thallium,SPLP	mg/L	---	---	---		--
Vanadium,SPLP	mg/L	---	---	---		--
Zinc,SPLP	mg/L	---	---	---		--
Cyanide,SPLP	mg/L	---	---	---		--
<b>Inorganic Analytical Parameters (TCLP)</b>						
Arsenic,TCLP	mg/L	---	---	---		<0.050
Barium,TCLP	mg/L	---	---	---		0.43
Cadmium,TCLP	mg/L	---	---	---		0.0031
Chromium,TCLP	mg/L	---	---	---		<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050
Silver,TCLP	mg/L	---	---	---		<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040
Calcium,TCLP	mg/L	---	---	---		270
Cobalt,TCLP	mg/L	---	---	---		<0.025
Copper,TCLP	mg/L	---	---	---		0.023
Cyanide,TCLP	mg/L	---	---	---		----
Iron,TCLP	mg/L	---	---	---		<0.40
Magnesium,TCLP	mg/L	---	---	---		130
Manganese,TCLP	mg/L	---	---	---		0.55
Nickel,TCLP	mg/L	---	---	---		<0.025
Potassium,TCLP	mg/L	---	---	---		2.6
Sodium,TCLP	mg/L	---	---	---		----
Thallium,TCLP	mg/L	---	---	---		<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025
Zinc,TCLP	mg/L	---	---	---		0.091

# TestAmerica

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## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

TestAmerica Job ID: 500-136670-2  
Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:  
Terracon Consulting Eng & Scientists  
135 Ambassador Drive  
Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:  
11/14/2017 5:44:28 PM  
Jodie Bracken, Project Management Assistant II  
[jodie.bracken@testamericainc.com](mailto:jodie.bracken@testamericainc.com)

Designee for  
Richard Wright, Senior Project Manager  
(708)534-5200  
[richard.wright@testamericainc.com](mailto:richard.wright@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-2

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**Job ID: 500-136670-2**

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**Laboratory: TestAmerica Chicago**

## Narrative

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### Job Narrative 500-136670-2

#### Receipt

The samples were received on 11/2/2017 10:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.7° C and 3.2° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

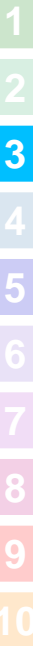
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-2

**Client Sample ID: 2696V-11-B01 (0-1)**

**Lab Sample ID: 500-136670-9**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.036	J	0.039	0.0070	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.055		0.039	0.0052	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.20		0.039	0.0065	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	1.3		0.039	0.0053	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	1.3		0.039	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	2.0		0.039	0.0085	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.80		0.039	0.013	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.64		0.039	0.012	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.26		0.20	0.072	mg/Kg	1	☼	8270D	Total/NA
Carbazole	0.12	J	0.20	0.098	mg/Kg	1	☼	8270D	Total/NA
Chrysene	1.5		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.26		0.039	0.0076	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.055		0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.85		0.039	0.010	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.0076	J	0.079	0.0072	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.0089	J	0.039	0.0060	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	1.0		0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Pyrene	1.9		0.039	0.0078	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene - DL	2.8		0.078	0.015	mg/Kg	2	☼	8270D	Total/NA
Antimony	0.40	J B	1.2	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	5.5		0.58	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	52		0.58	0.066	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.46		0.23	0.054	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.20	B	0.12	0.021	mg/Kg	1	☼	6010B	Total/NA
Chromium	13		0.58	0.29	mg/Kg	1	☼	6010B	Total/NA
Cobalt	7.2		0.29	0.075	mg/Kg	1	☼	6010B	Total/NA
Copper	16	B	0.58	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	13000	B	12	6.0	mg/Kg	1	☼	6010B	Total/NA
Lead	26		0.29	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	9700		5.8	2.9	mg/Kg	1	☼	6010B	Total/NA
Calcium	16000	B	12	2.0	mg/Kg	1	☼	6010B	Total/NA
Manganese	300		0.58	0.084	mg/Kg	1	☼	6010B	Total/NA
Nickel	15		0.58	0.17	mg/Kg	1	☼	6010B	Total/NA
Vanadium	18		0.29	0.068	mg/Kg	1	☼	6010B	Total/NA
Zinc	69		1.2	0.51	mg/Kg	1	☼	6010B	Total/NA
Potassium	1000		29	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	69		58	8.5	mg/Kg	1	☼	6010B	Total/NA
Barium	0.43	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0031	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	270		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.023	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	130		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.55		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	2.6		2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.091	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.22		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.025		0.020	0.0065	mg/Kg	1	☼	7471B	Total/NA
pH	7.9		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-2

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136670-9	2696V-11-B01 (0-1)	Solid	11/01/17 15:30	11/02/17 10:05

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- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-2

**Client Sample ID: 2696V-11-B01 (0-1)**

**Lab Sample ID: 500-136670-9**

**Date Collected: 11/01/17 15:30**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 83.8**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0083	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Benzene	<0.0019		0.0019	0.00048	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Bromodichloromethane	<0.0019		0.0019	0.00039	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Bromoform	<0.0019		0.0019	0.00056	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Bromomethane	<0.0048		0.0048	0.0018	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
2-Butanone (MEK)	<0.0048		0.0048	0.0021	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Carbon disulfide	<0.0048		0.0048	0.00099	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Carbon tetrachloride	<0.0019		0.0019	0.00055	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Chlorobenzene	<0.0019		0.0019	0.00070	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Chloroethane	<0.0048		0.0048	0.0014	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Chloroform	<0.0019		0.0019	0.00066	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Chloromethane	<0.0048		0.0048	0.0019	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
cis-1,2-Dichloroethene	<0.0019		0.0019	0.00053	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
cis-1,3-Dichloropropene	<0.0019		0.0019	0.00057	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Dibromochloromethane	<0.0019		0.0019	0.00062	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
1,1-Dichloroethane	<0.0019		0.0019	0.00065	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
1,2-Dichloroethane	<0.0048		0.0048	0.0015	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
1,1-Dichloroethene	<0.0019		0.0019	0.00065	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
1,2-Dichloropropane	<0.0019		0.0019	0.00049	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
1,3-Dichloropropane, Total	<0.0019		0.0019	0.00067	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Ethylbenzene	<0.0019		0.0019	0.00091	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
2-Hexanone	<0.0048		0.0048	0.0015	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Methylene Chloride	<0.0048		0.0048	0.0019	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
4-Methyl-2-pentanone (MIBK)	<0.0048		0.0048	0.0014	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Methyl tert-butyl ether	<0.0019		0.0019	0.00056	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Styrene	<0.0019		0.0019	0.00057	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
1,1,2,2-Tetrachloroethane	<0.0019		0.0019	0.00061	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Tetrachloroethene	<0.0019		0.0019	0.00065	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Toluene	<0.0019		0.0019	0.00048	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
trans-1,2-Dichloroethene	<0.0019		0.0019	0.00084	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
trans-1,3-Dichloropropene	<0.0019		0.0019	0.00067	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
1,1,1-Trichloroethane	<0.0019		0.0019	0.00064	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
1,1,2-Trichloroethane	<0.0019		0.0019	0.00082	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Trichloroethene	<0.0019		0.0019	0.00064	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Vinyl acetate	<0.0048		0.0048	0.0017	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Vinyl chloride	<0.0019		0.0019	0.00084	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1
Xylenes, Total	<0.0038		0.0038	0.00061	mg/Kg	☼	11/02/17 18:18	11/06/17 17:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		75 - 131	11/02/17 18:18	11/06/17 17:44	1
Dibromofluoromethane	100		75 - 126	11/02/17 18:18	11/06/17 17:44	1
1,2-Dichloroethane-d4 (Surr)	94		70 - 134	11/02/17 18:18	11/06/17 17:44	1
Toluene-d8 (Surr)	99		75 - 124	11/02/17 18:18	11/06/17 17:44	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.036	J	0.039	0.0070	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Acenaphthylene	0.055		0.039	0.0052	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Anthracene	0.20		0.039	0.0065	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Benzo[a]anthracene	1.3		0.039	0.0053	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-2

**Client Sample ID: 2696V-11-B01 (0-1)**

**Lab Sample ID: 500-136670-9**

**Date Collected: 11/01/17 15:30**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 83.8**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	1.3		0.039	0.0076	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Benzo[b]fluoranthene	2.0		0.039	0.0085	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Benzo[g,h,i]perylene	0.80		0.039	0.013	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Benzo[k]fluoranthene	0.64		0.039	0.012	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Bis(2-ethylhexyl) phthalate	0.26		0.20	0.072	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Butyl benzyl phthalate	<0.20		0.20	0.075	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Carbazole	0.12	J	0.20	0.098	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
4-Chloroaniline	<0.79		0.79	0.18	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Chrysene	1.5		0.039	0.011	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Dibenz(a,h)anthracene	0.26		0.039	0.0076	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
1,2-Dichlorobenzene	<0.20		0.20	0.047	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
2,4-Dichlorophenol	<0.39		0.39	0.093	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Diethyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
4,6-Dinitro-2-methylphenol	<0.79		0.79	0.32	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
2,4-Dinitrophenol	<0.79		0.79	0.69	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
2,6-Dinitrotoluene	<0.20		0.20	0.077	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Fluorene	0.055		0.039	0.0055	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Hexachlorobenzene	<0.079		0.079	0.0091	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Hexachlorocyclopentadiene	<0.79		0.79	0.23	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Indeno[1,2,3-cd]pyrene	0.85		0.039	0.010	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
2-Methylnaphthalene	0.0076	J	0.079	0.0072	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Naphthalene	0.0089	J	0.039	0.0060	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Nitrobenzene	<0.039		0.039	0.0098	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
2-Nitrophenol	<0.39		0.39	0.093	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
4-Nitrophenol	<0.79		0.79	0.37	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-2

**Client Sample ID: 2696V-11-B01 (0-1)**

**Lab Sample ID: 500-136670-9**

**Date Collected: 11/01/17 15:30**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 83.8**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	<0.079		0.079	0.048	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.045	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Pentachlorophenol	<0.79		0.79	0.63	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
<b>Phenanthrene</b>	<b>1.0</b>		0.039	0.0055	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Phenol	<0.20		0.20	0.087	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
<b>Pyrene</b>	<b>1.9</b>		0.039	0.0078	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
2,4,5-Trichlorophenol	<0.39		0.39	0.089	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	11/09/17 17:53	11/14/17 12:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	84		44 - 121				11/09/17 17:53	11/14/17 12:56	1
2-Fluorophenol	97		46 - 133				11/09/17 17:53	11/14/17 12:56	1
Nitrobenzene-d5	82		41 - 120				11/09/17 17:53	11/14/17 12:56	1
Phenol-d5	108		46 - 125				11/09/17 17:53	11/14/17 12:56	1
Terphenyl-d14	97		35 - 160				11/09/17 17:53	11/14/17 12:56	1
2,4,6-Tribromophenol	105		25 - 139				11/09/17 17:53	11/14/17 12:56	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Fluoranthene</b>	<b>2.8</b>		0.078	0.015	mg/Kg	☼	11/09/17 17:53	11/14/17 14:46	2

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.40</b>	<b>J B</b>	1.2	0.22	mg/Kg	☼	11/02/17 15:42	11/05/17 20:50	1
<b>Arsenic</b>	<b>5.5</b>		0.58	0.20	mg/Kg	☼	11/02/17 15:42	11/03/17 15:12	1
<b>Barium</b>	<b>52</b>		0.58	0.066	mg/Kg	☼	11/02/17 15:42	11/03/17 15:12	1
<b>Beryllium</b>	<b>0.46</b>		0.23	0.054	mg/Kg	☼	11/02/17 15:42	11/03/17 15:12	1
<b>Cadmium</b>	<b>0.20</b>	<b>B</b>	0.12	0.021	mg/Kg	☼	11/02/17 15:42	11/03/17 15:12	1
<b>Chromium</b>	<b>13</b>		0.58	0.29	mg/Kg	☼	11/02/17 15:42	11/03/17 15:12	1
<b>Cobalt</b>	<b>7.2</b>		0.29	0.075	mg/Kg	☼	11/02/17 15:42	11/03/17 15:12	1
<b>Copper</b>	<b>16</b>	<b>B</b>	0.58	0.16	mg/Kg	☼	11/02/17 15:42	11/03/17 15:12	1
<b>Iron</b>	<b>13000</b>	<b>B</b>	12	6.0	mg/Kg	☼	11/02/17 15:42	11/03/17 15:12	1
<b>Lead</b>	<b>26</b>		0.29	0.13	mg/Kg	☼	11/02/17 15:42	11/03/17 15:12	1
<b>Magnesium</b>	<b>9700</b>		5.8	2.9	mg/Kg	☼	11/02/17 15:42	11/03/17 15:12	1
<b>Calcium</b>	<b>16000</b>	<b>B</b>	12	2.0	mg/Kg	☼	11/02/17 15:42	11/03/17 15:12	1
<b>Manganese</b>	<b>300</b>		0.58	0.084	mg/Kg	☼	11/02/17 15:42	11/03/17 15:12	1
<b>Nickel</b>	<b>15</b>		0.58	0.17	mg/Kg	☼	11/02/17 15:42	11/03/17 15:12	1
Selenium	<0.58		0.58	0.34	mg/Kg	☼	11/02/17 15:42	11/05/17 20:50	1
Silver	<0.29		0.29	0.074	mg/Kg	☼	11/02/17 15:42	11/03/17 15:12	1
Thallium	<0.58		0.58	0.29	mg/Kg	☼	11/02/17 15:42	11/03/17 15:12	1
<b>Vanadium</b>	<b>18</b>		0.29	0.068	mg/Kg	☼	11/02/17 15:42	11/03/17 15:12	1
<b>Zinc</b>	<b>69</b>		1.2	0.51	mg/Kg	☼	11/02/17 15:42	11/03/17 15:12	1
<b>Potassium</b>	<b>1000</b>		29	10	mg/Kg	☼	11/02/17 15:42	11/03/17 15:12	1
<b>Sodium</b>	<b>69</b>		58	8.5	mg/Kg	☼	11/02/17 15:42	11/03/17 15:12	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/06/17 11:00	11/07/17 10:55	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-2

**Client Sample ID: 2696V-11-B01 (0-1)**

**Lab Sample ID: 500-136670-9**

Date Collected: 11/01/17 15:30

Matrix: Solid

Date Received: 11/02/17 10:05

Percent Solids: 83.8

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.43</b>	<b>J</b>	0.50	0.050	mg/L		11/06/17 11:00	11/07/17 10:55	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/06/17 11:00	11/07/17 10:55	1
<b>Cadmium</b>	<b>0.0031</b>	<b>J</b>	0.0050	0.0020	mg/L		11/06/17 11:00	11/07/17 10:55	1
<b>Calcium</b>	<b>270</b>		5.0	0.50	mg/L		11/06/17 11:00	11/07/17 10:55	1
Chromium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:55	1
Cobalt	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:55	1
<b>Copper</b>	<b>0.023</b>	<b>J</b>	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:55	1
Iron	<0.40		0.40	0.20	mg/L		11/06/17 11:00	11/07/17 10:55	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/06/17 11:00	11/07/17 10:55	1
<b>Magnesium</b>	<b>130</b>		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:55	1
<b>Manganese</b>	<b>0.55</b>		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:55	1
Nickel	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:55	1
<b>Potassium</b>	<b>2.6</b>		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:55	1
Selenium	<0.050		0.050	0.020	mg/L		11/06/17 11:00	11/07/17 10:55	1
Silver	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:55	1
Vanadium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:55	1
<b>Zinc</b>	<b>0.091</b>	<b>J</b>	0.50	0.020	mg/L		11/06/17 11:00	11/07/17 10:55	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.22</b>		0.025	0.010	mg/L		11/06/17 10:45	11/07/17 14:37	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/06/17 11:00	11/07/17 14:50	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/06/17 11:00	11/07/17 14:50	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/06/17 14:30	11/07/17 09:01	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.025</b>		0.020	0.0065	mg/Kg	☼	11/03/17 15:15	11/06/17 11:03	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.49		0.49	0.17	mg/Kg	☼	11/11/17 10:00	11/11/17 13:43	1
<b>pH</b>	<b>7.9</b>		0.20	0.20	SU			11/08/17 17:14	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-2

## Qualifiers

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-2

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)  
 Contact: **MATT WEISS**  
 Company: **TERRALON**  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference#: \_\_\_\_\_

## Chain of Custody Record

Lab Job #: **500-136670**

Chain of Custody Number: \_\_\_\_\_

Page **1** of **1**

Temperature °C of Cooler: \_\_\_\_\_

Client		Client Project #		Preservative		Parameter		Matrix		Comments	
TERRALON		11177029 M								Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name		Lab Project #		Date		Time		# of Containers		Matrix	
WORK ORDER 038A											
Project Location/State		Lab Project #		Date		Time		# of Containers		Matrix	
MARKHAM, IL											
Sampler		Lab PM		Date		Time		# of Containers		Matrix	
CRAIG VARLAND		DICK WRIGHT									
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix
9		2696V-11-301-(0-1')	11-1-17	1530	5	S	VOCS	SNOGS	23 TAL METALS PH	TCLP 23 TAL METALS	

Turnaround Time Required (Business Days)

\_\_\_ 1 Day \_\_\_ 2 Days \_\_\_ 5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <i>[Signature]</i> Company: TERRALON Date: 11-2-17 Time: 0838	Received By: <i>[Signature]</i> Company: TA Date: 11/2/17 Time: 0838	Lab Courier: <i>[Signature]</i>
Relinquished By: <i>[Signature]</i> Company: TA Date: 11/2/17 Time: 1005	Received By: <i>[Signature]</i> Company: TA-CHE Date: 11/2/17 Time: 1005	Shipped: _____
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Hand Delivered: _____

Matrix Key

WW - Wastewater	SE - Sediment
W - Water	SO - Soil
S - Soil	L - Leachate
SL - Sludge	WI - Wipe
MS - Miscellaneous	DW - Drinking Water
OL - Oil	O - Other
A - Air	

Client Comments  
**NO ALUMINUM**

Lab Comments:



## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136670-2

**Login Number: 136670**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Scott, Sherri L**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.2.2.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

US Route 6 (Eastbound) IDOT STA 50+50 to 51+40 (ISGS Site 2696V-12)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: \_\_\_\_\_ BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

Soil from boring B01 was sampled adjacent to ISGS Site No 2696V-12.  
See Exhibits 7, 7A, and Table 22 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136670-3.  
Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

*Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))*

Company Name: Terracon Consultants, Inc  
 Street Address: 135 Ambassador Drive  
 City: Naperville State: IL Zip Code: 60540  
 Phone: 630-717-4263

Matt Weiss

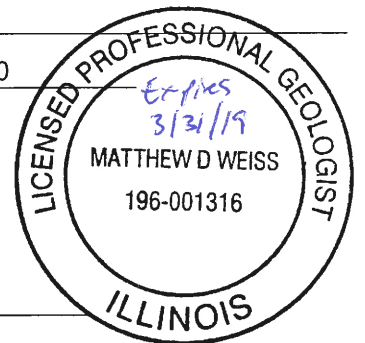
Printed Name:

[Signature]

Licensed Professional Engineer or  
Licensed Professional Geologist Signature:

7/24/18

Date:



**Detected Constituents to MACs-PTB 174-009;Work Order:037A**  
**Preliminary Site Investigation**  
**FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-12)**  
**Oak Forest/Markham, Cook County, IL**  
**Terracon Project No. 11177029M**  
**Page 1 of 2**

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-12-B01 (0-1)
				CCDD	Sample Depth (feet)	(0-1)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/01/2017
<b>Semivolatile Organic Analytical Parameters</b>						
Acenaphthene	mg/kg	0.09	0.13	570		0.009
Acenaphthylene	mg/kg	0.03	0.07	85		0.012
Anthracene	mg/kg	0.25	0.4	12000		0.039
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.3
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.4
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.58
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.22
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		0.19
Chrysene	mg/kg	1.2	2.7	88		0.37
Dibenzo(a,h)anthracene	mg/kg	0.2	0.42	0.09		0.083
Fluoranthene	mg/kg	2.7	4.1	3100		0.75
Fluorene	mg/kg	0.1	0.18	560		0.01
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.23
Naphthalene	mg/kg	0.04	0.2	1.8		0.012
Phenanthrene	mg/kg	1.3	2.5	210		0.24
Pyrene	mg/kg	1.9	3.0	2300		0.52
bis(2-Ethylhexyl)phthalate	mg/kg	---	---	46		0.16
2-Methylnaphthalene	mg/kg	---	0.14	---		0.018
<b>Inorganic Analytical Parameters</b>						
Arsenic	mg/kg	---	13	11.3		5.7
Barium	mg/kg	---	110	1500		49
Cadmium	mg/kg	---	0.6	5.2		0.36
Chromium, total	mg/kg	---	16.2	21		15
Lead	mg/kg	---	36	107		120
Mercury	mg/kg	---	0.06	0.1		0.029
Selenium	mg/kg	---	0.48	1.3		<0.55
Silver	mg/kg	---	0.55	4.4		<0.28
Antimony	mg/kg	---	4.0	5		0.45
Beryllium	mg/kg	---	0.59	22		0.59
Calcium	mg/kg	---	9,300	---		79000
Cobalt	mg/kg	---	8.9	20		7.8
Copper	mg/kg	---	19.6	2900		22
Cyanide	mg/kg	---	0.51	---		0.18
Iron	mg/kg	---	15,900	15000		15000
Magnesium	mg/kg	---	4,820	325000		28000
Manganese	mg/kg	---	636	630		300
Nickel	mg/kg	---	18	100		21
Potassium	mg/kg	---	1,268	---		1300
Sodium	mg/kg	---	130	---		260
Thallium	mg/kg	---	0.32	2.6		<0.55
Vanadium	mg/kg	---	25.2	550		17
Zinc	mg/kg	---	95	5100		92
pH			6.25	9		8.6

**Detected Constituents to MACs-PTB 174-009;Work Order:037A**  
**Preliminary Site Investigation**  
**FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-12)**  
**Oak Forest/Markham, Cook County, IL**  
**Terracon Project No. 11177029M**  
**Page 2 of 2**

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-12-B01 (0-1)
				CCDD	Sample Depth (feet)	(0-1)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/01/2017
<b>Inorganic Analytical Parameters (SPLP)</b>						
Antimony,SPLP	mg/L	---	---	---		--
Arsenic,SPLP	mg/L	---	---	---		--
Barium,SPLP	mg/L	---	---	---		--
Beryllium,SPLP	mg/L	---	---	---		--
Cadmium,SPLP	mg/L	---	---	---		--
Calcium,SPLP	mg/L	---	---	---		--
Chromium,SPLP	mg/L	---	---	---		--
Cobalt,SPLP	mg/L	---	---	---		--
Copper,SPLP	mg/L	---	---	---		--
Iron,SPLP	mg/L	---	---	---		--
Lead,SPLP	mg/L	---	---	---		--
Magnesium,SPLP	mg/L	---	---	---		--
Manganese,SPLP	mg/L	---	---	---		0.48
Mercury,SPLP	mg/L	---	---	---		--
Nickel,SPLP	mg/L	---	---	---		--
Potassium,SPLP	mg/L	---	---	---		--
Selenium,SPLP	mg/L	---	---	---		--
Silver,SPLP	mg/L	---	---	---		--
Sodium,SPLP	mg/L	---	---	---		--
Thallium,SPLP	mg/L	---	---	---		--
Vanadium,SPLP	mg/L	---	---	---		--
Zinc,SPLP	mg/L	---	---	---		--
Cyanide,SPLP	mg/L	---	---	---		--
<b>Inorganic Analytical Parameters (TCLP)</b>						
Arsenic,TCLP	mg/L	---	---	---		<0.050
Barium,TCLP	mg/L	---	---	---		0.52
Cadmium,TCLP	mg/L	---	---	---		0.0037
Chromium,TCLP	mg/L	---	---	---		<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050
Silver,TCLP	mg/L	---	---	---		<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040
Calcium,TCLP	mg/L	---	---	---		370
Cobalt,TCLP	mg/L	---	---	---		<0.025
Copper,TCLP	mg/L	---	---	---		0.021
Cyanide,TCLP	mg/L	---	---	---		----
Iron,TCLP	mg/L	---	---	---		<0.40
Magnesium,TCLP	mg/L	---	---	---		120
Manganese,TCLP	mg/L	---	---	---		0.18
Nickel,TCLP	mg/L	---	---	---		<0.025
Potassium,TCLP	mg/L	---	---	---		3.1
Sodium,TCLP	mg/L	---	---	---		----
Thallium,TCLP	mg/L	---	---	---		<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025
Zinc,TCLP	mg/L	---	---	---		0.084

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-136670-3

Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:

Terracon Consulting Eng & Scientists

135 Ambassador Drive

Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:

11/14/2017 5:45:18 PM

Jodie Bracken, Project Management Assistant II

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Designee for

Richard Wright, Senior Project Manager

(708)534-5200

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### LINKS

Review your project  
results through

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[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-3

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**Job ID: 500-136670-3**

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**Laboratory: TestAmerica Chicago**

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**Narrative**

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**Job Narrative  
500-136670-3**

**Receipt**

The samples were received on 11/2/2017 10:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.7° C and 3.2° C.

**GC/MS VOA**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**GC/MS Semi VOA**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Metals**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Organic Prep**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-3

**Client Sample ID: 2696V-12-B02 (0-1)**

**Lab Sample ID: 500-136670-10**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.021	J	0.038	0.0070	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.023	J	0.038	0.0051	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.096		0.038	0.0065	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.65		0.038	0.0052	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.75		0.038	0.0075	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	1.1		0.038	0.0084	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.40		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.40		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.12	J	0.19	0.071	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.77		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.14		0.038	0.0075	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	1.6		0.038	0.0072	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.027	J	0.038	0.0054	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.42		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.012	J	0.078	0.0071	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.011	J	0.038	0.0060	mg/Kg	1	☼	8270D	Total/NA
Pentachlorophenol	1.1		0.78	0.62	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.55		0.038	0.0054	mg/Kg	1	☼	8270D	Total/NA
Pyrene	1.1		0.038	0.0077	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.37	J B	1.1	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	6.5		0.54	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	63		0.54	0.062	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.92		0.22	0.051	mg/Kg	1	☼	6010B	Total/NA
Cadmium	1.0	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	22		0.54	0.27	mg/Kg	1	☼	6010B	Total/NA
Cobalt	9.7		0.27	0.071	mg/Kg	1	☼	6010B	Total/NA
Copper	53	B	0.54	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	18000	B	11	5.7	mg/Kg	1	☼	6010B	Total/NA
Lead	160		0.27	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	22000		5.4	2.7	mg/Kg	1	☼	6010B	Total/NA
Calcium	61000	B	110	18	mg/Kg	10	☼	6010B	Total/NA
Manganese	360		0.54	0.079	mg/Kg	1	☼	6010B	Total/NA
Nickel	24		0.54	0.16	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.50	J	0.54	0.32	mg/Kg	1	☼	6010B	Total/NA
Vanadium	19		0.27	0.064	mg/Kg	1	☼	6010B	Total/NA
Zinc	250		1.1	0.48	mg/Kg	1	☼	6010B	Total/NA
Potassium	1300		27	9.6	mg/Kg	1	☼	6010B	Total/NA
Sodium	290		54	8.0	mg/Kg	1	☼	6010B	Total/NA
Barium	0.55		0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0076		0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	350		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.017	J	0.025	0.010	mg/L	1		6010B	TCLP
Lead	0.0084		0.0075	0.0075	mg/L	1		6010B	TCLP
Magnesium	120		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.23		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	3.1		2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.11	J	0.50	0.020	mg/L	1		6010B	TCLP
Cadmium	0.0030	J	0.0050	0.0020	mg/L	1		6010B	SPLP East
Lead	0.18		0.0075	0.0075	mg/L	1		6010B	SPLP East
Manganese	0.30		0.025	0.010	mg/L	1		6010B	SPLP East

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-3

## Client Sample ID: 2696V-12-B02 (0-1) (Continued)

## Lab Sample ID: 500-136670-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.040		0.018	0.0059	mg/Kg	1	☼	7471B	Total/NA
Cyanide, Total	0.18	J	0.53	0.18	mg/Kg	1	☼	9014	Total/NA
pH	8.5		0.20	0.20	SU	1		9045D	Total/NA

## Client Sample ID: 2696V-12-B01 (0-1)

## Lab Sample ID: 500-136670-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.0090	J	0.036	0.0065	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.012	J	0.036	0.0048	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.039		0.036	0.0060	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.30		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.40		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.58		0.036	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.22		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.19		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.16	J	0.18	0.066	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.37		0.036	0.0099	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.083		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.75		0.036	0.0067	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.010	J	0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.23		0.036	0.0094	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.018	J	0.073	0.0066	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.012	J	0.036	0.0056	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.24		0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.52		0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.45	J B	1.1	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	5.7		0.55	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	49		0.55	0.063	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.59		0.22	0.051	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.36	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	15		0.55	0.27	mg/Kg	1	☼	6010B	Total/NA
Cobalt	7.8		0.28	0.072	mg/Kg	1	☼	6010B	Total/NA
Copper	22	B	0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	15000	B	11	5.7	mg/Kg	1	☼	6010B	Total/NA
Lead	120		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	28000		5.5	2.7	mg/Kg	1	☼	6010B	Total/NA
Calcium	79000	B	110	19	mg/Kg	10	☼	6010B	Total/NA
Manganese	300		0.55	0.080	mg/Kg	1	☼	6010B	Total/NA
Nickel	21		0.55	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	17		0.28	0.065	mg/Kg	1	☼	6010B	Total/NA
Zinc	92		1.1	0.48	mg/Kg	1	☼	6010B	Total/NA
Potassium	1300		28	9.7	mg/Kg	1	☼	6010B	Total/NA
Sodium	260		55	8.1	mg/Kg	1	☼	6010B	Total/NA
Barium	0.52		0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0037	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	370		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.021	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	120		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.18		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	3.1		2.5	0.50	mg/L	1		6010B	TCLP

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-3

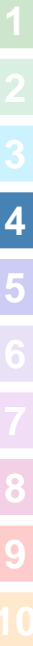
**Client Sample ID: 2696V-12-B01 (0-1) (Continued)**

**Lab Sample ID: 500-136670-11**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Zinc	0.084	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.48		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.029		0.018	0.0060	mg/Kg	1	⊛	7471B	Total/NA
Cyanide, Total	0.18	J	0.54	0.18	mg/Kg	1	⊛	9014	Total/NA
pH	8.6		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago



# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136670-10	2696V-12-B02 (0-1)	Solid	11/01/17 15:50	11/02/17 10:05
500-136670-11	2696V-12-B01 (0-1)	Solid	11/01/17 16:10	11/02/17 10:05

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-3

**Client Sample ID: 2696V-12-B02 (0-1)**

**Lab Sample ID: 500-136670-10**

**Date Collected: 11/01/17 15:50**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 85.4**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0077	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Benzene	<0.0018		0.0018	0.00045	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Bromodichloromethane	<0.0018		0.0018	0.00036	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Bromoform	<0.0018		0.0018	0.00052	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Bromomethane	<0.0044		0.0044	0.0017	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
2-Butanone (MEK)	<0.0044		0.0044	0.0020	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Carbon disulfide	<0.0044		0.0044	0.00092	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Carbon tetrachloride	<0.0018		0.0018	0.00051	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Chlorobenzene	<0.0018		0.0018	0.00065	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Chloroethane	<0.0044		0.0044	0.0013	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Chloroform	<0.0018		0.0018	0.00062	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Chloromethane	<0.0044		0.0044	0.0018	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
cis-1,2-Dichloroethene	<0.0018		0.0018	0.00050	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
cis-1,3-Dichloropropene	<0.0018		0.0018	0.00054	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Dibromochloromethane	<0.0018		0.0018	0.00058	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
1,1-Dichloroethane	<0.0018		0.0018	0.00061	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
1,2-Dichloroethane	<0.0044		0.0044	0.0014	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
1,1-Dichloroethene	<0.0018		0.0018	0.00061	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
1,2-Dichloropropane	<0.0018		0.0018	0.00046	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
1,3-Dichloropropane, Total	<0.0018		0.0018	0.00062	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Ethylbenzene	<0.0018		0.0018	0.00085	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
2-Hexanone	<0.0044		0.0044	0.0014	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Methylene Chloride	<0.0044		0.0044	0.0017	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
4-Methyl-2-pentanone (MIBK)	<0.0044		0.0044	0.0013	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Methyl tert-butyl ether	<0.0018		0.0018	0.00052	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Styrene	<0.0018		0.0018	0.00054	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
1,1,2,2-Tetrachloroethane	<0.0018		0.0018	0.00057	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Tetrachloroethene	<0.0018		0.0018	0.00060	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Toluene	<0.0018		0.0018	0.00045	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
trans-1,2-Dichloroethene	<0.0018		0.0018	0.00079	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
trans-1,3-Dichloropropene	<0.0018		0.0018	0.00062	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
1,1,1-Trichloroethane	<0.0018		0.0018	0.00060	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
1,1,2-Trichloroethane	<0.0018		0.0018	0.00076	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Trichloroethene	<0.0018		0.0018	0.00060	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Vinyl acetate	<0.0044		0.0044	0.0015	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Vinyl chloride	<0.0018		0.0018	0.00079	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1
Xylenes, Total	<0.0035		0.0035	0.00057	mg/Kg	☼	11/02/17 18:18	11/06/17 18:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		75 - 131	11/02/17 18:18	11/06/17 18:09	1
Dibromofluoromethane	99		75 - 126	11/02/17 18:18	11/06/17 18:09	1
1,2-Dichloroethane-d4 (Surr)	92		70 - 134	11/02/17 18:18	11/06/17 18:09	1
Toluene-d8 (Surr)	98		75 - 124	11/02/17 18:18	11/06/17 18:09	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.021	J	0.038	0.0070	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Acenaphthylene	0.023	J	0.038	0.0051	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Anthracene	0.096		0.038	0.0065	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Benzo[a]anthracene	0.65		0.038	0.0052	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-3

**Client Sample ID: 2696V-12-B02 (0-1)**

**Lab Sample ID: 500-136670-10**

**Date Collected: 11/01/17 15:50**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 85.4**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.75		0.038	0.0075	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Benzo[b]fluoranthene	1.1		0.038	0.0084	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Benzo[g,h,i]perylene	0.40		0.038	0.012	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Benzo[k]fluoranthene	0.40		0.038	0.011	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.040	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.058	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Bis(2-ethylhexyl) phthalate	0.12	J	0.19	0.071	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.051	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Butyl benzyl phthalate	<0.19		0.19	0.074	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Carbazole	<0.19		0.19	0.097	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
4-Chloroaniline	<0.78		0.78	0.18	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
2-Chloronaphthalene	<0.19		0.19	0.043	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
2-Chlorophenol	<0.19		0.19	0.066	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Chrysene	0.77		0.038	0.011	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Dibenz(a,h)anthracene	0.14		0.038	0.0075	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
1,2-Dichlorobenzene	<0.19		0.19	0.046	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
1,3-Dichlorobenzene	<0.19		0.19	0.044	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
1,4-Dichlorobenzene	<0.19		0.19	0.050	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.054	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
2,4-Dichlorophenol	<0.38		0.38	0.092	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Diethyl phthalate	<0.19		0.19	0.066	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
2,4-Dimethylphenol	<0.38		0.38	0.15	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Dimethyl phthalate	<0.19		0.19	0.051	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Di-n-butyl phthalate	<0.19		0.19	0.059	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
4,6-Dinitro-2-methylphenol	<0.78		0.78	0.31	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
2,4-Dinitrophenol	<0.78		0.78	0.68	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
2,4-Dinitrotoluene	<0.19		0.19	0.062	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
2,6-Dinitrotoluene	<0.19		0.19	0.076	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Di-n-octyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Fluoranthene	1.6		0.038	0.0072	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Fluorene	0.027	J	0.038	0.0054	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Hexachlorobenzene	<0.078		0.078	0.0090	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Hexachlorobutadiene	<0.19		0.19	0.061	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Hexachlorocyclopentadiene	<0.78		0.78	0.22	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Hexachloroethane	<0.19		0.19	0.059	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Indeno[1,2,3-cd]pyrene	0.42		0.038	0.010	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
2-Methylnaphthalene	0.012	J	0.078	0.0071	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
2-Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
3 & 4 Methylphenol	<0.19		0.19	0.065	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Naphthalene	0.011	J	0.038	0.0060	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
2-Nitroaniline	<0.19		0.19	0.052	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Nitrobenzene	<0.038		0.038	0.0097	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
2-Nitrophenol	<0.38		0.38	0.092	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-3

**Client Sample ID: 2696V-12-B02 (0-1)**

**Lab Sample ID: 500-136670-10**

Date Collected: 11/01/17 15:50

Matrix: Solid

Date Received: 11/02/17 10:05

Percent Solids: 85.4

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.78		0.78	0.37	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
N-Nitrosodi-n-propylamine	<0.078		0.078	0.047	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
N-Nitrosodiphenylamine	<0.19		0.19	0.046	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.045	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
<b>Pentachlorophenol</b>	<b>1.1</b>		0.78	0.62	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
<b>Phenanthrene</b>	<b>0.55</b>		0.038	0.0054	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
Phenol	<0.19		0.19	0.086	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
<b>Pyrene</b>	<b>1.1</b>		0.038	0.0077	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
2,4,5-Trichlorophenol	<0.38		0.38	0.088	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	11/09/17 17:53	11/14/17 13:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	77		44 - 121	11/09/17 17:53	11/14/17 13:23	1
2-Fluorophenol	90		46 - 133	11/09/17 17:53	11/14/17 13:23	1
Nitrobenzene-d5	75		41 - 120	11/09/17 17:53	11/14/17 13:23	1
Phenol-d5	92		46 - 125	11/09/17 17:53	11/14/17 13:23	1
Terphenyl-d14	87		35 - 160	11/09/17 17:53	11/14/17 13:23	1
2,4,6-Tribromophenol	94		25 - 139	11/09/17 17:53	11/14/17 13:23	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.37</b>	<b>J B</b>	1.1	0.21	mg/Kg	☼	11/02/17 15:42	11/05/17 21:02	1
<b>Arsenic</b>	<b>6.5</b>		0.54	0.19	mg/Kg	☼	11/02/17 15:42	11/03/17 15:25	1
<b>Barium</b>	<b>63</b>		0.54	0.062	mg/Kg	☼	11/02/17 15:42	11/03/17 15:25	1
<b>Beryllium</b>	<b>0.92</b>		0.22	0.051	mg/Kg	☼	11/02/17 15:42	11/03/17 15:25	1
<b>Cadmium</b>	<b>1.0</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/02/17 15:42	11/03/17 15:25	1
<b>Chromium</b>	<b>22</b>		0.54	0.27	mg/Kg	☼	11/02/17 15:42	11/03/17 15:25	1
<b>Cobalt</b>	<b>9.7</b>		0.27	0.071	mg/Kg	☼	11/02/17 15:42	11/03/17 15:25	1
<b>Copper</b>	<b>53</b>	<b>B</b>	0.54	0.15	mg/Kg	☼	11/02/17 15:42	11/03/17 15:25	1
<b>Iron</b>	<b>18000</b>	<b>B</b>	11	5.7	mg/Kg	☼	11/02/17 15:42	11/03/17 15:25	1
<b>Lead</b>	<b>160</b>		0.27	0.13	mg/Kg	☼	11/02/17 15:42	11/03/17 15:25	1
<b>Magnesium</b>	<b>22000</b>		5.4	2.7	mg/Kg	☼	11/02/17 15:42	11/03/17 15:25	1
<b>Calcium</b>	<b>61000</b>	<b>B</b>	110	18	mg/Kg	☼	11/02/17 15:42	11/05/17 21:06	10
<b>Manganese</b>	<b>360</b>		0.54	0.079	mg/Kg	☼	11/02/17 15:42	11/03/17 15:25	1
<b>Nickel</b>	<b>24</b>		0.54	0.16	mg/Kg	☼	11/02/17 15:42	11/03/17 15:25	1
<b>Selenium</b>	<b>0.50</b>	<b>J</b>	0.54	0.32	mg/Kg	☼	11/02/17 15:42	11/05/17 21:02	1
Silver	<0.27		0.27	0.070	mg/Kg	☼	11/02/17 15:42	11/03/17 15:25	1
Thallium	<0.54		0.54	0.27	mg/Kg	☼	11/02/17 15:42	11/03/17 15:25	1
<b>Vanadium</b>	<b>19</b>		0.27	0.064	mg/Kg	☼	11/02/17 15:42	11/03/17 15:25	1
<b>Zinc</b>	<b>250</b>		1.1	0.48	mg/Kg	☼	11/02/17 15:42	11/03/17 15:25	1
<b>Potassium</b>	<b>1300</b>		27	9.6	mg/Kg	☼	11/02/17 15:42	11/03/17 15:25	1
<b>Sodium</b>	<b>290</b>		54	8.0	mg/Kg	☼	11/02/17 15:42	11/03/17 15:25	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/06/17 11:00	11/07/17 10:59	1
<b>Barium</b>	<b>0.55</b>		0.50	0.050	mg/L		11/06/17 11:00	11/07/17 10:59	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/06/17 11:00	11/07/17 10:59	1
<b>Cadmium</b>	<b>0.0076</b>		0.0050	0.0020	mg/L		11/06/17 11:00	11/07/17 10:59	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-3

**Client Sample ID: 2696V-12-B02 (0-1)**

**Lab Sample ID: 500-136670-10**

Date Collected: 11/01/17 15:50

Matrix: Solid

Date Received: 11/02/17 10:05

Percent Solids: 85.4

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>350</b>		5.0	0.50	mg/L		11/06/17 11:00	11/07/17 10:59	1
Chromium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:59	1
Cobalt	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:59	1
<b>Copper</b>	<b>0.017</b>	<b>J</b>	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:59	1
Iron	<0.40		0.40	0.20	mg/L		11/06/17 11:00	11/07/17 10:59	1
<b>Lead</b>	<b>0.0084</b>		0.0075	0.0075	mg/L		11/06/17 11:00	11/07/17 10:59	1
<b>Magnesium</b>	<b>120</b>		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:59	1
<b>Manganese</b>	<b>0.23</b>		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:59	1
Nickel	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:59	1
<b>Potassium</b>	<b>3.1</b>		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 10:59	1
Selenium	<0.050		0.050	0.020	mg/L		11/06/17 11:00	11/07/17 10:59	1
Silver	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:59	1
Vanadium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 10:59	1
<b>Zinc</b>	<b>0.11</b>	<b>J</b>	0.50	0.020	mg/L		11/06/17 11:00	11/07/17 10:59	1

**Method: 6010B - SPLP Metals - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cadmium</b>	<b>0.0030</b>	<b>J</b>	0.0050	0.0020	mg/L		11/06/17 10:45	11/07/17 14:41	1
<b>Lead</b>	<b>0.18</b>		0.0075	0.0075	mg/L		11/06/17 10:45	11/07/17 14:41	1
<b>Manganese</b>	<b>0.30</b>		0.025	0.010	mg/L		11/06/17 10:45	11/07/17 14:41	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/06/17 11:00	11/07/17 14:55	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/06/17 11:00	11/07/17 14:55	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/06/17 14:30	11/07/17 09:03	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<b>0.040</b>		0.018	0.0059	mg/Kg	☼	11/03/17 15:15	11/06/17 11:06	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cyanide, Total</b>	<b>0.18</b>	<b>J</b>	0.53	0.18	mg/Kg	☼	11/11/17 10:00	11/11/17 13:43	1
<b>pH</b>	<b>8.5</b>		0.20	0.20	SU			11/08/17 17:14	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-3

**Client Sample ID: 2696V-12-B01 (0-1)**

**Lab Sample ID: 500-136670-11**

**Date Collected: 11/01/17 16:10**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 86.9**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0080	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Benzene	<0.0018		0.0018	0.00047	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Bromodichloromethane	<0.0018		0.0018	0.00037	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Bromoform	<0.0018		0.0018	0.00054	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Bromomethane	<0.0046		0.0046	0.0017	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
2-Butanone (MEK)	<0.0046		0.0046	0.0020	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Carbon disulfide	<0.0046		0.0046	0.00096	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Carbon tetrachloride	<0.0018		0.0018	0.00053	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Chlorobenzene	<0.0018		0.0018	0.00068	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Chloroethane	<0.0046		0.0046	0.0014	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Chloroform	<0.0018		0.0018	0.00064	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Chloromethane	<0.0046		0.0046	0.0018	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
cis-1,2-Dichloroethene	<0.0018		0.0018	0.00051	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
cis-1,3-Dichloropropene	<0.0018		0.0018	0.00055	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Dibromochloromethane	<0.0018		0.0018	0.00060	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
1,1-Dichloroethane	<0.0018		0.0018	0.00063	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
1,2-Dichloroethane	<0.0046		0.0046	0.0014	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
1,1-Dichloroethene	<0.0018		0.0018	0.00063	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
1,2-Dichloropropane	<0.0018		0.0018	0.00048	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
1,3-Dichloropropane, Total	<0.0018		0.0018	0.00065	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Ethylbenzene	<0.0018		0.0018	0.00088	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
2-Hexanone	<0.0046		0.0046	0.0014	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Methylene Chloride	<0.0046		0.0046	0.0018	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
4-Methyl-2-pentanone (MIBK)	<0.0046		0.0046	0.0014	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Methyl tert-butyl ether	<0.0018		0.0018	0.00054	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Styrene	<0.0018		0.0018	0.00056	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
1,1,2,2-Tetrachloroethane	<0.0018		0.0018	0.00059	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Tetrachloroethene	<0.0018		0.0018	0.00063	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Toluene	<0.0018		0.0018	0.00046	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
trans-1,2-Dichloroethene	<0.0018		0.0018	0.00081	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
trans-1,3-Dichloropropene	<0.0018		0.0018	0.00065	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
1,1,1-Trichloroethane	<0.0018		0.0018	0.00062	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
1,1,2-Trichloroethane	<0.0018		0.0018	0.00079	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Trichloroethene	<0.0018		0.0018	0.00062	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Vinyl acetate	<0.0046		0.0046	0.0016	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Vinyl chloride	<0.0018		0.0018	0.00081	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1
Xylenes, Total	<0.0037		0.0037	0.00059	mg/Kg	☼	11/02/17 18:18	11/06/17 18:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		75 - 131	11/02/17 18:18	11/06/17 18:34	1
Dibromofluoromethane	101		75 - 126	11/02/17 18:18	11/06/17 18:34	1
1,2-Dichloroethane-d4 (Surr)	93		70 - 134	11/02/17 18:18	11/06/17 18:34	1
Toluene-d8 (Surr)	97		75 - 124	11/02/17 18:18	11/06/17 18:34	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.0090	J	0.036	0.0065	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Acenaphthylene	0.012	J	0.036	0.0048	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Anthracene	0.039		0.036	0.0060	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Benzo[a]anthracene	0.30		0.036	0.0049	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-3

**Client Sample ID: 2696V-12-B01 (0-1)**

**Lab Sample ID: 500-136670-11**

**Date Collected: 11/01/17 16:10**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 86.9**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.40		0.036	0.0070	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Benzo[b]fluoranthene	0.58		0.036	0.0078	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Benzo[g,h,i]perylene	0.22		0.036	0.012	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Benzo[k]fluoranthene	0.19		0.036	0.011	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Bis(2-ethylhexyl) phthalate	0.16	J	0.18	0.066	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Butyl benzyl phthalate	<0.18		0.18	0.069	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Carbazole	<0.18		0.18	0.090	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
4-Chloroaniline	<0.73		0.73	0.17	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Chrysene	0.37		0.036	0.0099	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Dibenz(a,h)anthracene	0.083		0.036	0.0070	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
1,2-Dichlorobenzene	<0.18		0.18	0.043	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
2,4-Dichlorophenol	<0.36		0.36	0.086	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Di-n-butyl phthalate	<0.18		0.18	0.055	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
4,6-Dinitro-2-methylphenol	<0.73		0.73	0.29	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
2,4-Dinitrophenol	<0.73		0.73	0.64	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
2,6-Dinitrotoluene	<0.18		0.18	0.071	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Fluoranthene	0.75		0.036	0.0067	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Fluorene	0.010	J	0.036	0.0051	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Hexachlorobenzene	<0.073		0.073	0.0084	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Hexachlorocyclopentadiene	<0.73		0.73	0.21	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Indeno[1,2,3-cd]pyrene	0.23		0.036	0.0094	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
2-Methylnaphthalene	0.018	J	0.073	0.0066	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Naphthalene	0.012	J	0.036	0.0056	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Nitrobenzene	<0.036		0.036	0.0090	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
2-Nitrophenol	<0.36		0.36	0.085	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-3

**Client Sample ID: 2696V-12-B01 (0-1)**

**Lab Sample ID: 500-136670-11**

Date Collected: 11/01/17 16:10

Matrix: Solid

Date Received: 11/02/17 10:05

Percent Solids: 86.9

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.73		0.73	0.34	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
N-Nitrosodi-n-propylamine	<0.073		0.073	0.044	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Pentachlorophenol	<0.73		0.73	0.58	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
<b>Phenanthrene</b>	<b>0.24</b>		0.036	0.0050	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
Phenol	<0.18		0.18	0.080	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
<b>Pyrene</b>	<b>0.52</b>		0.036	0.0072	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
2,4,5-Trichlorophenol	<0.36		0.36	0.082	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	11/09/17 17:53	11/14/17 13:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	81		44 - 121	11/09/17 17:53	11/14/17 13:51	1
2-Fluorophenol	97		46 - 133	11/09/17 17:53	11/14/17 13:51	1
Nitrobenzene-d5	79		41 - 120	11/09/17 17:53	11/14/17 13:51	1
Phenol-d5	109		46 - 125	11/09/17 17:53	11/14/17 13:51	1
Terphenyl-d14	95		35 - 160	11/09/17 17:53	11/14/17 13:51	1
2,4,6-Tribromophenol	96		25 - 139	11/09/17 17:53	11/14/17 13:51	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.45</b>	<b>J B</b>	1.1	0.21	mg/Kg	☼	11/02/17 15:42	11/05/17 21:10	1
<b>Arsenic</b>	<b>5.7</b>		0.55	0.19	mg/Kg	☼	11/02/17 15:42	11/03/17 15:29	1
<b>Barium</b>	<b>49</b>		0.55	0.063	mg/Kg	☼	11/02/17 15:42	11/03/17 15:29	1
<b>Beryllium</b>	<b>0.59</b>		0.22	0.051	mg/Kg	☼	11/02/17 15:42	11/03/17 15:29	1
<b>Cadmium</b>	<b>0.36</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/02/17 15:42	11/03/17 15:29	1
<b>Chromium</b>	<b>15</b>		0.55	0.27	mg/Kg	☼	11/02/17 15:42	11/03/17 15:29	1
<b>Cobalt</b>	<b>7.8</b>		0.28	0.072	mg/Kg	☼	11/02/17 15:42	11/03/17 15:29	1
<b>Copper</b>	<b>22</b>	<b>B</b>	0.55	0.15	mg/Kg	☼	11/02/17 15:42	11/03/17 15:29	1
<b>Iron</b>	<b>15000</b>	<b>B</b>	11	5.7	mg/Kg	☼	11/02/17 15:42	11/03/17 15:29	1
<b>Lead</b>	<b>120</b>		0.28	0.13	mg/Kg	☼	11/02/17 15:42	11/03/17 15:29	1
<b>Magnesium</b>	<b>28000</b>		5.5	2.7	mg/Kg	☼	11/02/17 15:42	11/03/17 15:29	1
<b>Calcium</b>	<b>79000</b>	<b>B</b>	110	19	mg/Kg	☼	11/02/17 15:42	11/05/17 21:14	10
<b>Manganese</b>	<b>300</b>		0.55	0.080	mg/Kg	☼	11/02/17 15:42	11/03/17 15:29	1
<b>Nickel</b>	<b>21</b>		0.55	0.16	mg/Kg	☼	11/02/17 15:42	11/03/17 15:29	1
Selenium	<0.55		0.55	0.32	mg/Kg	☼	11/02/17 15:42	11/05/17 21:10	1
Silver	<0.28		0.28	0.071	mg/Kg	☼	11/02/17 15:42	11/03/17 15:29	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	11/02/17 15:42	11/03/17 15:29	1
<b>Vanadium</b>	<b>17</b>		0.28	0.065	mg/Kg	☼	11/02/17 15:42	11/03/17 15:29	1
<b>Zinc</b>	<b>92</b>		1.1	0.48	mg/Kg	☼	11/02/17 15:42	11/03/17 15:29	1
<b>Potassium</b>	<b>1300</b>		28	9.7	mg/Kg	☼	11/02/17 15:42	11/03/17 15:29	1
<b>Sodium</b>	<b>260</b>		55	8.1	mg/Kg	☼	11/02/17 15:42	11/03/17 15:29	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/06/17 11:00	11/07/17 11:03	1
<b>Barium</b>	<b>0.52</b>		0.50	0.050	mg/L		11/06/17 11:00	11/07/17 11:03	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/06/17 11:00	11/07/17 11:03	1
<b>Cadmium</b>	<b>0.0037</b>	<b>J</b>	0.0050	0.0020	mg/L		11/06/17 11:00	11/07/17 11:03	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-3

**Client Sample ID: 2696V-12-B01 (0-1)**

**Lab Sample ID: 500-136670-11**

**Date Collected: 11/01/17 16:10**

**Matrix: Solid**

**Date Received: 11/02/17 10:05**

**Percent Solids: 86.9**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>370</b>		5.0	0.50	mg/L		11/06/17 11:00	11/07/17 11:03	1
Chromium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 11:03	1
Cobalt	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 11:03	1
<b>Copper</b>	<b>0.021</b>	<b>J</b>	0.025	0.010	mg/L		11/06/17 11:00	11/07/17 11:03	1
Iron	<0.40		0.40	0.20	mg/L		11/06/17 11:00	11/07/17 11:03	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/06/17 11:00	11/07/17 11:03	1
<b>Magnesium</b>	<b>120</b>		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 11:03	1
<b>Manganese</b>	<b>0.18</b>		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 11:03	1
Nickel	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 11:03	1
<b>Potassium</b>	<b>3.1</b>		2.5	0.50	mg/L		11/06/17 11:00	11/07/17 11:03	1
Selenium	<0.050		0.050	0.020	mg/L		11/06/17 11:00	11/07/17 11:03	1
Silver	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 11:03	1
Vanadium	<0.025		0.025	0.010	mg/L		11/06/17 11:00	11/07/17 11:03	1
<b>Zinc</b>	<b>0.084</b>	<b>J</b>	0.50	0.020	mg/L		11/06/17 11:00	11/07/17 11:03	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.48</b>		0.025	0.010	mg/L		11/06/17 10:45	11/07/17 14:44	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/06/17 11:00	11/07/17 15:00	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/06/17 11:00	11/07/17 15:00	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/06/17 14:30	11/07/17 09:04	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.029</b>		0.018	0.0060	mg/Kg	☼	11/03/17 15:15	11/06/17 11:08	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cyanide, Total</b>	<b>0.18</b>	<b>J</b>	0.54	0.18	mg/Kg	☼	11/11/17 12:30	11/11/17 15:30	1
<b>pH</b>	<b>8.6</b>		0.20	0.20	SU			11/08/17 17:14	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-3

## Qualifiers

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

### General Chemistry

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

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136670-3

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)  
 Contact: MATT WEISS  
 Company: TERRALON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 570-136670  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: \_\_\_\_\_

Client		Client Project #		Preservative		Parameter												Preservative Key	
<u>TERRALON</u>		<u>11177029M</u>																1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name		Project Location/State		Lab Project #															
<u>WORK ORDER 038A</u>		<u>MARKHAM, IL</u>																	
Sampler		Lab PM																	
<u>CRAIG VARLAND</u>		<u>DICK WRIGHT</u>																	
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	VOLs	SVOLs	Z3 TAL METALS	TCLP Z3 TAL METALS									Comments
			Date	Time															
<u>10</u>		<u>2696V-12-B02-(0-1)</u>	<u>11-1-17</u>	<u>1550</u>	<u>5</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>									
<u>11</u>		<u>2696V-12-B01-(0-1)</u>	<u>11-1-17</u>	<u>1610</u>	<u>5</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>									

Turnaround Time Required (Business Days)

1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other

Requested Due Date \_\_\_\_\_

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u>	Company: <u>TERRALON</u>	Date: <u>11-2-17</u>	Time: <u>0838</u>	Received By: <u>[Signature]</u>	Company: <u>TA</u>	Date: <u>11/2/17</u>	Time: <u>0835</u>
Relinquished By: <u>[Signature]</u>	Company: <u>TA</u>	Date: <u>11/2/17</u>	Time: <u>1005</u>	Received By: <u>[Signature]</u>	Company: <u>TA-CHE</u>	Date: <u>11/2/17</u>	Time: <u>1005</u>
Relinquished By: _____	Company: _____	Date: _____	Time: _____	Received By: _____	Company: _____	Date: _____	Time: _____

Lab Courier: [Signature]  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

Matrix Key

- WW - Wastewater
- W - Water
- S - Soil
- SL - Sludge
- MS - Miscellaneous
- OL - Oil
- A - Air
- SE - Sediment
- SO - Soil
- L - Leachate
- WI - W/pe
- DW - Drinking Water
- O - Other

Client Comments

NO ALUMINUM

Lab Comments:

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136670-3

**Login Number: 136670**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Scott, Sherri L**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.2.2.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

US Route 6 (Eastbound) IDOT STA 49+00 to 50+50 (ISGS Site 2696V-13)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

EPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a):

Soil from boring B01 was sampled adjacent to ISGS Site No 2696V-13.  
See Exhibits 7, 7A, and Table 24 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136785-3.  
Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

***Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))***

Company Name: Terracon Consultants, Inc

Street Address: 135 Ambassador Drive

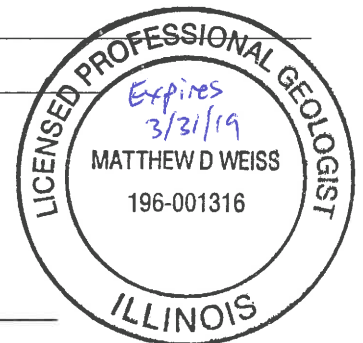
City: Naperville State: IL Zip Code: 60540

Phone: 630-717-4263

Matt Weiss  
Printed Name:

[Signature]  
Licensed Professional Engineer or  
Licensed Professional Geologist Signature:

7/24/18  
Date:



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-13)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 1 of 2

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-13-B01 (0-2)
				CCDD	Sample Depth (feet)	(0-2)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/02/2017
<b>Semivolatile Organic Analytical Parameters</b>						
Acenaphthene	mg/kg	0.09	0.13	570		0.009
Acenaphthylene	mg/kg	0.03	0.07	85		0.018
Anthracene	mg/kg	0.25	0.4	12000		0.036
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.17
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.23
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.3
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.12
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		0.093
Chrysene	mg/kg	1.2	2.7	88		0.19
Dibenzo(a,h)anthracene	mg/kg	0.2	0.42	0.09		0.066
Fluoranthene	mg/kg	2.7	4.1	3100		0.31
Fluorene	mg/kg	0.1	0.18	560		0.0081
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.13
Naphthalene	mg/kg	0.04	0.2	1.8		0.0096
Phenanthrene	mg/kg	1.3	2.5	210		0.12
Pyrene	mg/kg	1.9	3.0	2300		0.21
2-Methylnaphthalene	mg/kg	---	0.14	---		0.0091
<b>Inorganic Analytical Parameters</b>						
Arsenic	mg/kg	---	13	11.3		6
Barium	mg/kg	---	110	1500		51
Cadmium	mg/kg	---	0.6	5.2		0.38
Chromium, total	mg/kg	---	16.2	21		15
Lead	mg/kg	---	36	107		93
Mercury	mg/kg	---	0.06	0.1		0.033
Selenium	mg/kg	---	0.48	1.3		<0.55
Silver	mg/kg	---	0.55	4.4		<0.28
Antimony	mg/kg	---	4.0	5		0.57
Beryllium	mg/kg	---	0.59	22		0.58
Calcium	mg/kg	---	9,300	---		33000
Cobalt	mg/kg	---	8.9	20		7.8
Copper	mg/kg	---	19.6	2900		19
Cyanide	mg/kg	---	0.51	---		<0.56
Iron	mg/kg	---	15,900	15000		14000
Magnesium	mg/kg	---	4,820	325000		19000
Manganese	mg/kg	---	636	630		270
Nickel	mg/kg	---	18	100		17
Potassium	mg/kg	---	1,268	---		1400
Sodium	mg/kg	---	130	---		300
Thallium	mg/kg	---	0.32	2.6		<0.55
Vanadium	mg/kg	---	25.2	550		16
Zinc	mg/kg	---	95	5100		96
pH			6.25	9		8.4

Detected Constituents to MACs-PTB 174-009;Work Order:037A  
 Preliminary Site Investigation  
 FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-13)  
 Oak Forest/Markham, Cook County, IL  
 Terracon Project No. 11177029M  
 Page 2 of 2

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-13-B01 (0-2)
				CCDD	Sample Depth (feet)	(0-2)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/02/2017
<b>Inorganic Analytical Parameters (SPLP)</b>						
Antimony,SPLP	mg/L	---	---	---		--
Arsenic,SPLP	mg/L	---	---	---		--
Barium,SPLP	mg/L	---	---	---		--
Beryllium,SPLP	mg/L	---	---	---		--
Cadmium,SPLP	mg/L	---	---	---		--
Calcium,SPLP	mg/L	---	---	---		--
Chromium,SPLP	mg/L	---	---	---		--
Cobalt,SPLP	mg/L	---	---	---		--
Copper,SPLP	mg/L	---	---	---		--
Iron,SPLP	mg/L	---	---	---		--
Lead,SPLP	mg/L	---	---	---		--
Magnesium,SPLP	mg/L	---	---	---		--
Manganese,SPLP	mg/L	---	---	---		0.24
Mercury,SPLP	mg/L	---	---	---		--
Nickel,SPLP	mg/L	---	---	---		--
Potassium,SPLP	mg/L	---	---	---		--
Selenium,SPLP	mg/L	---	---	---		--
Silver,SPLP	mg/L	---	---	---		--
Sodium,SPLP	mg/L	---	---	---		--
Thallium,SPLP	mg/L	---	---	---		--
Vanadium,SPLP	mg/L	---	---	---		--
Zinc,SPLP	mg/L	---	---	---		--
Cyanide,SPLP	mg/L	---	---	---		--
<b>Inorganic Analytical Parameters (TCLP)</b>						
Arsenic,TCLP	mg/L	---	---	---		<0.050
Barium,TCLP	mg/L	---	---	---		0.4
Cadmium,TCLP	mg/L	---	---	---		0.004
Chromium,TCLP	mg/L	---	---	---		<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050
Silver,TCLP	mg/L	---	---	---		<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040
Calcium,TCLP	mg/L	---	---	---		350
Cobalt,TCLP	mg/L	---	---	---		<0.025
Copper,TCLP	mg/L	---	---	---		0.052
Cyanide,TCLP	mg/L	---	---	---		----
Iron,TCLP	mg/L	---	---	---		<0.40
Magnesium,TCLP	mg/L	---	---	---		98
Manganese,TCLP	mg/L	---	---	---		0.47
Nickel,TCLP	mg/L	---	---	---		<0.025
Potassium,TCLP	mg/L	---	---	---		0.61
Sodium,TCLP	mg/L	---	---	---		----
Thallium,TCLP	mg/L	---	---	---		<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025
Zinc,TCLP	mg/L	---	---	---		0.048



# TestAmerica

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## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

TestAmerica Job ID: 500-136785-3  
Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:  
Terracon Consulting Eng & Scientists  
135 Ambassador Drive  
Naperville, Illinois 60540

Attn: Mr. Matthew Weiss



Authorized for release by:  
11/15/2017 5:33:49 PM

Richard Wright, Senior Project Manager  
(708)534-5200  
[richard.wright@testamericainc.com](mailto:richard.wright@testamericainc.com)

### LINKS

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results through  
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Have a Question?



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[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

1

2

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-3

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**Job ID: 500-136785-3**

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**Laboratory: TestAmerica Chicago**

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**Narrative**

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**Job Narrative  
500-136785-3**

**Receipt**

The samples were received on 11/3/2017 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.6° C and 3.8° C.

**GC/MS VOA**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**GC/MS Semi VOA**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Metals**

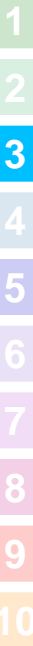
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Organic Prep**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-3

**Client Sample ID: 2696V-13-B01 (0-2)**

**Lab Sample ID: 500-136785-9**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.0090	J	0.039	0.0070	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.018	J	0.039	0.0051	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.036	J	0.039	0.0065	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.17		0.039	0.0052	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.23		0.039	0.0075	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.30		0.039	0.0084	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.12		0.039	0.013	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.093		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.19		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.066		0.039	0.0075	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.31		0.039	0.0072	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.0081	J	0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.13		0.039	0.010	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.0091	J	0.078	0.0071	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.0096	J	0.039	0.0060	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.12		0.039	0.0054	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.21		0.039	0.0077	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.57	J	1.1	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	6.0		0.55	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	51		0.55	0.063	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.58		0.22	0.051	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.38	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	15		0.55	0.27	mg/Kg	1	☼	6010B	Total/NA
Cobalt	7.8		0.28	0.072	mg/Kg	1	☼	6010B	Total/NA
Copper	19		0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	14000		11	5.7	mg/Kg	1	☼	6010B	Total/NA
Lead	93		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	19000		5.5	2.7	mg/Kg	1	☼	6010B	Total/NA
Calcium	33000	B	11	1.9	mg/Kg	1	☼	6010B	Total/NA
Manganese	270		0.55	0.080	mg/Kg	1	☼	6010B	Total/NA
Nickel	17		0.55	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	16		0.28	0.065	mg/Kg	1	☼	6010B	Total/NA
Zinc	96		1.1	0.48	mg/Kg	1	☼	6010B	Total/NA
Potassium	1400		28	9.7	mg/Kg	1	☼	6010B	Total/NA
Sodium	300		55	8.1	mg/Kg	1	☼	6010B	Total/NA
Barium	0.40	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0040	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	350		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.052		0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	98		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.47		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	0.61	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.048	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.24		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.033		0.018	0.0062	mg/Kg	1	☼	7471B	Total/NA
pH	8.4		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-3

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136785-9	2696V-13-B01 (0-2)	Solid	11/02/17 10:30	11/03/17 09:45

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-3

**Client Sample ID: 2696V-13-B01 (0-2)**

**Lab Sample ID: 500-136785-9**

**Date Collected: 11/02/17 10:30**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 83.9**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.017		0.017	0.0076	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Benzene	<0.0017		0.0017	0.00044	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Bromodichloromethane	<0.0017		0.0017	0.00035	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Bromoform	<0.0017		0.0017	0.00051	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Bromomethane	<0.0044		0.0044	0.0016	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
2-Butanone (MEK)	<0.0044		0.0044	0.0019	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Carbon disulfide	<0.0044		0.0044	0.00091	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Carbon tetrachloride	<0.0017		0.0017	0.00050	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Chlorobenzene	<0.0017		0.0017	0.00064	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Chloroethane	<0.0044		0.0044	0.0013	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Chloroform	<0.0017		0.0017	0.00060	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Chloromethane	<0.0044		0.0044	0.0017	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
cis-1,2-Dichloroethene	<0.0017		0.0017	0.00049	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
cis-1,3-Dichloropropene	<0.0017		0.0017	0.00052	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Dibromochloromethane	<0.0017		0.0017	0.00057	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
1,1-Dichloroethane	<0.0017		0.0017	0.00060	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
1,2-Dichloroethane	<0.0044		0.0044	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
1,1-Dichloroethene	<0.0017		0.0017	0.00060	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
1,2-Dichloropropane	<0.0017		0.0017	0.00045	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
1,3-Dichloropropane, Total	<0.0017		0.0017	0.00061	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Ethylbenzene	<0.0017		0.0017	0.00083	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
2-Hexanone	<0.0044		0.0044	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Methylene Chloride	<0.0044		0.0044	0.0017	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
4-Methyl-2-pentanone (MIBK)	<0.0044		0.0044	0.0013	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Methyl tert-butyl ether	<0.0017		0.0017	0.00051	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Styrene	<0.0017		0.0017	0.00053	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
1,1,2,2-Tetrachloroethane	<0.0017		0.0017	0.00056	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Tetrachloroethene	<0.0017		0.0017	0.00059	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Toluene	<0.0017		0.0017	0.00044	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
trans-1,2-Dichloroethene	<0.0017		0.0017	0.00077	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
trans-1,3-Dichloropropene	<0.0017		0.0017	0.00061	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
1,1,1-Trichloroethane	<0.0017		0.0017	0.00058	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
1,1,2-Trichloroethane	<0.0017		0.0017	0.00075	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Trichloroethene	<0.0017		0.0017	0.00059	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Vinyl acetate	<0.0044		0.0044	0.0015	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Vinyl chloride	<0.0017		0.0017	0.00077	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1
Xylenes, Total	<0.0035		0.0035	0.00056	mg/Kg	☼	11/04/17 08:18	11/08/17 18:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		75 - 131	11/04/17 08:18	11/08/17 18:19	1
Dibromofluoromethane	109		75 - 126	11/04/17 08:18	11/08/17 18:19	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 134	11/04/17 08:18	11/08/17 18:19	1
Toluene-d8 (Surr)	95		75 - 124	11/04/17 08:18	11/08/17 18:19	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.0090	J	0.039	0.0070	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Acenaphthylene	0.018	J	0.039	0.0051	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Anthracene	0.036	J	0.039	0.0065	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Benzo[a]anthracene	0.17		0.039	0.0052	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-3

**Client Sample ID: 2696V-13-B01 (0-2)**

**Lab Sample ID: 500-136785-9**

**Date Collected: 11/02/17 10:30**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 83.9**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.23</b>		0.039	0.0075	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
<b>Benzo[b]fluoranthene</b>	<b>0.30</b>		0.039	0.0084	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
<b>Benzo[g,h,i]perylene</b>	<b>0.12</b>		0.039	0.013	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
<b>Benzo[k]fluoranthene</b>	<b>0.093</b>		0.039	0.011	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.058	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.071	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.051	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Butyl benzyl phthalate	<0.20		0.20	0.074	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Carbazole	<0.20		0.20	0.097	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
4-Chloroaniline	<0.78		0.78	0.18	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
2-Chlorophenol	<0.20		0.20	0.066	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.045	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
<b>Chrysene</b>	<b>0.19</b>		0.039	0.011	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
<b>Dibenz(a,h)anthracene</b>	<b>0.066</b>		0.039	0.0075	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Dibenzofuran	<0.20		0.20	0.045	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
1,2-Dichlorobenzene	<0.20		0.20	0.046	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.054	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
2,4-Dichlorophenol	<0.39		0.39	0.092	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Diethyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Di-n-butyl phthalate	<0.20		0.20	0.059	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
4,6-Dinitro-2-methylphenol	<0.78		0.78	0.31	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
2,4-Dinitrophenol	<0.78		0.78	0.68	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
2,6-Dinitrotoluene	<0.20		0.20	0.076	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Di-n-octyl phthalate	<0.20		0.20	0.063	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
<b>Fluoranthene</b>	<b>0.31</b>		0.039	0.0072	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
<b>Fluorene</b>	<b>0.0081 J</b>		0.039	0.0055	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Hexachlorobenzene	<0.078		0.078	0.0090	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Hexachlorobutadiene	<0.20		0.20	0.061	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Hexachlorocyclopentadiene	<0.78		0.78	0.22	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Hexachloroethane	<0.20		0.20	0.059	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.13</b>		0.039	0.010	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
<b>2-Methylnaphthalene</b>	<b>0.0091 J</b>		0.078	0.0071	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
2-Methylphenol	<0.20		0.20	0.062	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
<b>Naphthalene</b>	<b>0.0096 J</b>		0.039	0.0060	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
2-Nitroaniline	<0.20		0.20	0.052	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Nitrobenzene	<0.039		0.039	0.0097	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
2-Nitrophenol	<0.39		0.39	0.092	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-3

**Client Sample ID: 2696V-13-B01 (0-2)**

**Lab Sample ID: 500-136785-9**

Date Collected: 11/02/17 10:30

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 83.9

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.78		0.78	0.37	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
N-Nitrosodi-n-propylamine	<0.078		0.078	0.047	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.045	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Pentachlorophenol	<0.78		0.78	0.62	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
<b>Phenanthrene</b>	<b>0.12</b>		0.039	0.0054	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
Phenol	<0.20		0.20	0.086	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
<b>Pyrene</b>	<b>0.21</b>		0.039	0.0077	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
2,4,5-Trichlorophenol	<0.39		0.39	0.089	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	11/10/17 17:29	11/15/17 15:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	90		44 - 121	11/10/17 17:29	11/15/17 15:10	1
2-Fluorophenol	109		46 - 133	11/10/17 17:29	11/15/17 15:10	1
Nitrobenzene-d5	94		41 - 120	11/10/17 17:29	11/15/17 15:10	1
Phenol-d5	108		46 - 125	11/10/17 17:29	11/15/17 15:10	1
Terphenyl-d14	87		35 - 160	11/10/17 17:29	11/15/17 15:10	1
2,4,6-Tribromophenol	82		25 - 139	11/10/17 17:29	11/15/17 15:10	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.57</b>	<b>J</b>	1.1	0.21	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
<b>Arsenic</b>	<b>6.0</b>		0.55	0.19	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
<b>Barium</b>	<b>51</b>		0.55	0.063	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
<b>Beryllium</b>	<b>0.58</b>		0.22	0.051	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
<b>Cadmium</b>	<b>0.38</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
<b>Chromium</b>	<b>15</b>		0.55	0.27	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
<b>Cobalt</b>	<b>7.8</b>		0.28	0.072	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
<b>Copper</b>	<b>19</b>		0.55	0.15	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
<b>Iron</b>	<b>14000</b>		11	5.7	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
<b>Lead</b>	<b>93</b>		0.28	0.13	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
<b>Magnesium</b>	<b>19000</b>		5.5	2.7	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
<b>Calcium</b>	<b>33000</b>	<b>B</b>	11	1.9	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
<b>Manganese</b>	<b>270</b>		0.55	0.080	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
<b>Nickel</b>	<b>17</b>		0.55	0.16	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
Selenium	<0.55		0.55	0.32	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
Silver	<0.28		0.28	0.071	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
<b>Vanadium</b>	<b>16</b>		0.28	0.065	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
<b>Zinc</b>	<b>96</b>		1.1	0.48	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
<b>Potassium</b>	<b>1400</b>		28	9.7	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1
<b>Sodium</b>	<b>300</b>		55	8.1	mg/Kg	☼	11/07/17 16:54	11/09/17 02:00	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 08:42	11/09/17 16:09	1
<b>Barium</b>	<b>0.40</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 08:42	11/09/17 16:09	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 08:42	11/09/17 16:09	1
<b>Cadmium</b>	<b>0.0040</b>	<b>J</b>	0.0050	0.0020	mg/L		11/09/17 08:42	11/09/17 16:09	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-3

**Client Sample ID: 2696V-13-B01 (0-2)**

**Lab Sample ID: 500-136785-9**

Date Collected: 11/02/17 10:30

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 83.9

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>350</b>		5.0	0.50	mg/L		11/09/17 08:42	11/09/17 16:09	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:09	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:09	1
<b>Copper</b>	<b>0.052</b>		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:09	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 08:42	11/09/17 16:09	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 08:42	11/09/17 16:09	1
<b>Magnesium</b>	<b>98</b>		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 16:09	1
<b>Manganese</b>	<b>0.47</b>		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:09	1
Nickel	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:09	1
<b>Potassium</b>	<b>0.61</b>	<b>J</b>	2.5	0.50	mg/L		11/09/17 08:42	11/09/17 16:09	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 08:42	11/09/17 16:09	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:09	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:09	1
<b>Zinc</b>	<b>0.048</b>	<b>J</b>	0.50	0.020	mg/L		11/09/17 08:42	11/09/17 16:09	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.24</b>		0.025	0.010	mg/L		11/09/17 16:40	11/10/17 20:36	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 08:42	11/10/17 12:33	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 08:42	11/10/17 12:33	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 15:09	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.033</b>		0.018	0.0062	mg/Kg	☼	11/07/17 13:20	11/08/17 09:56	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.56		0.56	0.19	mg/Kg	☼	11/11/17 12:30	11/11/17 15:35	1
<b>pH</b>	<b>8.4</b>		0.20	0.20	SU			11/11/17 16:42	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-3

## Qualifiers

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-3

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)  
 Contact: **MATT WIGGINS**  
 Company: **TERRALON**  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: **500-136785**  
 Chain of Custody Number: \_\_\_\_\_  
 Page **1** of **1**  
 Temperature °C of Cooler: **26.3.8**

Client		Client Project #		Preservative		Parameter		Matrix		Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name		Lab Project #		# of Containers		Date		Time			Comments
Project Location/State		Lab Project #		Matrix		Date		Time			
Sampler		Lab PM		Matrix		Date		Time			
<b>TERRALON</b>		<b>11-77029 M</b>									
<b>WORK ORDER 038A</b>											
<b>MARKHAM, IL</b>											
<b>CRAIG VARLAND</b>		<b>DICK WRIGHT</b>									
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	VOCs	SUDGS	ZETAL METALS	TCLP ZETAL METALS	Comments
0		2696V-13-B01-(0-21)	11-2-17	1030	5	S	X	X	X	X	

Turnaround Time Required (Business Days):  1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other \_\_\_\_\_

Requested Due Date: \_\_\_\_\_

Sample Disposal:  Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <b>[Signature]</b>	Company: <b>TERRALON</b>	Date: <b>11-3-17</b>	Time: <b>0832</b>	Received By: <b>P. Neal</b>	Company: <b>TA</b>	Date: <b>11/3/17</b>	Time: <b>0832</b>
Relinquished By: <b>P. Neal</b>	Company: <b>TA</b>	Date: <b>11/3/17</b>	Time: <b>0945</b>	Received By: <b>Dirol Senushy</b>	Company: <b>TACHIE</b>	Date: <b>11/3/17</b>	Time: <b>0945</b>

Lab Courier: **TA**  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

- Matrix Key
- WW - Wastewater
  - W - Water
  - S - Soil
  - SL - Sludge
  - MS - Miscellaneous
  - OL - Oil
  - A - Air
  - SE - Sediment
  - SO - Soil
  - L - Leachate
  - WI - Wipe
  - DW - Drinking Water
  - O - Other

Client Comments: **NO ALUMINUM**

Lab Comments: \_\_\_\_\_

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136785-3

**Login Number: 136785**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6, 3.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

US Route 6 (Eastbound) IDOT STA 46+30 to 49+00 (ISGS Site 2696V-14)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms



Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

Soil from borings B01 to B03 were sampled adjacent to ISGS Site No 2696V-14. See Exhibits 6, 6C, 7, 7B, and Table 26 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136785-2 and J136786-3. Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

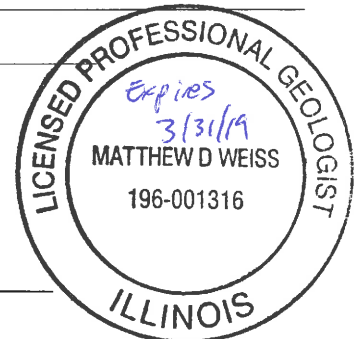
*Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))*

Company Name: Terracon Consultants, Inc  
 Street Address: 135 Ambassador Drive  
 City: Naperville State: IL Zip Code: 60540  
 Phone: 630-717-4263

Matt weiss  
 Printed Name:

[Signature]  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

7/24/18  
 Date:



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-14)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 1 of 4

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-14-B01 (0-2)	2696V-14-B02 (0-2)
				CCDD	Sample Depth (feet)	(0-2)	(0-2)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/3/2017	11/3/2017
<b>Volatile Organic Analytical Parameters</b>							
Acetone	mg/kg	---	---	25		<0.018	<0.019
<b>Semivolatile Organic Analytical Parameters</b>							
Acenaphthene	mg/kg	0.09	0.13	570		<0.039	0.0096
Acenaphthylene	mg/kg	0.03	0.07	85		0.0052	0.0069
Anthracene	mg/kg	0.25	0.4	12000		0.0067	0.028
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.032	0.13
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.048	0.15
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.077	<0.038
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.028	0.081
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		0.028	<0.038
Chrysene	mg/kg	1.2	2.7	88		0.046	0.16
Dibenzo(a,h)anthracene	mg/kg	0.2	0.42	0.09		<0.039	0.03
Fluoranthene	mg/kg	2.7	4.1	3100		0.061	0.21
Fluorene	mg/kg	0.1	0.18	560		<0.039	0.007
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.02	0.078
Naphthalene	mg/kg	0.04	0.2	1.8		<0.039	0.0076
Phenanthrene	mg/kg	1.3	2.5	210		0.026	0.12
Pyrene	mg/kg	1.9	3.0	2300		0.061	0.22
2-Methylnaphthalene	mg/kg	---	0.14	---		<0.078	0.011
<b>Inorganic Analytical Parameters</b>							
Arsenic	mg/kg	---	13	11.3		8.3	7.4
Barium	mg/kg	---	110	1500		49	79
Cadmium	mg/kg	---	0.6	5.2		0.23	0.5
Chromium, total	mg/kg	---	16.2	21		11	16
Lead	mg/kg	---	36	107		38	170
Mercury	mg/kg	---	0.06	0.1		0.023	0.04
Selenium	mg/kg	---	0.48	1.3		<0.57	<0.55
Silver	mg/kg	---	0.55	4.4		<0.28	<0.27
Antimony	mg/kg	---	4.0	5		0.51	0.63
Beryllium	mg/kg	---	0.59	22		0.54	0.89
Calcium	mg/kg	---	9,300	---		33000	29000
Cobalt	mg/kg	---	8.9	20		12	10
Copper	mg/kg	---	19.6	2900		19	27
Cyanide	mg/kg	---	0.51	---		<0.45	0.27
Iron	mg/kg	---	15,900	15000		17000	20000
Magnesium	mg/kg	---	4,820	325000		24000	24000
Manganese	mg/kg	---	636	630		470	290
Nickel	mg/kg	---	18	100		23	26
Potassium	mg/kg	---	1,268	---		1500	2000
Sodium	mg/kg	---	130	---		240	520
Thallium	mg/kg	---	0.32	2.6		<0.57	<0.55
Vanadium	mg/kg	---	25.2	550		17	22
Zinc	mg/kg	---	95	5100		61	110
pH			6.25	9		8.6	8.7

Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-14)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 2 of 4

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-14-B01 (0-2)	2696V-14-B02 (0-2)
				CCDD	Sample Depth (feet)	(0-2)	(0-2)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/3/2017	11/3/2017
<b>Inorganic Analytical Parameters (SPLP)</b>							
Antimony,SPLP	mg/L	---	---	---		--	--
Arsenic,SPLP	mg/L	---	---	---		--	--
Barium,SPLP	mg/L	---	---	---		--	--
Beryllium,SPLP	mg/L	---	---	---		--	--
Cadmium,SPLP	mg/L	---	---	---		--	--
Calcium,SPLP	mg/L	---	---	---		--	--
Chromium,SPLP	mg/L	---	---	---		--	--
Cobalt,SPLP	mg/L	---	---	---		--	--
Copper,SPLP	mg/L	---	---	---		--	--
Iron,SPLP	mg/L	---	---	---		--	--
Lead,SPLP	mg/L	---	---	---		--	--
Magnesium,SPLP	mg/L	---	---	---		--	--
Manganese,SPLP	mg/L	---	---	---		0.33	0.4
Mercury,SPLP	mg/L	---	---	---		--	--
Nickel,SPLP	mg/L	---	---	---		--	--
Potassium,SPLP	mg/L	---	---	---		--	--
Selenium,SPLP	mg/L	---	---	---		--	--
Silver,SPLP	mg/L	---	---	---		--	--
Sodium,SPLP	mg/L	---	---	---		--	--
Thallium,SPLP	mg/L	---	---	---		--	--
Vanadium,SPLP	mg/L	---	---	---		--	--
Zinc,SPLP	mg/L	---	---	---		--	--
Cyanide,SPLP	mg/L	---	---	---		--	--
<b>Inorganic Analytical Parameters (TCLP)</b>							
Arsenic,TCLP	mg/L	---	---	---		<0.050	<0.050
Barium,TCLP	mg/L	---	---	---		0.33	0.51
Cadmium,TCLP	mg/L	---	---	---		0.0027	0.0035
Chromium,TCLP	mg/L	---	---	---		<0.025	<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075	<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020	<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050	<0.050
Silver,TCLP	mg/L	---	---	---		<0.025	<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060	<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040	<0.0040
Calcium,TCLP	mg/L	---	---	---		400	370
Cobalt,TCLP	mg/L	---	---	---		<0.025	<0.025
Copper,TCLP	mg/L	---	---	---		<0.025	<0.025
Cyanide,TCLP	mg/L	---	---	---		----	----
Iron,TCLP	mg/L	---	---	---		<0.40	<0.40
Magnesium,TCLP	mg/L	---	---	---		76	100
Manganese,TCLP	mg/L	---	---	---		0.32	0.18
Nickel,TCLP	mg/L	---	---	---		<0.025	<0.025
Potassium,TCLP	mg/L	---	---	---		2	1.1
Sodium,TCLP	mg/L	---	---	---		----	----
Thallium,TCLP	mg/L	---	---	---		<0.0020	<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025	<0.025
Zinc,TCLP	mg/L	---	---	---		<0.50	0.024

Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-14)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 3 of 4

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-14-B03 (0-2)
				CCDD	Sample Depth (feet)	(0-2)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/02/2017
<b>Volatile Organic Analytical Parameters</b>						
Acetone	mg/kg	---	---	25		0.068
<b>Semivolatile Organic Analytical Parameters</b>						
Acenaphthene	mg/kg	0.09	0.13	570		<0.037
Acenaphthylene	mg/kg	0.03	0.07	85		0.0061
Anthracene	mg/kg	0.25	0.4	12000		0.012
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.058
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.095
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.11
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.067
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		0.038
Chrysene	mg/kg	1.2	2.7	88		0.065
Dibenzo(a,h)anthracene	mg/kg	0.2	0.42	0.09		0.045
Fluoranthene	mg/kg	2.7	4.1	3100		0.13
Fluorene	mg/kg	0.1	0.18	560		<0.037
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.066
Naphthalene	mg/kg	0.04	0.2	1.8		<0.037
Phenanthrene	mg/kg	1.3	2.5	210		0.053
Pyrene	mg/kg	1.9	3.0	2300		0.089
2-Methylnaphthalene	mg/kg	---	0.14	---		<0.076
<b>Inorganic Analytical Parameters</b>						
Arsenic	mg/kg	---	13	11.3		7.8
Barium	mg/kg	---	110	1500		51
Cadmium	mg/kg	---	0.6	5.2		0.39
Chromium, total	mg/kg	---	16.2	21		11
Lead	mg/kg	---	36	107		77
Mercury	mg/kg	---	0.06	0.1		0.036
Selenium	mg/kg	---	0.48	1.3		<0.57
Silver	mg/kg	---	0.55	4.4		<0.28
Antimony	mg/kg	---	4.0	5		0.42
Beryllium	mg/kg	---	0.59	22		0.6
Calcium	mg/kg	---	9,300	---		72000
Cobalt	mg/kg	---	8.9	20		8.8
Copper	mg/kg	---	19.6	2900		21
Cyanide	mg/kg	---	0.51	---		0.26
Iron	mg/kg	---	15,900	15000		16000
Magnesium	mg/kg	---	4,820	325000		27000
Manganese	mg/kg	---	636	630		340
Nickel	mg/kg	---	18	100		20
Potassium	mg/kg	---	1,268	---		1500
Sodium	mg/kg	---	130	---		310
Thallium	mg/kg	---	0.32	2.6		<0.57
Vanadium	mg/kg	---	25.2	550		16
Zinc	mg/kg	---	95	5100		80
pH			6.25	9		8.7

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-14-B03 (0-2)
				CCDD	Sample Depth (feet)	(0-2)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/02/2017
<b>Inorganic Analytical Parameters (SPLP)</b>						
Antimony,SPLP	mg/L	---	---	---		--
Arsenic,SPLP	mg/L	---	---	---		--
Barium,SPLP	mg/L	---	---	---		--
Beryllium,SPLP	mg/L	---	---	---		--
Cadmium,SPLP	mg/L	---	---	---		--
Calcium,SPLP	mg/L	---	---	---		--
Chromium,SPLP	mg/L	---	---	---		--
Cobalt,SPLP	mg/L	---	---	---		--
Copper,SPLP	mg/L	---	---	---		--
Iron,SPLP	mg/L	---	---	---		--
Lead,SPLP	mg/L	---	---	---		--
Magnesium,SPLP	mg/L	---	---	---		--
Manganese,SPLP	mg/L	---	---	---		0.42
Mercury,SPLP	mg/L	---	---	---		--
Nickel,SPLP	mg/L	---	---	---		--
Potassium,SPLP	mg/L	---	---	---		--
Selenium,SPLP	mg/L	---	---	---		--
Silver,SPLP	mg/L	---	---	---		--
Sodium,SPLP	mg/L	---	---	---		--
Thallium,SPLP	mg/L	---	---	---		--
Vanadium,SPLP	mg/L	---	---	---		--
Zinc,SPLP	mg/L	---	---	---		--
Cyanide,SPLP	mg/L	---	---	---		--
<b>Inorganic Analytical Parameters (TCLP)</b>						
Arsenic,TCLP	mg/L	---	---	---		<0.050
Barium,TCLP	mg/L	---	---	---		0.4
Cadmium,TCLP	mg/L	---	---	---		0.0033
Chromium,TCLP	mg/L	---	---	---		<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050
Silver,TCLP	mg/L	---	---	---		<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040
Calcium,TCLP	mg/L	---	---	---		390
Cobalt,TCLP	mg/L	---	---	---		<0.025
Copper,TCLP	mg/L	---	---	---		0.011
Cyanide,TCLP	mg/L	---	---	---		----
Iron,TCLP	mg/L	---	---	---		<0.40
Magnesium,TCLP	mg/L	---	---	---		80
Manganese,TCLP	mg/L	---	---	---		0.37
Nickel,TCLP	mg/L	---	---	---		<0.025
Potassium,TCLP	mg/L	---	---	---		0.62
Sodium,TCLP	mg/L	---	---	---		----
Thallium,TCLP	mg/L	---	---	---		<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025
Zinc,TCLP	mg/L	---	---	---		0.055

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

TestAmerica Job ID: 500-136785-2  
Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:  
Terracon Consulting Eng & Scientists  
135 Ambassador Drive  
Naperville, Illinois 60540

Attn: Mr. Matthew Weiss



Authorized for release by:  
11/15/2017 5:33:28 PM

Richard Wright, Senior Project Manager  
(708)534-5200  
[richard.wright@testamericainc.com](mailto:richard.wright@testamericainc.com)

### LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-2

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**Job ID: 500-136785-2**

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**Laboratory: TestAmerica Chicago**

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**Narrative**

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**Job Narrative  
500-136785-2**

**Receipt**

The samples were received on 11/3/2017 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.6° C and 3.8° C.

**GC/MS VOA**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**GC/MS Semi VOA**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Metals**

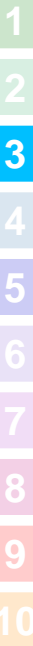
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Organic Prep**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-2

**Client Sample ID: 2696V-14-B03 (0-2)**

**Lab Sample ID: 500-136785-8**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.068		0.018	0.0080	mg/Kg	1	☼	8260B	Total/NA
Acenaphthylene	0.0061	J	0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.012	J	0.037	0.0063	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.058		0.037	0.0051	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.095		0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.11		0.037	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.067		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.038		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.065		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.045		0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.13		0.037	0.0070	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.066		0.037	0.0098	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.053		0.037	0.0053	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.089		0.037	0.0075	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.42	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	7.8		0.57	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	51		0.57	0.065	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.60		0.23	0.053	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.39	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	11		0.57	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	8.8		0.28	0.074	mg/Kg	1	☼	6010B	Total/NA
Copper	21		0.57	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	16000		11	5.9	mg/Kg	1	☼	6010B	Total/NA
Lead	77		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	27000		5.7	2.8	mg/Kg	1	☼	6010B	Total/NA
Calcium	72000	B	110	19	mg/Kg	10	☼	6010B	Total/NA
Manganese	340		0.57	0.082	mg/Kg	1	☼	6010B	Total/NA
Nickel	20		0.57	0.17	mg/Kg	1	☼	6010B	Total/NA
Vanadium	16		0.28	0.067	mg/Kg	1	☼	6010B	Total/NA
Zinc	80		1.1	0.50	mg/Kg	1	☼	6010B	Total/NA
Potassium	1500		28	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	310		57	8.4	mg/Kg	1	☼	6010B	Total/NA
Barium	0.40	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0033	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	390		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.011	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	80		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.37		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	0.62	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.055	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.42		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.036		0.018	0.0060	mg/Kg	1	☼	7471B	Total/NA
Cyanide, Total	0.26	J	0.57	0.20	mg/Kg	1	☼	9014	Total/NA
pH	8.7		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-2

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136785-8	2696V-14-B03 (0-2)	Solid	11/02/17 10:15	11/03/17 09:45

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-2

**Client Sample ID: 2696V-14-B03 (0-2)**

**Lab Sample ID: 500-136785-8**

**Date Collected: 11/02/17 10:15**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 86.0**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.068</b>		0.018	0.0080	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Benzene	<0.0018		0.0018	0.00047	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Bromodichloromethane	<0.0018		0.0018	0.00038	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Bromoform	<0.0018		0.0018	0.00054	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Bromomethane	<0.0046		0.0046	0.0017	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
2-Butanone (MEK)	<0.0046		0.0046	0.0021	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Carbon disulfide	<0.0046		0.0046	0.00096	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Carbon tetrachloride	<0.0018		0.0018	0.00054	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Chlorobenzene	<0.0018		0.0018	0.00068	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Chloroethane	<0.0046		0.0046	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Chloroform	<0.0018		0.0018	0.00064	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Chloromethane	<0.0046		0.0046	0.0019	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
cis-1,2-Dichloroethene	<0.0018		0.0018	0.00052	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
cis-1,3-Dichloropropene	<0.0018		0.0018	0.00056	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Dibromochloromethane	<0.0018		0.0018	0.00060	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
1,1-Dichloroethane	<0.0018		0.0018	0.00063	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
1,2-Dichloroethane	<0.0046		0.0046	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
1,1-Dichloroethene	<0.0018		0.0018	0.00064	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
1,2-Dichloropropane	<0.0018		0.0018	0.00048	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
1,3-Dichloropropane, Total	<0.0018		0.0018	0.00065	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Ethylbenzene	<0.0018		0.0018	0.00088	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
2-Hexanone	<0.0046		0.0046	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Methylene Chloride	<0.0046		0.0046	0.0018	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
4-Methyl-2-pentanone (MIBK)	<0.0046		0.0046	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Methyl tert-butyl ether	<0.0018		0.0018	0.00054	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Styrene	<0.0018		0.0018	0.00056	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
1,1,2,2-Tetrachloroethane	<0.0018		0.0018	0.00059	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Tetrachloroethene	<0.0018		0.0018	0.00063	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Toluene	<0.0018		0.0018	0.00047	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
trans-1,2-Dichloroethene	<0.0018		0.0018	0.00082	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
trans-1,3-Dichloropropene	<0.0018		0.0018	0.00065	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
1,1,1-Trichloroethane	<0.0018		0.0018	0.00062	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
1,1,2-Trichloroethane	<0.0018		0.0018	0.00079	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Trichloroethene	<0.0018		0.0018	0.00062	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Vinyl acetate	<0.0046		0.0046	0.0016	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Vinyl chloride	<0.0018		0.0018	0.00082	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1
Xylenes, Total	<0.0037		0.0037	0.00059	mg/Kg	☼	11/04/17 08:18	11/08/17 17:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		75 - 131	11/04/17 08:18	11/08/17 17:53	1
Dibromofluoromethane	106		75 - 126	11/04/17 08:18	11/08/17 17:53	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 134	11/04/17 08:18	11/08/17 17:53	1
Toluene-d8 (Surr)	95		75 - 124	11/04/17 08:18	11/08/17 17:53	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.037		0.037	0.0068	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
<b>Acenaphthylene</b>	<b>0.0061</b>	<b>J</b>	0.037	0.0050	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
<b>Anthracene</b>	<b>0.012</b>	<b>J</b>	0.037	0.0063	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
<b>Benzo[a]anthracene</b>	<b>0.058</b>		0.037	0.0051	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-2

**Client Sample ID: 2696V-14-B03 (0-2)**

**Lab Sample ID: 500-136785-8**

**Date Collected: 11/02/17 10:15**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 86.0**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.095</b>		0.037	0.0073	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
<b>Benzo[b]fluoranthene</b>	<b>0.11</b>		0.037	0.0081	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
<b>Benzo[g,h,i]perylene</b>	<b>0.067</b>		0.037	0.012	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
<b>Benzo[k]fluoranthene</b>	<b>0.038</b>		0.037	0.011	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.069	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
<b>Chrysene</b>	<b>0.065</b>		0.037	0.010	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
<b>Dibenz(a,h)anthracene</b>	<b>0.045</b>		0.037	0.0073	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
2,4-Dichlorophenol	<0.37		0.37	0.090	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
2,4-Dinitrophenol	<0.76		0.76	0.66	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
<b>Fluoranthene</b>	<b>0.13</b>		0.037	0.0070	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Hexachlorobenzene	<0.076		0.076	0.0087	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.066</b>		0.037	0.0098	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
2-Methylnaphthalene	<0.076		0.076	0.0069	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Naphthalene	<0.037		0.037	0.0058	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Nitrobenzene	<0.037		0.037	0.0094	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
2-Nitrophenol	<0.37		0.37	0.089	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-2

**Client Sample ID: 2696V-14-B03 (0-2)**

**Lab Sample ID: 500-136785-8**

Date Collected: 11/02/17 10:15

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 86.0

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Pentachlorophenol	<0.76		0.76	0.61	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
<b>Phenanthrene</b>	<b>0.053</b>		0.037	0.0053	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
Phenol	<0.19		0.19	0.084	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
<b>Pyrene</b>	<b>0.089</b>		0.037	0.0075	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
2,4,5-Trichlorophenol	<0.37		0.37	0.086	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/15/17 14:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	61		44 - 121	11/10/17 17:29	11/15/17 14:42	1
2-Fluorophenol	77		46 - 133	11/10/17 17:29	11/15/17 14:42	1
Nitrobenzene-d5	65		41 - 120	11/10/17 17:29	11/15/17 14:42	1
Phenol-d5	68		46 - 125	11/10/17 17:29	11/15/17 14:42	1
Terphenyl-d14	58		35 - 160	11/10/17 17:29	11/15/17 14:42	1
2,4,6-Tribromophenol	52		25 - 139	11/10/17 17:29	11/15/17 14:42	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.42</b>	<b>J</b>	1.1	0.22	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1
<b>Arsenic</b>	<b>7.8</b>		0.57	0.19	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1
<b>Barium</b>	<b>51</b>		0.57	0.065	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1
<b>Beryllium</b>	<b>0.60</b>		0.23	0.053	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1
<b>Cadmium</b>	<b>0.39</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1
<b>Chromium</b>	<b>11</b>		0.57	0.28	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1
<b>Cobalt</b>	<b>8.8</b>		0.28	0.074	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1
<b>Copper</b>	<b>21</b>		0.57	0.16	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1
<b>Iron</b>	<b>16000</b>		11	5.9	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1
<b>Lead</b>	<b>77</b>		0.28	0.13	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1
<b>Magnesium</b>	<b>27000</b>		5.7	2.8	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1
<b>Calcium</b>	<b>72000</b>	<b>B</b>	110	19	mg/Kg	☼	11/07/17 16:54	11/09/17 19:27	10
<b>Manganese</b>	<b>340</b>		0.57	0.082	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1
<b>Nickel</b>	<b>20</b>		0.57	0.17	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1
Selenium	<0.57		0.57	0.33	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1
Silver	<0.28		0.28	0.073	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1
Thallium	<0.57		0.57	0.28	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1
<b>Vanadium</b>	<b>16</b>		0.28	0.067	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1
<b>Zinc</b>	<b>80</b>		1.1	0.50	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1
<b>Potassium</b>	<b>1500</b>		28	10	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1
<b>Sodium</b>	<b>310</b>		57	8.4	mg/Kg	☼	11/07/17 16:54	11/09/17 01:56	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 08:42	11/09/17 15:56	1
<b>Barium</b>	<b>0.40</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 08:42	11/09/17 15:56	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 08:42	11/09/17 15:56	1
<b>Cadmium</b>	<b>0.0033</b>	<b>J</b>	0.0050	0.0020	mg/L		11/09/17 08:42	11/09/17 15:56	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-2

**Client Sample ID: 2696V-14-B03 (0-2)**

**Lab Sample ID: 500-136785-8**

Date Collected: 11/02/17 10:15

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 86.0

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>390</b>		5.0	0.50	mg/L		11/09/17 08:42	11/09/17 15:56	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:56	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:56	1
<b>Copper</b>	<b>0.011</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:56	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 08:42	11/09/17 15:56	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 08:42	11/09/17 15:56	1
<b>Magnesium</b>	<b>80</b>		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 15:56	1
<b>Manganese</b>	<b>0.37</b>		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:56	1
Nickel	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:56	1
<b>Potassium</b>	<b>0.62</b>	<b>J</b>	2.5	0.50	mg/L		11/09/17 08:42	11/09/17 15:56	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 08:42	11/09/17 15:56	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:56	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:56	1
<b>Zinc</b>	<b>0.055</b>	<b>J</b>	0.50	0.020	mg/L		11/09/17 08:42	11/09/17 15:56	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.42</b>		0.025	0.010	mg/L		11/09/17 16:40	11/10/17 20:32	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 08:42	11/10/17 12:00	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 08:42	11/10/17 12:00	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 15:07	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.036</b>		0.018	0.0060	mg/Kg	☼	11/07/17 13:20	11/08/17 09:54	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cyanide, Total</b>	<b>0.26</b>	<b>J</b>	0.57	0.20	mg/Kg	☼	11/11/17 12:30	11/11/17 15:35	1
<b>pH</b>	<b>8.7</b>		0.20	0.20	SU			11/11/17 16:09	1



# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-2

## Qualifiers

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

### General Chemistry

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

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-2

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)  
 Contact: MATT WEISS  
 Company: TERRALON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference#: \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-136785  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: 2.6, 3.8

Client		Client Project #		Preservative		Parameter		Matrix		Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other
Project Name		Lab Project #		# of Containers		Matrix		Comments		
Project Location/State		Lab PM		Date		Time				
<u>TERRALON</u>		<u>11177029M</u>								
<u>WORK ORDER 038A</u>		<u>DICK WRIGHT</u>								
<u>MARKHAM, IL</u>										
<u>CRAIG VARLAND</u>										
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	NOGS	SNOS	23 TAL METALS	TELEP 23 TAL METALS
<u>8</u>		<u>2696V-14-B03-(0-21)</u>	<u>11-2-17</u>	<u>1015</u>	<u>5</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>

Turnaround Time Required (Business Days)  
 \_\_\_ 1 Day \_\_\_ 2 Days \_\_\_ 5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other

Requested Due Date: \_\_\_\_\_

Sample Disposal  
 Return to Client  Disposal by Lab  Archive for \_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRALON</u> Date: <u>11-3-17</u> Time: <u>0832</u>	Received By: <u>A. Neal</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>0832</u>
Relinquished By: <u>A. Neal</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>0945</u>	Received By: <u>[Signature]</u> Company: <u>TALME</u> Date: <u>11/3/17</u> Time: <u>0945</u>

Lab Courier: TA  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

Matrix Key  
 WW - Wastewater SE - Sediment  
 W - Water SO - Soil  
 S - Soil L - Leachate  
 SL - Sludge WI - Wipe  
 MS - Miscellaneous DW - Drinking Water  
 OL - Oil O - Other  
 A - Air

Client Comments:  
NO ALUMINUM

Lab Comments:

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136785-2

**Login Number: 136785**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6, 3.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

TestAmerica Job ID: 500-136786-3  
Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:  
Terracon Consulting Eng & Scientists  
135 Ambassador Drive  
Naperville, Illinois 60540

Attn: Mr. Matthew Weiss



Authorized for release by:  
11/16/2017 12:29:42 PM

Richard Wright, Senior Project Manager  
(708)534-5200  
[richard.wright@testamericainc.com](mailto:richard.wright@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-3

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**Job ID: 500-136786-3**

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**Laboratory: TestAmerica Chicago**

## Narrative

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**Job Narrative  
500-136786-3**

### Receipt

The samples were received on 11/3/2017 4:27 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.9° C and 4.6° C.

### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### Metals

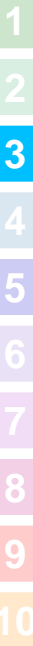
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.





# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-3

**Client Sample ID: 2696V-14-B01 (0-2)**

**Lab Sample ID: 500-136786-12**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0052	J	0.039	0.0051	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.0067	J	0.039	0.0065	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.032	J	0.039	0.0052	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.048		0.039	0.0075	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.077		0.039	0.0084	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.028	J	0.039	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.028	J	0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.046		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.061		0.039	0.0072	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.020	J	0.039	0.010	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.026	J	0.039	0.0054	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.061		0.039	0.0077	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.51	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	8.3		0.57	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	49		0.57	0.065	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.54		0.23	0.053	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.23	B	0.11	0.021	mg/Kg	1	☼	6010B	Total/NA
Chromium	11		0.57	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	12		0.28	0.075	mg/Kg	1	☼	6010B	Total/NA
Copper	19		0.57	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	17000		11	5.9	mg/Kg	1	☼	6010B	Total/NA
Lead	38		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	24000		5.7	2.8	mg/Kg	1	☼	6010B	Total/NA
Calcium	33000	B	110	19	mg/Kg	10	☼	6010B	Total/NA
Manganese	470		0.57	0.083	mg/Kg	1	☼	6010B	Total/NA
Nickel	23		0.57	0.17	mg/Kg	1	☼	6010B	Total/NA
Vanadium	17		0.28	0.067	mg/Kg	1	☼	6010B	Total/NA
Zinc	61		1.1	0.50	mg/Kg	1	☼	6010B	Total/NA
Potassium	1500		28	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	240		57	8.4	mg/Kg	1	☼	6010B	Total/NA
Barium	0.33	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0027	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	400		5.0	0.50	mg/L	1		6010B	TCLP
Magnesium	76		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.32		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	2.0	J	2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.33		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.023		0.019	0.0064	mg/Kg	1	☼	7471B	Total/NA
pH	8.6		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-14-B02 (0-2)**

**Lab Sample ID: 500-136786-13**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.0096	J	0.038	0.0069	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.0069	J	0.038	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.028	J	0.038	0.0064	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.13		0.038	0.0051	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.15		0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.081		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.16		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-3

**Client Sample ID: 2696V-14-B02 (0-2) (Continued)**

**Lab Sample ID: 500-136786-13**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Dibenz(a,h)anthracene	0.030	J	0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA	
Fluoranthene	0.21		0.038	0.0071	mg/Kg	1	☼	8270D	Total/NA	
Fluorene	0.0070	J	0.038	0.0054	mg/Kg	1	☼	8270D	Total/NA	
Indeno[1,2,3-cd]pyrene	0.078		0.038	0.0099	mg/Kg	1	☼	8270D	Total/NA	
2-Methylnaphthalene	0.011	J	0.077	0.0070	mg/Kg	1	☼	8270D	Total/NA	
Naphthalene	0.0076	J	0.038	0.0059	mg/Kg	1	☼	8270D	Total/NA	
Phenanthrene	0.12		0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA	
Pyrene	0.22		0.038	0.0076	mg/Kg	1	☼	8270D	Total/NA	
Antimony	0.63	J	1.1	0.21	mg/Kg	1	☼	6010B	Total/NA	
Arsenic	7.4		0.55	0.19	mg/Kg	1	☼	6010B	Total/NA	
Barium	79		0.55	0.062	mg/Kg	1	☼	6010B	Total/NA	
Beryllium	0.89		0.22	0.051	mg/Kg	1	☼	6010B	Total/NA	
Cadmium	0.50	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA	
Chromium	16		0.55	0.27	mg/Kg	1	☼	6010B	Total/NA	
Cobalt	10		0.27	0.072	mg/Kg	1	☼	6010B	Total/NA	
Copper	27		0.55	0.15	mg/Kg	1	☼	6010B	Total/NA	
Iron	20000		11	5.7	mg/Kg	1	☼	6010B	Total/NA	
Lead	170		0.27	0.13	mg/Kg	1	☼	6010B	Total/NA	
Magnesium	24000		5.5	2.7	mg/Kg	1	☼	6010B	Total/NA	
Calcium	29000	B	110	19	mg/Kg	10	☼	6010B	Total/NA	
Manganese	290		0.55	0.079	mg/Kg	1	☼	6010B	Total/NA	
Nickel	26		0.55	0.16	mg/Kg	1	☼	6010B	Total/NA	
Vanadium	22		0.27	0.064	mg/Kg	1	☼	6010B	Total/NA	
Zinc	110		1.1	0.48	mg/Kg	1	☼	6010B	Total/NA	
Potassium	2000		27	9.7	mg/Kg	1	☼	6010B	Total/NA	
Sodium	520		55	8.1	mg/Kg	1	☼	6010B	Total/NA	
Barium	0.51		0.50	0.050	mg/L	1		6010B	TCLP	
Cadmium	0.0035	J	0.0050	0.0020	mg/L	1		6010B	TCLP	
Calcium	370		5.0	0.50	mg/L	1		6010B	TCLP	
Magnesium	100		2.5	0.50	mg/L	1		6010B	TCLP	
Manganese	0.18		0.025	0.010	mg/L	1		6010B	TCLP	
Potassium	1.1	J	2.5	0.50	mg/L	1		6010B	TCLP	
Zinc	0.024	J	0.50	0.020	mg/L	1		6010B	TCLP	
Manganese	0.40		0.025	0.010	mg/L	1		6010B	SPLP East	
Mercury	0.040		0.019	0.0063	mg/Kg	1	☼	7471B	Total/NA	
Cyanide, Total	0.27	J	0.51	0.17	mg/Kg	1	☼	9014	Total/NA	
pH	8.7		0.20	0.20	SU	1		9045D	Total/NA	

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136786-12	2696V-14-B01 (0-2)	Solid	11/03/17 14:20	11/03/17 16:27
500-136786-13	2696V-14-B02 (0-2)	Solid	11/03/17 14:35	11/03/17 16:27

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-3

**Client Sample ID: 2696V-14-B01 (0-2)**

**Lab Sample ID: 500-136786-12**

**Date Collected: 11/03/17 14:20**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 84.9**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0078	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Benzene	<0.0018		0.0018	0.00046	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Bromodichloromethane	<0.0018		0.0018	0.00037	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Bromoform	<0.0018		0.0018	0.00052	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Bromomethane	<0.0045		0.0045	0.0017	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
2-Butanone (MEK)	<0.0045		0.0045	0.0020	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Carbon disulfide	<0.0045		0.0045	0.00093	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Carbon tetrachloride	<0.0018		0.0018	0.00052	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Chlorobenzene	<0.0018		0.0018	0.00066	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Chloroethane	<0.0045		0.0045	0.0013	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Chloroform	<0.0018		0.0018	0.00062	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Chloromethane	<0.0045		0.0045	0.0018	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
cis-1,2-Dichloroethene	<0.0018		0.0018	0.00050	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
cis-1,3-Dichloropropene	<0.0018		0.0018	0.00054	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Dibromochloromethane	<0.0018		0.0018	0.00059	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
1,1-Dichloroethane	<0.0018		0.0018	0.00062	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
1,2-Dichloroethane	<0.0045		0.0045	0.0014	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
1,1-Dichloroethene	<0.0018		0.0018	0.00062	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
1,2-Dichloropropane	<0.0018		0.0018	0.00046	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
1,3-Dichloropropane, Total	<0.0018		0.0018	0.00063	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Ethylbenzene	<0.0018		0.0018	0.00086	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
2-Hexanone	<0.0045		0.0045	0.0014	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Methylene Chloride	<0.0045		0.0045	0.0018	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
4-Methyl-2-pentanone (MIBK)	<0.0045		0.0045	0.0013	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Methyl tert-butyl ether	<0.0018		0.0018	0.00053	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Styrene	<0.0018		0.0018	0.00054	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
1,1,2,2-Tetrachloroethane	<0.0018		0.0018	0.00057	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Tetrachloroethene	<0.0018		0.0018	0.00061	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Toluene	<0.0018		0.0018	0.00045	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
trans-1,2-Dichloroethene	<0.0018		0.0018	0.00080	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
trans-1,3-Dichloropropene	<0.0018		0.0018	0.00063	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
1,1,1-Trichloroethane	<0.0018		0.0018	0.00060	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
1,1,2-Trichloroethane	<0.0018		0.0018	0.00077	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Trichloroethene	<0.0018		0.0018	0.00061	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Vinyl acetate	<0.0045		0.0045	0.0016	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Vinyl chloride	<0.0018		0.0018	0.00079	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1
Xylenes, Total	<0.0036		0.0036	0.00057	mg/Kg	☼	11/04/17 08:18	11/09/17 18:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		75 - 131	11/04/17 08:18	11/09/17 18:34	1
Dibromofluoromethane	97		75 - 126	11/04/17 08:18	11/09/17 18:34	1
1,2-Dichloroethane-d4 (Surr)	93		70 - 134	11/04/17 08:18	11/09/17 18:34	1
Toluene-d8 (Surr)	98		75 - 124	11/04/17 08:18	11/09/17 18:34	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.039		0.039	0.0070	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Acenaphthylene	0.0052	J	0.039	0.0051	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Anthracene	0.0067	J	0.039	0.0065	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Benzo[a]anthracene	0.032	J	0.039	0.0052	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-3

**Client Sample ID: 2696V-14-B01 (0-2)**

**Lab Sample ID: 500-136786-12**

Date Collected: 11/03/17 14:20

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 84.9

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.048		0.039	0.0075	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Benzo[b]fluoranthene	0.077		0.039	0.0084	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Benzo[g,h,i]perylene	0.028	J	0.039	0.012	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Benzo[k]fluoranthene	0.028	J	0.039	0.011	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.040	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.058	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.071	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.051	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Butyl benzyl phthalate	<0.19		0.19	0.074	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Carbazole	<0.19		0.19	0.097	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
4-Chloroaniline	<0.78		0.78	0.18	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
2-Chloronaphthalene	<0.19		0.19	0.043	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
2-Chlorophenol	<0.19		0.19	0.066	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Chrysene	0.046		0.039	0.011	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Dibenz(a,h)anthracene	<0.039		0.039	0.0075	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
1,2-Dichlorobenzene	<0.19		0.19	0.046	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
1,3-Dichlorobenzene	<0.19		0.19	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
1,4-Dichlorobenzene	<0.19		0.19	0.050	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.054	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
2,4-Dichlorophenol	<0.39		0.39	0.092	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Diethyl phthalate	<0.19		0.19	0.066	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Dimethyl phthalate	<0.19		0.19	0.051	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Di-n-butyl phthalate	<0.19		0.19	0.059	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
4,6-Dinitro-2-methylphenol	<0.78		0.78	0.31	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
2,4-Dinitrophenol	<0.78		0.78	0.68	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
2,4-Dinitrotoluene	<0.19		0.19	0.062	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
2,6-Dinitrotoluene	<0.19		0.19	0.076	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Di-n-octyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Fluoranthene	0.061		0.039	0.0072	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Fluorene	<0.039		0.039	0.0054	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Hexachlorobenzene	<0.078		0.078	0.0090	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Hexachlorobutadiene	<0.19		0.19	0.061	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Hexachlorocyclopentadiene	<0.78		0.78	0.22	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Hexachloroethane	<0.19		0.19	0.059	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Indeno[1,2,3-cd]pyrene	0.020	J	0.039	0.010	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Isophorone	<0.19		0.19	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
2-Methylnaphthalene	<0.078		0.078	0.0071	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
2-Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
3 & 4 Methylphenol	<0.19		0.19	0.065	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Naphthalene	<0.039		0.039	0.0060	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
2-Nitroaniline	<0.19		0.19	0.052	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Nitrobenzene	<0.039		0.039	0.0097	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
2-Nitrophenol	<0.39		0.39	0.092	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-3

**Client Sample ID: 2696V-14-B01 (0-2)**

**Lab Sample ID: 500-136786-12**

Date Collected: 11/03/17 14:20

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 84.9

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.78		0.78	0.37	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
N-Nitrosodi-n-propylamine	<0.078		0.078	0.047	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
N-Nitrosodiphenylamine	<0.19		0.19	0.046	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.045	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Pentachlorophenol	<0.78		0.78	0.62	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
<b>Phenanthrene</b>	<b>0.026</b>	<b>J</b>	0.039	0.0054	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
Phenol	<0.19		0.19	0.086	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
<b>Pyrene</b>	<b>0.061</b>		0.039	0.0077	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
2,4,5-Trichlorophenol	<0.39		0.39	0.088	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	11/11/17 09:17	11/13/17 20:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	77		44 - 121	11/11/17 09:17	11/13/17 20:29	1
2-Fluorophenol	76		46 - 133	11/11/17 09:17	11/13/17 20:29	1
Nitrobenzene-d5	78		41 - 120	11/11/17 09:17	11/13/17 20:29	1
Phenol-d5	86		46 - 125	11/11/17 09:17	11/13/17 20:29	1
Terphenyl-d14	94		35 - 160	11/11/17 09:17	11/13/17 20:29	1
2,4,6-Tribromophenol	67		25 - 139	11/11/17 09:17	11/13/17 20:29	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.51</b>	<b>J</b>	1.1	0.22	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1
<b>Arsenic</b>	<b>8.3</b>		0.57	0.19	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1
<b>Barium</b>	<b>49</b>		0.57	0.065	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1
<b>Beryllium</b>	<b>0.54</b>		0.23	0.053	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1
<b>Cadmium</b>	<b>0.23</b>	<b>B</b>	0.11	0.021	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1
<b>Chromium</b>	<b>11</b>		0.57	0.28	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1
<b>Cobalt</b>	<b>12</b>		0.28	0.075	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1
<b>Copper</b>	<b>19</b>		0.57	0.16	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1
<b>Iron</b>	<b>17000</b>		11	5.9	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1
<b>Lead</b>	<b>38</b>		0.28	0.13	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1
<b>Magnesium</b>	<b>24000</b>		5.7	2.8	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1
<b>Calcium</b>	<b>33000</b>	<b>B</b>	110	19	mg/Kg	☼	11/07/17 16:57	11/09/17 19:55	10
<b>Manganese</b>	<b>470</b>		0.57	0.083	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1
<b>Nickel</b>	<b>23</b>		0.57	0.17	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1
Selenium	<0.57		0.57	0.34	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1
Silver	<0.28		0.28	0.074	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1
Thallium	<0.57		0.57	0.28	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1
<b>Vanadium</b>	<b>17</b>		0.28	0.067	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1
<b>Zinc</b>	<b>61</b>		1.1	0.50	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1
<b>Potassium</b>	<b>1500</b>		28	10	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1
<b>Sodium</b>	<b>240</b>		57	8.4	mg/Kg	☼	11/07/17 16:57	11/09/17 00:17	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 16:44	11/10/17 16:52	1
<b>Barium</b>	<b>0.33</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 16:44	11/10/17 16:52	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 16:44	11/10/17 16:52	1
<b>Cadmium</b>	<b>0.0027</b>	<b>J</b>	0.0050	0.0020	mg/L		11/09/17 16:44	11/10/17 16:52	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-3

**Client Sample ID: 2696V-14-B01 (0-2)**

**Lab Sample ID: 500-136786-12**

Date Collected: 11/03/17 14:20

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 84.9

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>400</b>		5.0	0.50	mg/L		11/09/17 16:44	11/10/17 16:52	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:52	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:52	1
Copper	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:52	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 16:44	11/10/17 16:52	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 16:44	11/10/17 16:52	1
<b>Magnesium</b>	<b>76</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:52	1
<b>Manganese</b>	<b>0.32</b>		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:52	1
Nickel	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:52	1
<b>Potassium</b>	<b>2.0 J</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:52	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 16:44	11/10/17 16:52	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:52	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:52	1
Zinc	<0.50		0.50	0.020	mg/L		11/09/17 16:44	11/10/17 16:52	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.33</b>		0.025	0.010	mg/L		11/09/17 16:42	11/10/17 22:32	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 16:44	11/10/17 14:23	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 16:44	11/10/17 14:23	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 16:08	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.023</b>		0.019	0.0064	mg/Kg	☼	11/08/17 16:15	11/09/17 08:33	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.45		0.45	0.15	mg/Kg	☼	11/13/17 08:00	11/13/17 16:42	1
<b>pH</b>	<b>8.6</b>		0.20	0.20	SU			11/12/17 02:44	1



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-3

**Client Sample ID: 2696V-14-B02 (0-2)**

**Lab Sample ID: 500-136786-13**

**Date Collected: 11/03/17 14:35**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 85.1**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0085	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Benzene	<0.0019		0.0019	0.00050	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Bromodichloromethane	<0.0019		0.0019	0.00040	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Bromoform	<0.0019		0.0019	0.00057	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Bromomethane	<0.0049		0.0049	0.0018	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
2-Butanone (MEK)	<0.0049		0.0049	0.0022	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Carbon disulfide	<0.0049		0.0049	0.0010	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Carbon tetrachloride	<0.0019		0.0019	0.00056	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Chlorobenzene	<0.0019		0.0019	0.00072	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Chloroethane	<0.0049		0.0049	0.0014	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Chloroform	<0.0019		0.0019	0.00068	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Chloromethane	<0.0049		0.0049	0.0020	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
cis-1,2-Dichloroethene	<0.0019		0.0019	0.00054	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
cis-1,3-Dichloropropene	<0.0019		0.0019	0.00059	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Dibromochloromethane	<0.0019		0.0019	0.00064	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
1,1-Dichloroethane	<0.0019		0.0019	0.00067	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
1,2-Dichloroethane	<0.0049		0.0049	0.0015	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
1,1-Dichloroethene	<0.0019		0.0019	0.00067	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
1,2-Dichloropropane	<0.0019		0.0019	0.00050	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
1,3-Dichloropropane, Total	<0.0019		0.0019	0.00068	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Ethylbenzene	<0.0019		0.0019	0.00093	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
2-Hexanone	<0.0049		0.0049	0.0015	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Methylene Chloride	<0.0049		0.0049	0.0019	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
4-Methyl-2-pentanone (MIBK)	<0.0049		0.0049	0.0014	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Methyl tert-butyl ether	<0.0019		0.0019	0.00057	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Styrene	<0.0019		0.0019	0.00059	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
1,1,2,2-Tetrachloroethane	<0.0019		0.0019	0.00062	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Tetrachloroethene	<0.0019		0.0019	0.00066	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Toluene	<0.0019		0.0019	0.00049	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
trans-1,2-Dichloroethene	<0.0019		0.0019	0.00086	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
trans-1,3-Dichloropropene	<0.0019		0.0019	0.00068	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
1,1,1-Trichloroethane	<0.0019		0.0019	0.00065	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
1,1,2-Trichloroethane	<0.0019		0.0019	0.00084	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Trichloroethene	<0.0019		0.0019	0.00066	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Vinyl acetate	<0.0049		0.0049	0.0017	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Vinyl chloride	<0.0019		0.0019	0.00086	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1
Xylenes, Total	<0.0039		0.0039	0.00062	mg/Kg	☼	11/04/17 08:18	11/09/17 18:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		75 - 131	11/04/17 08:18	11/09/17 18:59	1
Dibromofluoromethane	101		75 - 126	11/04/17 08:18	11/09/17 18:59	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 134	11/04/17 08:18	11/09/17 18:59	1
Toluene-d8 (Surr)	96		75 - 124	11/04/17 08:18	11/09/17 18:59	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.0096	J	0.038	0.0069	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Acenaphthylene	0.0069	J	0.038	0.0050	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Anthracene	0.028	J	0.038	0.0064	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Benzo[a]anthracene	0.13		0.038	0.0051	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-3

**Client Sample ID: 2696V-14-B02 (0-2)**

**Lab Sample ID: 500-136786-13**

Date Collected: 11/03/17 14:35

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 85.1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.15</b>		0.038	0.0074	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Benzo[b]fluoranthene	<0.038		0.038	0.0082	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
<b>Benzo[g,h,i]perylene</b>	<b>0.081</b>		0.038	0.012	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Benzo[k]fluoranthene	<0.038		0.038	0.011	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.070	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Butyl benzyl phthalate	<0.19		0.19	0.073	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Carbazole	<0.19		0.19	0.095	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
4-Chloroaniline	<0.77		0.77	0.18	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
2-Chlorophenol	<0.19		0.19	0.065	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
<b>Chrysene</b>	<b>0.16</b>		0.038	0.010	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
<b>Dibenz(a,h)anthracene</b>	<b>0.030 J</b>		0.038	0.0074	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
1,2-Dichlorobenzene	<0.19		0.19	0.046	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
2,4-Dichlorophenol	<0.38		0.38	0.091	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Diethyl phthalate	<0.19		0.19	0.065	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
2,4-Dimethylphenol	<0.38		0.38	0.14	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
4,6-Dinitro-2-methylphenol	<0.77		0.77	0.31	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
2,4-Dinitrophenol	<0.77		0.77	0.67	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
2,4-Dinitrotoluene	<0.19		0.19	0.061	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
2,6-Dinitrotoluene	<0.19		0.19	0.075	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
<b>Fluoranthene</b>	<b>0.21</b>		0.038	0.0071	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
<b>Fluorene</b>	<b>0.0070 J</b>		0.038	0.0054	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Hexachlorobenzene	<0.077		0.077	0.0088	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Hexachlorocyclopentadiene	<0.77		0.77	0.22	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.078</b>		0.038	0.0099	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
<b>2-Methylnaphthalene</b>	<b>0.011 J</b>		0.077	0.0070	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
3 & 4 Methylphenol	<0.19		0.19	0.064	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
<b>Naphthalene</b>	<b>0.0076 J</b>		0.038	0.0059	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Nitrobenzene	<0.038		0.038	0.0095	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
2-Nitrophenol	<0.38		0.38	0.090	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-3

**Client Sample ID: 2696V-14-B02 (0-2)**

**Lab Sample ID: 500-136786-13**

Date Collected: 11/03/17 14:35

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 85.1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.77		0.77	0.36	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
N-Nitrosodi-n-propylamine	<0.077		0.077	0.047	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Pentachlorophenol	<0.77		0.77	0.61	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
<b>Phenanthrene</b>	<b>0.12</b>		0.038	0.0053	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
Phenol	<0.19		0.19	0.085	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
<b>Pyrene</b>	<b>0.22</b>		0.038	0.0076	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
2,4,5-Trichlorophenol	<0.38		0.38	0.087	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	11/11/17 09:17	11/13/17 20:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	83		44 - 121	11/11/17 09:17	11/13/17 20:54	1
2-Fluorophenol	74		46 - 133	11/11/17 09:17	11/13/17 20:54	1
Nitrobenzene-d5	75		41 - 120	11/11/17 09:17	11/13/17 20:54	1
Phenol-d5	85		46 - 125	11/11/17 09:17	11/13/17 20:54	1
Terphenyl-d14	100		35 - 160	11/11/17 09:17	11/13/17 20:54	1
2,4,6-Tribromophenol	74		25 - 139	11/11/17 09:17	11/13/17 20:54	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.63</b>	<b>J</b>	1.1	0.21	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1
<b>Arsenic</b>	<b>7.4</b>		0.55	0.19	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1
<b>Barium</b>	<b>79</b>		0.55	0.062	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1
<b>Beryllium</b>	<b>0.89</b>		0.22	0.051	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1
<b>Cadmium</b>	<b>0.50</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1
<b>Chromium</b>	<b>16</b>		0.55	0.27	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1
<b>Cobalt</b>	<b>10</b>		0.27	0.072	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1
<b>Copper</b>	<b>27</b>		0.55	0.15	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1
<b>Iron</b>	<b>20000</b>		11	5.7	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1
<b>Lead</b>	<b>170</b>		0.27	0.13	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1
<b>Magnesium</b>	<b>24000</b>		5.5	2.7	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1
<b>Calcium</b>	<b>29000</b>	<b>B</b>	110	19	mg/Kg	☼	11/07/17 16:57	11/09/17 19:59	10
<b>Manganese</b>	<b>290</b>		0.55	0.079	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1
<b>Nickel</b>	<b>26</b>		0.55	0.16	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1
Selenium	<0.55		0.55	0.32	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1
Silver	<0.27		0.27	0.070	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1
<b>Vanadium</b>	<b>22</b>		0.27	0.064	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1
<b>Zinc</b>	<b>110</b>		1.1	0.48	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1
<b>Potassium</b>	<b>2000</b>		27	9.7	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1
<b>Sodium</b>	<b>520</b>		55	8.1	mg/Kg	☼	11/07/17 16:57	11/09/17 00:21	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 16:44	11/10/17 16:56	1
<b>Barium</b>	<b>0.51</b>		0.50	0.050	mg/L		11/09/17 16:44	11/10/17 16:56	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 16:44	11/10/17 16:56	1
<b>Cadmium</b>	<b>0.0035</b>	<b>J</b>	0.0050	0.0020	mg/L		11/09/17 16:44	11/10/17 16:56	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-3

**Client Sample ID: 2696V-14-B02 (0-2)**

**Lab Sample ID: 500-136786-13**

Date Collected: 11/03/17 14:35

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 85.1

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>370</b>		5.0	0.50	mg/L		11/09/17 16:44	11/10/17 16:56	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:56	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:56	1
Copper	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:56	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 16:44	11/10/17 16:56	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 16:44	11/10/17 16:56	1
<b>Magnesium</b>	<b>100</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:56	1
<b>Manganese</b>	<b>0.18</b>		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:56	1
Nickel	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:56	1
<b>Potassium</b>	<b>1.1 J</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:56	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 16:44	11/10/17 16:56	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:56	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:56	1
<b>Zinc</b>	<b>0.024 J</b>		0.50	0.020	mg/L		11/09/17 16:44	11/10/17 16:56	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.40</b>		0.025	0.010	mg/L		11/09/17 16:42	11/10/17 22:36	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 16:44	11/10/17 14:27	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 16:44	11/10/17 14:27	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 16:15	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.040</b>		0.019	0.0063	mg/Kg	☼	11/08/17 16:15	11/09/17 08:40	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cyanide, Total</b>	<b>0.27 J</b>		0.51	0.17	mg/Kg	☼	11/13/17 08:00	11/13/17 16:42	1
<b>pH</b>	<b>8.7</b>		0.20	0.20	SU			11/12/17 03:17	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-3

## Qualifiers

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

### General Chemistry

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

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-3

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)  
 Contact: MATT WEISS  
 Company: TERRACON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference#: \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-136786  
 Chain of Custody Number: \_\_\_\_\_  
 Page \_\_\_\_\_ of \_\_\_\_\_  
 Temperature °C of Cooler: 29, 4.6

Client		Client Project #		Preservative		Parameter														Preservative Key					
<u>TERRACON</u>		<u>1117729M</u>																		1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other					
Project Name		Lab Project #																							
<u>WORK ORDER 037</u>																									
Project Location/State		Lab Project #																							
<u>MARKHAM, IL</u>																									
Sampler		Lab PM																							
<u>CRIG VARLAND</u>		<u>DICK WRIGHT</u>																							
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	VOCS	SVOCs	ZS TAL METALS	PH	TRCP ZS TAL METALS											Comments			
			Date	Time																					
<u>12</u>		<u>2696V-14-B01-(0-1)</u>	<u>11-3-17</u>	<u>1420</u>	<u>5</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>														
<u>13</u>		<u>2696V-14-B02-(0-1)</u>	<u>11-3-17</u>	<u>1435</u>	<u>5</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>														

Turnaround Time Required (Business Days)  
 \_\_\_\_\_ 1 Day \_\_\_\_\_ 2 Days \_\_\_\_\_ 5 Days \_\_\_\_\_ 7 Days \_\_\_\_\_ 10 Days \_\_\_\_\_ 15 Days \_\_\_\_\_ Other \_\_\_\_\_

Requested On Date \_\_\_\_\_

Sample Disposal  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRACON</u> Date: <u>11-3-17</u> Time: <u>1605</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>1605</u>	Lab Courier: <u>TA</u>
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>1627</u>	Received By: <u>[Signature]</u> Company: <u>TERRACON</u> Date: <u>11/3/17</u> Time: <u>1627</u>	Shipped: _____
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Hand Delivered: _____

Matrix Key  
 WW - Wastewater SE - Sediment  
 W - Water SO - Soil  
 S - Soil L - Leachate  
 SL - Sludge WI - Wipe  
 MS - Miscellaneous DW - Drinking Water  
 OL - Oil O - Other  
 A - Air

Client Comments: \_\_\_\_\_  
 Lab Comments: \_\_\_\_\_

# Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136786-3

**Login Number: 136786**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9, 4.6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	







Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

US Route 6 (Eastbound) 44+80 to 46+30 and Kedzie Ave (Northbound) 81+10 to 82+00 (ISGS Site 2696V-15)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

Soil from borings B01, B04, and B05 were sampled adjacent to ISGS Site No 2696V-15. See Exhibits 6, 6C, 6D, 8, and Table 28 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136785-5 and J136786-2. Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

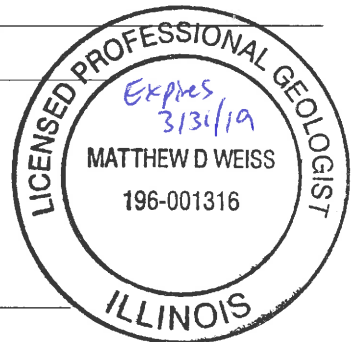
**Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))**

Company Name: Terracon Consultants, Inc  
 Street Address: 135 Ambassador Drive  
 City: Naperville State: IL Zip Code: 60540  
 Phone: 630-717-4263

Matt Weiss  
 Printed Name:

[Signature]  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

7/24/18  
 Date:



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-15)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 1 of 4

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-15-B01 (0-5)	2696V-15-B01 (0-5) Dup
				CCDD	Sample Depth (feet)	(0-5)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/02/2017	11/02/2017
<b>Volatile Organic Analytical Parameters</b>							
Acetone	mg/kg	---	---	25		0.091	0.029
<b>Semivolatile Organic Analytical Parameters</b>							
Acenaphthylene	mg/kg	0.03	0.07	85		<0.037	<0.034
Anthracene	mg/kg	0.25	0.4	12000		<0.037	<0.034
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		<0.037	<0.034
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		<0.037	<0.034
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		<0.037	<0.034
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		<0.037	<0.034
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		<0.037	<0.034
Chrysene	mg/kg	1.2	2.7	88		<0.037	<0.034
Dibenzo(a,h)anthracene	mg/kg	0.2	0.42	0.09		<0.037	<0.034
Fluoranthene	mg/kg	2.7	4.1	3100		<0.037	<0.034
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		<0.037	<0.034
Phenanthrene	mg/kg	1.3	2.5	210		<0.037	<0.034
Pyrene	mg/kg	1.9	3.0	2300		<0.037	<0.034
2-Methylnaphthalene	mg/kg	---	0.14	---		<0.075	<0.070
<b>Inorganic Analytical Parameters</b>							
Arsenic	mg/kg	---	13	11.3		2.5	0.87
Barium	mg/kg	---	110	1500		120	130
Cadmium	mg/kg	---	0.6	5.2		<0.11	<0.10
Chromium, total	mg/kg	---	16.2	21		17	17
Lead	mg/kg	---	36	107		4.6	2.6
Mercury	mg/kg	---	0.06	0.1		0.015	0.0074
Selenium	mg/kg	---	0.48	1.3		<0.55	<0.52
Silver	mg/kg	---	0.55	4.4		<0.28	<0.26
Antimony	mg/kg	---	4.0	5		0.58	0.78
Beryllium	mg/kg	---	0.59	22		1.3	1.4
Calcium	mg/kg	---	9,300	---		19000	18000
Cobalt	mg/kg	---	8.9	20		5.6	4.6
Copper	mg/kg	---	19.6	2900		8.1	6.5
Cyanide	mg/kg	---	0.51	---		<0.56	<0.52
Iron	mg/kg	---	15,900	15000		33000	33000
Magnesium	mg/kg	---	4,820	325000		2800	1900
Manganese	mg/kg	---	636	630		190	180
Nickel	mg/kg	---	18	100		15	13
Potassium	mg/kg	---	1,268	---		2900	3000
Sodium	mg/kg	---	130	---		840	900
Thallium	mg/kg	---	0.32	2.6		<0.55	<0.52
Vanadium	mg/kg	---	25.2	550		21	20
Zinc	mg/kg	---	95	5100		52	50
pH			6.25	9		8.4	8.4

Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-15)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 2 of 4

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-15-B01 (0-5)	2696V-15-B01 (0-5) Dup
				CCDD	Sample Depth (feet)	(0-5)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/02/2017	11/02/2017
<b>Inorganic Analytical Parameters (SPLP)</b>							
Antimony,SPLP	mg/L	---	---	---		--	--
Arsenic,SPLP	mg/L	---	---	---		--	--
Barium,SPLP	mg/L	---	---	---		--	--
Beryllium,SPLP	mg/L	---	---	---		--	--
Cadmium,SPLP	mg/L	---	---	---		--	--
Calcium,SPLP	mg/L	---	---	---		--	--
Chromium,SPLP	mg/L	---	---	---		--	--
Cobalt,SPLP	mg/L	---	---	---		--	--
Copper,SPLP	mg/L	---	---	---		--	--
Iron,SPLP	mg/L	---	---	---		--	--
Lead,SPLP	mg/L	---	---	---		--	--
Magnesium,SPLP	mg/L	---	---	---		--	--
Manganese,SPLP	mg/L	---	---	---		0.14	0.058
Mercury,SPLP	mg/L	---	---	---		--	--
Nickel,SPLP	mg/L	---	---	---		--	--
Potassium,SPLP	mg/L	---	---	---		--	--
Selenium,SPLP	mg/L	---	---	---		--	--
Silver,SPLP	mg/L	---	---	---		--	--
Sodium,SPLP	mg/L	---	---	---		--	--
Thallium,SPLP	mg/L	---	---	---		--	--
Vanadium,SPLP	mg/L	---	---	---		--	--
Zinc,SPLP	mg/L	---	---	---		--	--
Cyanide,SPLP	mg/L	---	---	---		--	--
<b>Inorganic Analytical Parameters (TCLP)</b>							
Arsenic,TCLP	mg/L	---	---	---		<0.050	<0.050
Barium,TCLP	mg/L	---	---	---		0.18	0.093
Cadmium,TCLP	mg/L	---	---	---		0.0022	0.002
Chromium,TCLP	mg/L	---	---	---		<0.025	<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075	<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020	<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050	<0.050
Silver,TCLP	mg/L	---	---	---		<0.025	<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060	<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040	<0.0040
Calcium,TCLP	mg/L	---	---	---		400	210
Cobalt,TCLP	mg/L	---	---	---		<0.025	<0.025
Copper,TCLP	mg/L	---	---	---		<0.025	0.013
Cyanide,TCLP	mg/L	---	---	---		----	----
Iron,TCLP	mg/L	---	---	---		<0.40	<0.40
Magnesium,TCLP	mg/L	---	---	---		61	100
Manganese,TCLP	mg/L	---	---	---		0.33	0.72
Nickel,TCLP	mg/L	---	---	---		<0.025	0.02
Potassium,TCLP	mg/L	---	---	---		1.6	0.89
Sodium,TCLP	mg/L	---	---	---		----	----
Thallium,TCLP	mg/L	---	---	---		<0.0020	<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025	<0.025
Zinc,TCLP	mg/L	---	---	---		<0.50	0.042

Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-15)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 3 of 4

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-15-B04 (0-5)	2696V-15-B05 (0-5)
				CCDD	Sample Depth (feet)	(0-5)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/3/2017	11/3/2017
<b>Volatile Organic Analytical Parameters</b>							
Acetone	mg/kg	---	---	25		<0.018	<0.019
<b>Semivolatile Organic Analytical Parameters</b>							
Acenaphthylene	mg/kg	0.03	0.07	85		<0.040	0.0058
Anthracene	mg/kg	0.25	0.4	12000		<0.040	0.0084
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.015	0.052
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.028	0.073
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.031	0.11
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.018	0.062
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		0.013	0.029
Chrysene	mg/kg	1.2	2.7	88		0.025	0.067
Dibenzo(a,h)anthracene	mg/kg	0.2	0.42	0.09		<0.040	0.016
Fluoranthene	mg/kg	2.7	4.1	3100		0.026	0.085
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.01	0.057
Phenanthrene	mg/kg	1.3	2.5	210		0.022	0.042
Pyrene	mg/kg	1.9	3.0	2300		0.027	0.077
2-Methylnaphthalene	mg/kg	---	0.14	---		0.0081	<0.074
<b>Inorganic Analytical Parameters</b>							
Arsenic	mg/kg	---	13	11.3		7	7.2
Barium	mg/kg	---	110	1500		35	77
Cadmium	mg/kg	---	0.6	5.2		0.14	0.6
Chromium, total	mg/kg	---	16.2	21		11	15
Lead	mg/kg	---	36	107		20	220
Mercury	mg/kg	---	0.06	0.1		0.029	0.025
Selenium	mg/kg	---	0.48	1.3		<0.60	<0.56
Silver	mg/kg	---	0.55	4.4		<0.30	<0.28
Antimony	mg/kg	---	4.0	5		0.46	0.57
Beryllium	mg/kg	---	0.59	22		0.49	0.8
Calcium	mg/kg	---	9,300	---		35000	1100
Cobalt	mg/kg	---	8.9	20		9.7	8.2
Copper	mg/kg	---	19.6	2900		18	24
Cyanide	mg/kg	---	0.51	---		<0.59	<0.56
Iron	mg/kg	---	15,900	15000		16000	17000
Magnesium	mg/kg	---	4,820	325000		20000	25000
Manganese	mg/kg	---	636	630		280	280
Nickel	mg/kg	---	18	100		22	21
Potassium	mg/kg	---	1,268	---		1700	1700
Sodium	mg/kg	---	130	---		560	420
Thallium	mg/kg	---	0.32	2.6		<0.60	<0.56
Vanadium	mg/kg	---	25.2	550		16	21
Zinc	mg/kg	---	95	5100		89	140
pH			6.25	9		8.4	8.3

Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-15)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 4 of 4

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-15-B04 (0-5)	2696V-15-B05 (0-5)
				CCDD	Sample Depth (feet)	(0-5)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/3/2017	11/3/2017
<b>Inorganic Analytical Parameters (SPLP)</b>							
Antimony, SPLP	mg/L	---	---	---		--	--
Arsenic, SPLP	mg/L	---	---	---		--	--
Barium, SPLP	mg/L	---	---	---		--	--
Beryllium, SPLP	mg/L	---	---	---		--	--
Cadmium, SPLP	mg/L	---	---	---		--	--
Calcium, SPLP	mg/L	---	---	---		--	--
Chromium, SPLP	mg/L	---	---	---		--	--
Cobalt, SPLP	mg/L	---	---	---		--	--
Copper, SPLP	mg/L	---	---	---		--	--
Iron, SPLP	mg/L	---	---	---		--	--
Lead, SPLP	mg/L	---	---	---		--	--
Magnesium, SPLP	mg/L	---	---	---		--	--
Manganese, SPLP	mg/L	---	---	---		0.48	0.41
Mercury, SPLP	mg/L	---	---	---		--	--
Nickel, SPLP	mg/L	---	---	---		--	--
Potassium, SPLP	mg/L	---	---	---		--	--
Selenium, SPLP	mg/L	---	---	---		--	--
Silver, SPLP	mg/L	---	---	---		--	--
Sodium, SPLP	mg/L	---	---	---		--	--
Thallium, SPLP	mg/L	---	---	---		--	--
Vanadium, SPLP	mg/L	---	---	---		--	--
Zinc, SPLP	mg/L	---	---	---		--	--
Cyanide, SPLP	mg/L	---	---	---		--	--
<b>Inorganic Analytical Parameters (TCLP)</b>							
Arsenic, TCLP	mg/L	---	---	---		<0.050	<0.050
Barium, TCLP	mg/L	---	---	---		0.45	0.48
Cadmium, TCLP	mg/L	---	---	---		0.0029	0.0032
Chromium, TCLP	mg/L	---	---	---		<0.025	<0.025
Lead, TCLP	mg/L	---	---	---		<0.0075	<0.0075
Mercury, TCLP	mg/L	---	---	---		<0.00020	<0.00020
Selenium, TCLP	mg/L	---	---	---		<0.050	<0.050
Silver, TCLP	mg/L	---	---	---		<0.025	<0.025
Antimony, TCLP	mg/L	---	---	---		<0.0060	<0.0060
Beryllium, TCLP	mg/L	---	---	---		<0.0040	<0.0040
Calcium, TCLP	mg/L	---	---	---		370	400
Cobalt, TCLP	mg/L	---	---	---		<0.025	<0.025
Copper, TCLP	mg/L	---	---	---		0.026	<0.025
Cyanide, TCLP	mg/L	---	---	---		----	----
Iron, TCLP	mg/L	---	---	---		<0.40	<0.40
Magnesium, TCLP	mg/L	---	---	---		80	79
Manganese, TCLP	mg/L	---	---	---		1.5	0.16
Nickel, TCLP	mg/L	---	---	---		0.013	<0.025
Potassium, TCLP	mg/L	---	---	---		1.3	1.6
Sodium, TCLP	mg/L	---	---	---		----	----
Thallium, TCLP	mg/L	---	---	---		<0.0020	<0.0020
Vanadium, TCLP	mg/L	---	---	---		<0.025	<0.025
Zinc, TCLP	mg/L	---	---	---		0.035	0.024



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

TestAmerica Job ID: 500-136785-5  
Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:  
Terracon Consulting Eng & Scientists  
135 Ambassador Drive  
Naperville, Illinois 60540

Attn: Mr. Matthew Weiss



Authorized for release by:  
11/15/2017 5:34:26 PM

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### LINKS

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-5

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**Job ID: 500-136785-5**

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**Laboratory: TestAmerica Chicago**

## Narrative

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**Job Narrative  
500-136785-5**

### Receipt

The samples were received on 11/3/2017 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.6° C and 3.8° C.

### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### Metals

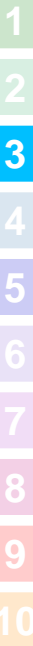
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-5

**Client Sample ID: 2696V-15-B01 (0-5)**

**Lab Sample ID: 500-136785-12**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.091		0.023	0.0099	mg/Kg	1	☼	8260B	Total/NA
Antimony	0.58	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	2.5		0.55	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	120		0.55	0.063	mg/Kg	1	☼	6010B	Total/NA
Beryllium	1.3		0.22	0.052	mg/Kg	1	☼	6010B	Total/NA
Chromium	17		0.55	0.27	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.6		0.28	0.072	mg/Kg	1	☼	6010B	Total/NA
Copper	8.1		0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	33000		11	5.8	mg/Kg	1	☼	6010B	Total/NA
Lead	4.6		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	2800		5.5	2.7	mg/Kg	1	☼	6010B	Total/NA
Calcium	19000	B	11	1.9	mg/Kg	1	☼	6010B	Total/NA
Manganese	190		0.55	0.080	mg/Kg	1	☼	6010B	Total/NA
Nickel	15		0.55	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	21		0.28	0.065	mg/Kg	1	☼	6010B	Total/NA
Zinc	52		1.1	0.49	mg/Kg	1	☼	6010B	Total/NA
Potassium	2900		28	9.8	mg/Kg	1	☼	6010B	Total/NA
Sodium	840		55	8.2	mg/Kg	1	☼	6010B	Total/NA
Barium	0.18	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0022	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	400		5.0	0.50	mg/L	1		6010B	TCLP
Magnesium	61		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.33		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	1.6	J	2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.14		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.015	J	0.017	0.0058	mg/Kg	1	☼	7471B	Total/NA
pH	8.4		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-15-B01 (0-5) Dup**

**Lab Sample ID: 500-136785-13**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.029		0.023	0.0099	mg/Kg	1	☼	8260B	Total/NA
Antimony	0.78	J	1.0	0.20	mg/Kg	1	☼	6010B	Total/NA
Arsenic	0.87		0.52	0.18	mg/Kg	1	☼	6010B	Total/NA
Barium	130		0.52	0.060	mg/Kg	1	☼	6010B	Total/NA
Beryllium	1.4		0.21	0.049	mg/Kg	1	☼	6010B	Total/NA
Chromium	17		0.52	0.26	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.6		0.26	0.069	mg/Kg	1	☼	6010B	Total/NA
Copper	6.5		0.52	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	33000		10	5.4	mg/Kg	1	☼	6010B	Total/NA
Lead	2.6		0.26	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	1900		5.2	2.6	mg/Kg	1	☼	6010B	Total/NA
Calcium	18000	B	10	1.8	mg/Kg	1	☼	6010B	Total/NA
Manganese	180		0.52	0.076	mg/Kg	1	☼	6010B	Total/NA
Nickel	13		0.52	0.15	mg/Kg	1	☼	6010B	Total/NA
Vanadium	20		0.26	0.062	mg/Kg	1	☼	6010B	Total/NA
Zinc	50		1.0	0.46	mg/Kg	1	☼	6010B	Total/NA
Potassium	3000		26	9.3	mg/Kg	1	☼	6010B	Total/NA
Sodium	900		52	7.7	mg/Kg	1	☼	6010B	Total/NA
Barium	0.093	J	0.50	0.050	mg/L	1		6010B	TCLP

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-5

**Client Sample ID: 2696V-15-B01 (0-5) Dup (Continued)**

**Lab Sample ID: 500-136785-13**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Cadmium	0.0020	J	0.0050	0.0020	mg/L	1			6010B	TCLP
Calcium	210		5.0	0.50	mg/L	1			6010B	TCLP
Copper	0.013	J	0.025	0.010	mg/L	1			6010B	TCLP
Magnesium	100		2.5	0.50	mg/L	1			6010B	TCLP
Manganese	0.72		0.025	0.010	mg/L	1			6010B	TCLP
Nickel	0.020	J	0.025	0.010	mg/L	1			6010B	TCLP
Potassium	0.89	J	2.5	0.50	mg/L	1			6010B	TCLP
Zinc	0.042	J	0.50	0.020	mg/L	1			6010B	TCLP
Manganese	0.058		0.025	0.010	mg/L	1			6010B	SPLP East
Mercury	0.0074	J	0.016	0.0052	mg/Kg	1		☆	7471B	Total/NA
pH	8.4		0.20	0.20	SU	1			9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago



# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-5

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136785-12	2696V-15-B01 (0-5)	Solid	11/02/17 15:00	11/03/17 09:45
500-136785-13	2696V-15-B01 (0-5) Dup	Solid	11/02/17 15:00	11/03/17 09:45

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-5

**Client Sample ID: 2696V-15-B01 (0-5)**

**Lab Sample ID: 500-136785-12**

**Date Collected: 11/02/17 15:00**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 88.6**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.091		0.023	0.0099	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Benzene	<0.0023		0.0023	0.00058	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Bromodichloromethane	<0.0023		0.0023	0.00046	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Bromoform	<0.0023		0.0023	0.00067	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Bromomethane	<0.0057		0.0057	0.0022	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
2-Butanone (MEK)	<0.0057		0.0057	0.0025	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Carbon disulfide	<0.0057		0.0057	0.0012	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Carbon tetrachloride	<0.0023		0.0023	0.00066	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Chlorobenzene	<0.0023		0.0023	0.00084	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Chloroethane	<0.0057		0.0057	0.0017	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Chloroform	<0.0023		0.0023	0.00079	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Chloromethane	<0.0057		0.0057	0.0023	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
cis-1,2-Dichloroethene	<0.0023		0.0023	0.00064	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
cis-1,3-Dichloropropene	<0.0023		0.0023	0.00069	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Dibromochloromethane	<0.0023		0.0023	0.00075	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
1,1-Dichloroethane	<0.0023		0.0023	0.00078	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
1,2-Dichloroethane	<0.0057		0.0057	0.0018	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
1,1-Dichloroethene	<0.0023		0.0023	0.00079	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
1,2-Dichloropropane	<0.0023		0.0023	0.00059	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
1,3-Dichloropropane, Total	<0.0023		0.0023	0.00080	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Ethylbenzene	<0.0023		0.0023	0.0011	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
2-Hexanone	<0.0057		0.0057	0.0018	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Methylene Chloride	<0.0057		0.0057	0.0022	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
4-Methyl-2-pentanone (MIBK)	<0.0057		0.0057	0.0017	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Methyl tert-butyl ether	<0.0023		0.0023	0.00067	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Styrene	<0.0023		0.0023	0.00069	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
1,1,2,2-Tetrachloroethane	<0.0023		0.0023	0.00073	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Tetrachloroethene	<0.0023		0.0023	0.00078	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Toluene	<0.0023		0.0023	0.00058	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
trans-1,2-Dichloroethene	<0.0023		0.0023	0.0010	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
trans-1,3-Dichloropropene	<0.0023		0.0023	0.00080	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
1,1,1-Trichloroethane	<0.0023		0.0023	0.00077	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
1,1,2-Trichloroethane	<0.0023		0.0023	0.00098	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Trichloroethene	<0.0023		0.0023	0.00077	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Vinyl acetate	<0.0057		0.0057	0.0020	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Vinyl chloride	<0.0023		0.0023	0.0010	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1
Xylenes, Total	<0.0046		0.0046	0.00073	mg/Kg	☼	11/04/17 08:18	11/08/17 19:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		75 - 131	11/04/17 08:18	11/08/17 19:34	1
Dibromofluoromethane	111		75 - 126	11/04/17 08:18	11/08/17 19:34	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 134	11/04/17 08:18	11/08/17 19:34	1
Toluene-d8 (Surr)	99		75 - 124	11/04/17 08:18	11/08/17 19:34	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Anthracene	<0.037		0.037	0.0062	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Benzo[a]anthracene	<0.037		0.037	0.0050	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-5

**Client Sample ID: 2696V-15-B01 (0-5)**

**Lab Sample ID: 500-136785-12**

**Date Collected: 11/02/17 15:00**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 88.6**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.037		0.037	0.0072	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Benzo[b]fluoranthene	<0.037		0.037	0.0080	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Benzo[g,h,i]perylene	<0.037		0.037	0.012	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Benzo[k]fluoranthene	<0.037		0.037	0.011	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Carbazole	<0.19		0.19	0.093	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
4-Chloroaniline	<0.75		0.75	0.17	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
2-Chlorophenol	<0.19		0.19	0.063	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.043	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Chrysene	<0.037		0.037	0.010	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Dibenzofuran	<0.19		0.19	0.043	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
1,2-Dichlorobenzene	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
2,4-Dichlorophenol	<0.37		0.37	0.088	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
2,4-Dinitrophenol	<0.75		0.75	0.65	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
2,6-Dinitrotoluene	<0.19		0.19	0.073	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Fluoranthene	<0.037		0.037	0.0069	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Fluorene	<0.037		0.037	0.0052	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Hexachlorobenzene	<0.075		0.075	0.0086	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Hexachlorobutadiene	<0.19		0.19	0.058	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Hexachlorocyclopentadiene	<0.75		0.75	0.21	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Hexachloroethane	<0.19		0.19	0.056	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Indeno[1,2,3-cd]pyrene	<0.037		0.037	0.0096	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
2-Methylnaphthalene	<0.075		0.075	0.0068	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Naphthalene	<0.037		0.037	0.0057	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-5

**Client Sample ID: 2696V-15-B01 (0-5)**

**Lab Sample ID: 500-136785-12**

**Date Collected: 11/02/17 15:00**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 88.6**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.75		0.75	0.35	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.045	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Pentachlorophenol	<0.75		0.75	0.60	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Phenanthrene	<0.037		0.037	0.0052	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Phenol	<0.19		0.19	0.082	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
Pyrene	<0.037		0.037	0.0074	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/13/17 19:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	62		44 - 121	11/10/17 17:29	11/13/17 19:15	1
2-Fluorophenol	66		46 - 133	11/10/17 17:29	11/13/17 19:15	1
Nitrobenzene-d5	64		41 - 120	11/10/17 17:29	11/13/17 19:15	1
Phenol-d5	65		46 - 125	11/10/17 17:29	11/13/17 19:15	1
Terphenyl-d14	68		35 - 160	11/10/17 17:29	11/13/17 19:15	1
2,4,6-Tribromophenol	40		25 - 139	11/10/17 17:29	11/13/17 19:15	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.58</b>	<b>J</b>	1.1	0.22	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
<b>Arsenic</b>	<b>2.5</b>		0.55	0.19	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
<b>Barium</b>	<b>120</b>		0.55	0.063	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
<b>Beryllium</b>	<b>1.3</b>		0.22	0.052	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
Cadmium	<0.11		0.11	0.020	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
<b>Chromium</b>	<b>17</b>		0.55	0.27	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
<b>Cobalt</b>	<b>5.6</b>		0.28	0.072	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
<b>Copper</b>	<b>8.1</b>		0.55	0.15	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
<b>Iron</b>	<b>33000</b>		11	5.8	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
<b>Lead</b>	<b>4.6</b>		0.28	0.13	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
<b>Magnesium</b>	<b>2800</b>		5.5	2.7	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
<b>Calcium</b>	<b>19000</b>	<b>B</b>	11	1.9	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
<b>Manganese</b>	<b>190</b>		0.55	0.080	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
<b>Nickel</b>	<b>15</b>		0.55	0.16	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
Selenium	<0.55		0.55	0.33	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
Silver	<0.28		0.28	0.071	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
Thallium	<0.55		0.55	0.28	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
<b>Vanadium</b>	<b>21</b>		0.28	0.065	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
<b>Zinc</b>	<b>52</b>		1.1	0.49	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
<b>Potassium</b>	<b>2900</b>		28	9.8	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1
<b>Sodium</b>	<b>840</b>		55	8.2	mg/Kg	☼	11/07/17 16:54	11/09/17 02:20	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 08:42	11/09/17 16:21	1
<b>Barium</b>	<b>0.18</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 08:42	11/09/17 16:21	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 08:42	11/09/17 16:21	1
<b>Cadmium</b>	<b>0.0022</b>	<b>J</b>	0.0050	0.0020	mg/L		11/09/17 08:42	11/09/17 16:21	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-5

**Client Sample ID: 2696V-15-B01 (0-5)**

**Lab Sample ID: 500-136785-12**

Date Collected: 11/02/17 15:00

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 88.6

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>400</b>		5.0	0.50	mg/L		11/09/17 08:42	11/09/17 16:21	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:21	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:21	1
Copper	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:21	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 08:42	11/09/17 16:21	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 08:42	11/09/17 16:21	1
<b>Magnesium</b>	<b>61</b>		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 16:21	1
<b>Manganese</b>	<b>0.33</b>		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:21	1
Nickel	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:21	1
<b>Potassium</b>	<b>1.6 J</b>		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 16:21	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 08:42	11/09/17 16:21	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:21	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:21	1
Zinc	<0.50		0.50	0.020	mg/L		11/09/17 08:42	11/09/17 16:21	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.14</b>		0.025	0.010	mg/L		11/09/17 16:40	11/10/17 20:57	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 08:42	11/10/17 12:45	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 08:42	11/10/17 12:45	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 15:20	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.015 J</b>		0.017	0.0058	mg/Kg	☼	11/07/17 13:20	11/08/17 10:04	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.56		0.56	0.19	mg/Kg	☼	11/11/17 12:30	11/11/17 15:36	1
<b>pH</b>	<b>8.4</b>		0.20	0.20	SU			11/11/17 18:22	1



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-5

**Client Sample ID: 2696V-15-B01 (0-5) Dup**

**Lab Sample ID: 500-136785-13**

**Date Collected: 11/02/17 15:00**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 92.3**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.029		0.023	0.0099	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Benzene	<0.0023		0.0023	0.00058	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Bromodichloromethane	<0.0023		0.0023	0.00046	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Bromoform	<0.0023		0.0023	0.00066	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Bromomethane	<0.0057		0.0057	0.0021	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
2-Butanone (MEK)	<0.0057		0.0057	0.0025	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Carbon disulfide	<0.0057		0.0057	0.0012	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Carbon tetrachloride	<0.0023		0.0023	0.00066	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Chlorobenzene	<0.0023		0.0023	0.00084	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Chloroethane	<0.0057		0.0057	0.0017	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Chloroform	<0.0023		0.0023	0.00079	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Chloromethane	<0.0057		0.0057	0.0023	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
cis-1,2-Dichloroethene	<0.0023		0.0023	0.00063	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
cis-1,3-Dichloropropene	<0.0023		0.0023	0.00068	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Dibromochloromethane	<0.0023		0.0023	0.00074	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
1,1-Dichloroethane	<0.0023		0.0023	0.00078	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
1,2-Dichloroethane	<0.0057		0.0057	0.0018	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
1,1-Dichloroethene	<0.0023		0.0023	0.00078	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
1,2-Dichloropropane	<0.0023		0.0023	0.00059	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
1,3-Dichloropropane, Total	<0.0023		0.0023	0.00079	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Ethylbenzene	<0.0023		0.0023	0.0011	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
2-Hexanone	<0.0057		0.0057	0.0018	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Methylene Chloride	<0.0057		0.0057	0.0022	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
4-Methyl-2-pentanone (MIBK)	<0.0057		0.0057	0.0017	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Methyl tert-butyl ether	<0.0023		0.0023	0.00066	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Styrene	<0.0023		0.0023	0.00068	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
1,1,2,2-Tetrachloroethane	<0.0023		0.0023	0.00072	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Tetrachloroethene	<0.0023		0.0023	0.00077	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Toluene	<0.0023		0.0023	0.00057	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
trans-1,2-Dichloroethene	<0.0023		0.0023	0.0010	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
trans-1,3-Dichloropropene	<0.0023		0.0023	0.00079	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
1,1,1-Trichloroethane	<0.0023		0.0023	0.00076	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
1,1,2-Trichloroethane	<0.0023		0.0023	0.00097	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Trichloroethene	<0.0023		0.0023	0.00077	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Vinyl acetate	<0.0057		0.0057	0.0020	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Vinyl chloride	<0.0023		0.0023	0.0010	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1
Xylenes, Total	<0.0045		0.0045	0.00072	mg/Kg	☼	11/04/17 08:18	11/08/17 19:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		75 - 131	11/04/17 08:18	11/08/17 19:59	1
Dibromofluoromethane	108		75 - 126	11/04/17 08:18	11/08/17 19:59	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 134	11/04/17 08:18	11/08/17 19:59	1
Toluene-d8 (Surr)	97		75 - 124	11/04/17 08:18	11/08/17 19:59	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.034		0.034	0.0062	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Acenaphthylene	<0.034		0.034	0.0046	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Anthracene	<0.034		0.034	0.0058	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Benzo[a]anthracene	<0.034		0.034	0.0047	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-5

**Client Sample ID: 2696V-15-B01 (0-5) Dup**

**Lab Sample ID: 500-136785-13**

**Date Collected: 11/02/17 15:00**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 92.3**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.034		0.034	0.0067	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Benzo[b]fluoranthene	<0.034		0.034	0.0075	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Benzo[g,h,i]perylene	<0.034		0.034	0.011	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Benzo[k]fluoranthene	<0.034		0.034	0.010	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Bis(2-chloroethoxy)methane	<0.17		0.17	0.035	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Bis(2-chloroethyl)ether	<0.17		0.17	0.052	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Bis(2-ethylhexyl) phthalate	<0.17		0.17	0.063	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
4-Bromophenyl phenyl ether	<0.17		0.17	0.046	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Butyl benzyl phthalate	<0.17		0.17	0.066	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Carbazole	<0.17		0.17	0.086	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
4-Chloroaniline	<0.70		0.70	0.16	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
4-Chloro-3-methylphenol	<0.34		0.34	0.12	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
2-Chloronaphthalene	<0.17		0.17	0.038	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
2-Chlorophenol	<0.17		0.17	0.059	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
4-Chlorophenyl phenyl ether	<0.17		0.17	0.040	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Chrysene	<0.034		0.034	0.0094	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Dibenz(a,h)anthracene	<0.034		0.034	0.0067	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Dibenzofuran	<0.17		0.17	0.040	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
1,2-Dichlorobenzene	<0.17		0.17	0.041	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
1,3-Dichlorobenzene	<0.17		0.17	0.039	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
1,4-Dichlorobenzene	<0.17		0.17	0.044	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
3,3'-Dichlorobenzidine	<0.17		0.17	0.048	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
2,4-Dichlorophenol	<0.34		0.34	0.082	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Diethyl phthalate	<0.17		0.17	0.059	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
2,4-Dimethylphenol	<0.34		0.34	0.13	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Dimethyl phthalate	<0.17		0.17	0.045	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Di-n-butyl phthalate	<0.17		0.17	0.053	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
4,6-Dinitro-2-methylphenol	<0.70		0.70	0.28	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
2,4-Dinitrophenol	<0.70		0.70	0.61	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
2,4-Dinitrotoluene	<0.17		0.17	0.055	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
2,6-Dinitrotoluene	<0.17		0.17	0.068	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Di-n-octyl phthalate	<0.17		0.17	0.056	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Fluoranthene	<0.034		0.034	0.0064	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Fluorene	<0.034		0.034	0.0049	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Hexachlorobenzene	<0.070		0.070	0.0080	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Hexachlorobutadiene	<0.17		0.17	0.054	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Hexachlorocyclopentadiene	<0.70		0.70	0.20	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Hexachloroethane	<0.17		0.17	0.053	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Indeno[1,2,3-cd]pyrene	<0.034		0.034	0.0090	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Isophorone	<0.17		0.17	0.039	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
2-Methylnaphthalene	<0.070		0.070	0.0064	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
2-Methylphenol	<0.17		0.17	0.055	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
3 & 4 Methylphenol	<0.17		0.17	0.058	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Naphthalene	<0.034		0.034	0.0053	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
2-Nitroaniline	<0.17		0.17	0.047	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
3-Nitroaniline	<0.34		0.34	0.11	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
4-Nitroaniline	<0.34		0.34	0.14	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Nitrobenzene	<0.034		0.034	0.0086	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
2-Nitrophenol	<0.34		0.34	0.082	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-5

**Client Sample ID: 2696V-15-B01 (0-5) Dup**

**Lab Sample ID: 500-136785-13**

**Date Collected: 11/02/17 15:00**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 92.3**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.70		0.70	0.33	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
N-Nitrosodi-n-propylamine	<0.070		0.070	0.042	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
N-Nitrosodiphenylamine	<0.17		0.17	0.041	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
2,2'-oxybis[1-chloropropane]	<0.17		0.17	0.040	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Pentachlorophenol	<0.70		0.70	0.55	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Phenanthrene	<0.034		0.034	0.0048	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Phenol	<0.17		0.17	0.077	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
Pyrene	<0.034		0.034	0.0069	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
1,2,4-Trichlorobenzene	<0.17		0.17	0.037	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
2,4,5-Trichlorophenol	<0.34		0.34	0.079	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1
2,4,6-Trichlorophenol	<0.34		0.34	0.12	mg/Kg	☼	11/10/17 17:29	11/13/17 19:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	102		44 - 121	11/10/17 17:29	11/13/17 19:40	1
2-Fluorophenol	106		46 - 133	11/10/17 17:29	11/13/17 19:40	1
Nitrobenzene-d5	117		41 - 120	11/10/17 17:29	11/13/17 19:40	1
Phenol-d5	111		46 - 125	11/10/17 17:29	11/13/17 19:40	1
Terphenyl-d14	110		35 - 160	11/10/17 17:29	11/13/17 19:40	1
2,4,6-Tribromophenol	75		25 - 139	11/10/17 17:29	11/13/17 19:40	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.78	J	1.0	0.20	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Arsenic	0.87		0.52	0.18	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Barium	130		0.52	0.060	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Beryllium	1.4		0.21	0.049	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Cadmium	<0.10		0.10	0.019	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Chromium	17		0.52	0.26	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Cobalt	4.6		0.26	0.069	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Copper	6.5		0.52	0.15	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Iron	33000		10	5.4	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Lead	2.6		0.26	0.12	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Magnesium	1900		5.2	2.6	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Calcium	18000	B	10	1.8	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Manganese	180		0.52	0.076	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Nickel	13		0.52	0.15	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Selenium	<0.52		0.52	0.31	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Silver	<0.26		0.26	0.067	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Thallium	<0.52		0.52	0.26	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Vanadium	20		0.26	0.062	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Zinc	50		1.0	0.46	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Potassium	3000		26	9.3	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1
Sodium	900		52	7.7	mg/Kg	☼	11/07/17 16:54	11/09/17 02:24	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 08:42	11/09/17 16:25	1
Barium	0.093	J	0.50	0.050	mg/L		11/09/17 08:42	11/09/17 16:25	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 08:42	11/09/17 16:25	1
Cadmium	0.0020	J	0.0050	0.0020	mg/L		11/09/17 08:42	11/09/17 16:25	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-5

**Client Sample ID: 2696V-15-B01 (0-5) Dup**

**Lab Sample ID: 500-136785-13**

**Date Collected: 11/02/17 15:00**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 92.3**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>210</b>		5.0	0.50	mg/L		11/09/17 08:42	11/09/17 16:25	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:25	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:25	1
<b>Copper</b>	<b>0.013</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:25	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 08:42	11/09/17 16:25	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 08:42	11/09/17 16:25	1
<b>Magnesium</b>	<b>100</b>		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 16:25	1
<b>Manganese</b>	<b>0.72</b>		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:25	1
<b>Nickel</b>	<b>0.020</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:25	1
<b>Potassium</b>	<b>0.89</b>	<b>J</b>	2.5	0.50	mg/L		11/09/17 08:42	11/09/17 16:25	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 08:42	11/09/17 16:25	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:25	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:25	1
<b>Zinc</b>	<b>0.042</b>	<b>J</b>	0.50	0.020	mg/L		11/09/17 08:42	11/09/17 16:25	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.058</b>		0.025	0.010	mg/L		11/09/17 16:40	11/10/17 21:01	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 08:42	11/10/17 12:49	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 08:42	11/10/17 12:49	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 15:22	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.0074</b>	<b>J</b>	0.016	0.0052	mg/Kg	☼	11/07/17 13:20	11/08/17 10:07	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.52		0.52	0.18	mg/Kg	☼	11/11/17 12:30	11/11/17 15:36	1
<b>pH</b>	<b>8.4</b>		0.20	0.20	SU			11/11/17 18:56	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-5

## Qualifiers

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-5

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Report To (optional)  
 Contact: MATT WEISS  
 Company: TERRALON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500136785  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: 3.8, 2.6

Client		Client Project #		Preservative		Parameter												Preservative Key	
<u>TERRALON</u>		<u>11177029 M</u>																1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name		Lab Project #		Sampling		# of Containers		Matrix										Comments	
<u>WORK ORDER 038A</u>				Date Time		Matrix													
Project Location/State <u>MARKHAM, IL</u>		Lab Project #																	
Sampler <u>CRAIG VARLAND</u>		Lab PM <u>DICK WRIGHT</u>																	
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix													
<u>12</u>		<u>2696V-15-B01-(0-S1)</u>	<u>11-2-17</u>	<u>1500</u>	<u>5</u>	<u>S</u>	<u>VOCS</u>	<u>SVOCS</u>	<u>23 TRACE METALS, PH</u>	<u>TCLP 23 TRACE METALS</u>									
<u>13</u>		<u>2696V-15-B01-DUP-(0-S1)</u>	<u>11-2-17</u>	<u>-</u>	<u>5</u>	<u>S</u>	<u>VOCS</u>	<u>SVOCS</u>	<u>23 TRACE METALS, PH</u>	<u>TCLP 23 TRACE METALS</u>									

Turnaround Time Required (Business Days)

1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRALON</u> Date: <u>11-3-17</u> Time: <u>0832</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>0832</u>
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>0945</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>0945</u>

Lab Courier: TA  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

Matrix Key  
 WW - Wastewater SE - Sediment  
 W - Water SO - Soil  
 S - Soil L - Leachate  
 SL - Sludge WI - Wipe  
 MS - Miscellaneous DW - Drinking Water  
 OL - Oil O - Other  
 A - Air

Client Comments:  
NO ALUMINUM

Lab Comments:

# Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136785-5

**Login Number: 136785**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6, 3.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

TestAmerica Job ID: 500-136786-2  
Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:  
Terracon Consulting Eng & Scientists  
135 Ambassador Drive  
Naperville, Illinois 60540

Attn: Mr. Matthew Weiss



Authorized for release by:  
11/16/2017 12:29:21 PM

Richard Wright, Senior Project Manager  
(708)534-5200  
[richard.wright@testamericainc.com](mailto:richard.wright@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Job ID: 500-136786-2**

**Laboratory: TestAmerica Chicago**

## Narrative

### Job Narrative 500-136786-2

#### Receipt

The samples were received on 11/3/2017 4:27 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.9° C and 4.6° C.

#### GC/MS VOA

Method(s) 8260B: The method blank for preparation batch 409674 contained Methylene Chloride above the reporting limit (RL). The sample associated with this method blank did not contained the target compound; therefore, re-analysis of sample was not performed.

Method(s) 8260B: The laboratory control sample (LCS) for 409674 recovered outside control limits for the following analyte: Methylene Chloride. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data has been reported.

Method(s) 8260B: The following samples were diluted due to the abundance of non-target analytes: 2696V-15-B02 (10-15) (500-136786-7) and 2696V-15-B03 (0-5) (500-136786-9). Analysis of the sample could not be performed un-diluted due to the concentration of these non-target analytes exceeding the instruments saturation levels. The samples were run diluted at 50x (the lowest dilution allowed for method 5035). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270D: The following sample was diluted due to the nature of the sample matrix (large amount of early eluting hydrocarbon peaks): 2696V-15-G01 (500-136786-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Metals

Method(s) 6020A: Due to sample matrix effect on the internal standard (ISTD), a dilution was required for the following sample: 2696V-15-G01 (500-136786-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-G01**

**Lab Sample ID: 500-136786-4**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Benzene	0.00064		0.00050	0.00015	mg/L	1			8260B	Total/NA
Toluene	0.0020		0.00050	0.00015	mg/L	1			8260B	Total/NA
Xylenes, Total	0.12		0.0010	0.00022	mg/L	1			8260B	Total/NA
Ethylbenzene - DL	0.26		0.0050	0.0018	mg/L	10			8260B	Total/NA
2-Methylnaphthalene	0.050		0.0034	0.00011	mg/L	2			8270D	Total/NA
Naphthalene	0.11		0.0017	0.00052	mg/L	2			8270D	Total/NA
Antimony	0.0016	J	0.0030	0.0013	mg/L	1			6020A	Total Recoverable
Arsenic	0.089		0.0010	0.00023	mg/L	1			6020A	Total Recoverable
Barium	0.57		0.0050	0.0015	mg/L	2			6020A	Total Recoverable
Cadmium	0.0031		0.00050	0.00017	mg/L	1			6020A	Total Recoverable
Calcium	820		1.0	0.22	mg/L	5			6020A	Total Recoverable
Chromium	0.093		0.025	0.0057	mg/L	5			6020A	Total Recoverable
Cobalt	0.069		0.0050	0.0020	mg/L	5			6020A	Total Recoverable
Copper	0.20		0.0020	0.00050	mg/L	1			6020A	Total Recoverable
Iron	140		0.50	0.23	mg/L	5			6020A	Total Recoverable
Lead	0.085		0.00050	0.00019	mg/L	1			6020A	Total Recoverable
Magnesium	420		1.0	0.25	mg/L	5			6020A	Total Recoverable
Manganese	3.6		0.013	0.0040	mg/L	5			6020A	Total Recoverable
Nickel	0.15		0.010	0.0031	mg/L	5			6020A	Total Recoverable
Potassium	28		2.5	0.56	mg/L	5			6020A	Total Recoverable
Selenium	0.0074		0.0025	0.00098	mg/L	1			6020A	Total Recoverable
Silver	0.00046	J	0.00050	0.00012	mg/L	1			6020A	Total Recoverable
Sodium	200		1.0	0.39	mg/L	5			6020A	Total Recoverable
Thallium	0.0049		0.0020	0.00057	mg/L	1			6020A	Total Recoverable
Vanadium	0.084		0.025	0.011	mg/L	5			6020A	Total Recoverable
Zinc	0.41		0.020	0.0069	mg/L	1			6020A	Total Recoverable
Mercury	0.00014	J	0.00020	0.000098	mg/L	1			7470A	Total/NA

**Client Sample ID: 2696V-15-B02 (0-5)**

**Lab Sample ID: 500-136786-5**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acetone	0.042		0.023	0.010	mg/Kg	1		☼	8260B	Total/NA
Benzo[a]anthracene	0.0073	J	0.037	0.0050	mg/Kg	1		☼	8270D	Total/NA
Benzo[a]pyrene	0.028	J	0.037	0.0072	mg/Kg	1		☼	8270D	Total/NA
Benzo[b]fluoranthene	0.0085	J	0.037	0.0081	mg/Kg	1		☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B02 (0-5) (Continued)**

**Lab Sample ID: 500-136786-5**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[g,h,i]perylene	0.013	J	0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.019	J	0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.0094	J	0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.069		0.037	0.0074	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.29	J	1.1	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	1.5		0.54	0.18	mg/Kg	1	☼	6010B	Total/NA
Barium	5.0		0.54	0.061	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.096	J	0.22	0.050	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.068	J B	0.11	0.019	mg/Kg	1	☼	6010B	Total/NA
Chromium	2.8		0.54	0.27	mg/Kg	1	☼	6010B	Total/NA
Cobalt	1.9		0.27	0.071	mg/Kg	1	☼	6010B	Total/NA
Copper	1.7		0.54	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	2800		11	5.6	mg/Kg	1	☼	6010B	Total/NA
Lead	2.5		0.27	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	5000		5.4	2.7	mg/Kg	1	☼	6010B	Total/NA
Calcium	8200	B	11	1.8	mg/Kg	1	☼	6010B	Total/NA
Manganese	38		0.54	0.078	mg/Kg	1	☼	6010B	Total/NA
Nickel	3.2		0.54	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	3.9		0.27	0.064	mg/Kg	1	☼	6010B	Total/NA
Zinc	12		1.1	0.47	mg/Kg	1	☼	6010B	Total/NA
Potassium	310		27	9.5	mg/Kg	1	☼	6010B	Total/NA
Sodium	52	J	54	8.0	mg/Kg	1	☼	6010B	Total/NA
Barium	0.063	J	0.50	0.050	mg/L	1		6010B	TCLP
Calcium	210		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.013	J	0.025	0.010	mg/L	1		6010B	TCLP
Copper	0.021	J	0.025	0.010	mg/L	1		6010B	TCLP
Iron	1.3		0.40	0.20	mg/L	1		6010B	TCLP
Magnesium	110		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.82		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.012	J	0.025	0.010	mg/L	1		6010B	TCLP
Potassium	1.0	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.055	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.037		0.025	0.010	mg/L	1		6010B	SPLP East
pH	8.6		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-15-B02 (5-10)**

**Lab Sample ID: 500-136786-6**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.057		0.016	0.0070	mg/Kg	1	☼	8260B	Total/NA
Anthracene	0.023	J	0.039	0.0065	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.017	J	0.039	0.0053	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.055		0.039	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.021	J	0.039	0.0085	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.032	J	0.039	0.013	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.020	J	0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.070		0.039	0.0073	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.011	J	0.039	0.010	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.022	J	0.079	0.0072	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.052		0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.22		0.039	0.0078	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B02 (5-10) (Continued)**

**Lab Sample ID: 500-136786-6**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.40	J	1.2	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	7.1		0.59	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	17		0.59	0.067	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.34		0.24	0.055	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.14	B	0.12	0.021	mg/Kg	1	☼	6010B	Total/NA
Chromium	7.0		0.59	0.29	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.9		0.30	0.077	mg/Kg	1	☼	6010B	Total/NA
Copper	18		0.59	0.17	mg/Kg	1	☼	6010B	Total/NA
Iron	14000		12	6.1	mg/Kg	1	☼	6010B	Total/NA
Lead	10		0.30	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	42000		5.9	2.9	mg/Kg	1	☼	6010B	Total/NA
Calcium	130000	B	120	20	mg/Kg	10	☼	6010B	Total/NA
Manganese	270		0.59	0.086	mg/Kg	1	☼	6010B	Total/NA
Nickel	13		0.59	0.17	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.65		0.59	0.35	mg/Kg	1	☼	6010B	Total/NA
Vanadium	11		0.30	0.070	mg/Kg	1	☼	6010B	Total/NA
Zinc	39		1.2	0.52	mg/Kg	1	☼	6010B	Total/NA
Potassium	1500		30	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	150		59	8.7	mg/Kg	1	☼	6010B	Total/NA
Barium	0.27	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0026	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	350		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.013	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	95		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	1.3		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.027		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	3.2		2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.056	J	0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.013	J	0.018	0.0059	mg/Kg	1	☼	7471B	Total/NA
pH	8.1		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-15-B02 (10-15)**

**Lab Sample ID: 500-136786-7**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	3.0		0.0098	0.0072	mg/Kg	50	☼	8260B	Total/NA
Toluene	0.011		0.0098	0.0058	mg/Kg	50	☼	8260B	Total/NA
Xylenes, Total	0.92		0.020	0.0086	mg/Kg	50	☼	8260B	Total/NA
2-Methylnaphthalene	1.2		0.071	0.0065	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	2.3		0.035	0.0054	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.0055	J	0.035	0.0049	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.39	J	1.1	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	2.7		0.54	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	10		0.54	0.062	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.32		0.22	0.051	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.087	J B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	6.2		0.54	0.27	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.6		0.27	0.071	mg/Kg	1	☼	6010B	Total/NA
Copper	7.9		0.54	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	9000		11	5.7	mg/Kg	1	☼	6010B	Total/NA
Lead	3.2		0.27	0.13	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

## Client Sample ID: 2696V-15-B02 (10-15) (Continued)

## Lab Sample ID: 500-136786-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	52000		5.4	2.7	mg/Kg	1	☼	6010B	Total/NA
Calcium	130000	B	110	18	mg/Kg	10	☼	6010B	Total/NA
Manganese	280		0.54	0.079	mg/Kg	1	☼	6010B	Total/NA
Nickel	9.9		0.54	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	6.7		0.27	0.064	mg/Kg	1	☼	6010B	Total/NA
Zinc	19		1.1	0.48	mg/Kg	1	☼	6010B	Total/NA
Potassium	1900		27	9.6	mg/Kg	1	☼	6010B	Total/NA
Sodium	170		54	8.1	mg/Kg	1	☼	6010B	Total/NA
Barium	0.13	J	0.50	0.050	mg/L	1		6010B	TCLP
Calcium	360		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.014	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	98		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	1.1		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.029		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	3.9		2.5	0.50	mg/L	1		6010B	TCLP
pH	8.4		0.20	0.20	SU	1		9045D	Total/NA

## Client Sample ID: 2696V-15-B02 (15-20)

## Lab Sample ID: 500-136786-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.0059	J	0.035	0.0049	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.49	J	1.0	0.20	mg/Kg	1	☼	6010B	Total/NA
Arsenic	1.9		0.51	0.17	mg/Kg	1	☼	6010B	Total/NA
Barium	14		0.51	0.058	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.24		0.20	0.048	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.14	B	0.10	0.018	mg/Kg	1	☼	6010B	Total/NA
Chromium	15		0.51	0.25	mg/Kg	1	☼	6010B	Total/NA
Cobalt	2.7		0.26	0.067	mg/Kg	1	☼	6010B	Total/NA
Copper	4.7		0.51	0.14	mg/Kg	1	☼	6010B	Total/NA
Iron	6500		10	5.3	mg/Kg	1	☼	6010B	Total/NA
Lead	3.1		0.26	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	110000		51	25	mg/Kg	10	☼	6010B	Total/NA
Calcium	200000	B	100	17	mg/Kg	10	☼	6010B	Total/NA
Manganese	250		0.51	0.074	mg/Kg	1	☼	6010B	Total/NA
Nickel	7.5		0.51	0.15	mg/Kg	1	☼	6010B	Total/NA
Vanadium	7.2		0.26	0.060	mg/Kg	1	☼	6010B	Total/NA
Zinc	26		1.0	0.45	mg/Kg	1	☼	6010B	Total/NA
Potassium	1300		26	9.1	mg/Kg	1	☼	6010B	Total/NA
Sodium	230		51	7.6	mg/Kg	1	☼	6010B	Total/NA
Barium	0.34	J	0.50	0.050	mg/L	1		6010B	TCLP
Calcium	330		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.024	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	100		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.93		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.023	J	0.025	0.010	mg/L	1		6010B	TCLP
Potassium	4.1		2.5	0.50	mg/L	1		6010B	TCLP
pH	8.3		0.20	0.20	SU	1		9045D	Total/NA

## Client Sample ID: 2696V-15-B03 (0-5)

## Lab Sample ID: 500-136786-9

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B03 (0-5) (Continued)**

**Lab Sample ID: 500-136786-9**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.27		0.013	0.0079	mg/Kg	50	☼	8260B	Total/NA
Ethylbenzene	0.13		0.013	0.0099	mg/Kg	50	☼	8260B	Total/NA
Toluene	0.013		0.013	0.0079	mg/Kg	50	☼	8260B	Total/NA
Xylenes, Total	0.87		0.027	0.012	mg/Kg	50	☼	8260B	Total/NA
Phenanthrene	0.0058	J	0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.63	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	8.5		0.56	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	10		0.56	0.064	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.25		0.23	0.053	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.28	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	5.6		0.56	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	6.2		0.28	0.074	mg/Kg	1	☼	6010B	Total/NA
Copper	19		0.56	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	13000		11	5.9	mg/Kg	1	☼	6010B	Total/NA
Lead	9.7		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	56000		5.6	2.8	mg/Kg	1	☼	6010B	Total/NA
Calcium	150000	B	110	19	mg/Kg	10	☼	6010B	Total/NA
Manganese	360		0.56	0.082	mg/Kg	1	☼	6010B	Total/NA
Nickel	14		0.56	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	7.9		0.28	0.067	mg/Kg	1	☼	6010B	Total/NA
Zinc	52		1.1	0.49	mg/Kg	1	☼	6010B	Total/NA
Potassium	1200		28	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	140		56	8.3	mg/Kg	1	☼	6010B	Total/NA
Barium	0.13	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0027	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	310		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.028		0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	100		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	2.7		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.051		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	2.3	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.10	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.070		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.013	J	0.019	0.0064	mg/Kg	1	☼	7471B	Total/NA
pH	8.0		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-15-B04 (0-5)**

**Lab Sample ID: 500-136786-10**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.015	J	0.040	0.0054	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.028	J	0.040	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.031	J	0.040	0.0086	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.018	J	0.040	0.013	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.013	J	0.040	0.012	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.025	J	0.040	0.011	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.026	J	0.040	0.0074	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.010	J	0.040	0.010	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.0081	J	0.080	0.0073	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.022	J	0.040	0.0055	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.027	J	0.040	0.0079	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

## Client Sample ID: 2696V-15-B04 (0-5) (Continued)

## Lab Sample ID: 500-136786-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.46	J	1.2	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	7.0		0.60	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	35		0.60	0.068	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.49		0.24	0.056	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.14	B	0.12	0.021	mg/Kg	1	☼	6010B	Total/NA
Chromium	11		0.60	0.29	mg/Kg	1	☼	6010B	Total/NA
Cobalt	9.7		0.30	0.078	mg/Kg	1	☼	6010B	Total/NA
Copper	18		0.60	0.17	mg/Kg	1	☼	6010B	Total/NA
Iron	16000		12	6.2	mg/Kg	1	☼	6010B	Total/NA
Lead	20		0.30	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	20000		6.0	3.0	mg/Kg	1	☼	6010B	Total/NA
Calcium	35000	B	12	2.0	mg/Kg	1	☼	6010B	Total/NA
Manganese	280		0.60	0.086	mg/Kg	1	☼	6010B	Total/NA
Nickel	22		0.60	0.17	mg/Kg	1	☼	6010B	Total/NA
Vanadium	16		0.30	0.070	mg/Kg	1	☼	6010B	Total/NA
Zinc	89		1.2	0.52	mg/Kg	1	☼	6010B	Total/NA
Potassium	1700		30	11	mg/Kg	1	☼	6010B	Total/NA
Sodium	560		60	8.8	mg/Kg	1	☼	6010B	Total/NA
Barium	0.45	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0029	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	370		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.026		0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	80		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	1.5		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.013	J	0.025	0.010	mg/L	1		6010B	TCLP
Potassium	1.3	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.035	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.48		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.029		0.020	0.0066	mg/Kg	1	☼	7471B	Total/NA
pH	8.4		0.20	0.20	SU	1		9045D	Total/NA

## Client Sample ID: 2696V-15-B05 (0-5)

## Lab Sample ID: 500-136786-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0058	J	0.036	0.0048	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.0084	J	0.036	0.0061	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.052		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.073		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.11		0.036	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.062		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.029	J	0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.067		0.036	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.016	J	0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.085		0.036	0.0068	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.057		0.036	0.0095	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.042		0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.077		0.036	0.0073	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.57	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	7.2		0.56	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	77		0.56	0.064	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B05 (0-5) (Continued)**

**Lab Sample ID: 500-136786-11**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Beryllium	0.80		0.22	0.052	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.60	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	15		0.56	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	8.2		0.28	0.073	mg/Kg	1	☼	6010B	Total/NA
Copper	24		0.56	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	17000		11	5.8	mg/Kg	1	☼	6010B	Total/NA
Lead	220		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	25000		5.6	2.8	mg/Kg	1	☼	6010B	Total/NA
Calcium	1100	B	110	19	mg/Kg	10	☼	6010B	Total/NA
Manganese	280		0.56	0.081	mg/Kg	1	☼	6010B	Total/NA
Nickel	21		0.56	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	21		0.28	0.066	mg/Kg	1	☼	6010B	Total/NA
Zinc	140		1.1	0.49	mg/Kg	1	☼	6010B	Total/NA
Potassium	1700		28	9.9	mg/Kg	1	☼	6010B	Total/NA
Sodium	420		56	8.3	mg/Kg	1	☼	6010B	Total/NA
Barium	0.48	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0032	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	400		5.0	0.50	mg/L	1		6010B	TCLP
Magnesium	79		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.16		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	1.6	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.024	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.41		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.025		0.019	0.0064	mg/Kg	1	☼	7471B	Total/NA
pH	8.3		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136786-4	2696V-15-G01	Water	11/03/17 11:15	11/03/17 16:27
500-136786-5	2696V-15-B02 (0-5)	Solid	11/03/17 10:30	11/03/17 16:27
500-136786-6	2696V-15-B02 (5-10)	Solid	11/03/17 10:35	11/03/17 16:27
500-136786-7	2696V-15-B02 (10-15)	Solid	11/03/17 10:40	11/03/17 16:27
500-136786-8	2696V-15-B02 (15-20)	Solid	11/03/17 10:45	11/03/17 16:27
500-136786-9	2696V-15-B03 (0-5)	Solid	11/03/17 12:10	11/03/17 16:27
500-136786-10	2696V-15-B04 (0-5)	Solid	11/03/17 13:10	11/03/17 16:27
500-136786-11	2696V-15-B05 (0-5)	Solid	11/03/17 13:45	11/03/17 16:27



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-G01**

**Lab Sample ID: 500-136786-4**

**Date Collected: 11/03/17 11:15**

**Matrix: Water**

**Date Received: 11/03/17 16:27**

**Method: 8260B - VOC**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.0050		0.0050	0.0017	mg/L			11/13/17 16:24	1
<b>Benzene</b>	<b>0.00064</b>		0.00050	0.00015	mg/L			11/13/17 16:24	1
Bromodichloromethane	<0.0010		0.0010	0.00037	mg/L			11/13/17 16:24	1
Bromoform	<0.0010		0.0010	0.00048	mg/L			11/13/17 16:24	1
Bromomethane	<0.0020		0.0020	0.00080	mg/L			11/13/17 16:24	1
Carbon disulfide	<0.0020		0.0020	0.00045	mg/L			11/13/17 16:24	1
Carbon tetrachloride	<0.0010		0.0010	0.00038	mg/L			11/13/17 16:24	1
Chlorobenzene	<0.0010		0.0010	0.00039	mg/L			11/13/17 16:24	1
Chloroethane	<0.0010		0.0010	0.00051	mg/L			11/13/17 16:24	1
Chloroform	<0.0020		0.0020	0.00037	mg/L			11/13/17 16:24	1
Chloromethane	<0.0010		0.0010	0.00032	mg/L			11/13/17 16:24	1
cis-1,2-Dichloroethene	<0.0010		0.0010	0.00041	mg/L			11/13/17 16:24	1
cis-1,3-Dichloropropene	<0.0010		0.0010	0.00042	mg/L			11/13/17 16:24	1
Dibromochloromethane	<0.0010		0.0010	0.00049	mg/L			11/13/17 16:24	1
1,1-Dichloroethane	<0.0010		0.0010	0.00041	mg/L			11/13/17 16:24	1
1,2-Dichloroethane	<0.0010		0.0010	0.00039	mg/L			11/13/17 16:24	1
1,1-Dichloroethene	<0.0010		0.0010	0.00039	mg/L			11/13/17 16:24	1
1,2-Dichloropropane	<0.0010		0.0010	0.00043	mg/L			11/13/17 16:24	1
1,3-Dichloropropene, Total	<0.0010		0.0010	0.00042	mg/L			11/13/17 16:24	1
2-Hexanone	<0.0050		0.0050	0.0016	mg/L			11/13/17 16:24	1
Methylene Chloride	<0.0050 *		0.0050	0.0016	mg/L			11/13/17 16:24	1
Methyl Ethyl Ketone	<0.0050		0.0050	0.0021	mg/L			11/13/17 16:24	1
methyl isobutyl ketone	<0.0050		0.0050	0.0022	mg/L			11/13/17 16:24	1
Methyl tert-butyl ether	<0.0010		0.0010	0.00039	mg/L			11/13/17 16:24	1
Styrene	<0.0010		0.0010	0.00039	mg/L			11/13/17 16:24	1
1,1,2,2-Tetrachloroethane	<0.0010		0.0010	0.00040	mg/L			11/13/17 16:24	1
Tetrachloroethene	<0.0010		0.0010	0.00037	mg/L			11/13/17 16:24	1
<b>Toluene</b>	<b>0.0020</b>		0.00050	0.00015	mg/L			11/13/17 16:24	1
trans-1,2-Dichloroethene	<0.0010		0.0010	0.00035	mg/L			11/13/17 16:24	1
trans-1,3-Dichloropropene	<0.0010		0.0010	0.00036	mg/L			11/13/17 16:24	1
1,1,1-Trichloroethane	<0.0010		0.0010	0.00038	mg/L			11/13/17 16:24	1
1,1,2-Trichloroethane	<0.0010		0.0010	0.00035	mg/L			11/13/17 16:24	1
Trichloroethene	<0.00050		0.00050	0.00016	mg/L			11/13/17 16:24	1
Vinyl acetate	<0.0020		0.0020	0.00091	mg/L			11/13/17 16:24	1
Vinyl chloride	<0.00050		0.00050	0.00020	mg/L			11/13/17 16:24	1
<b>Xylenes, Total</b>	<b>0.12</b>		0.0010	0.00022	mg/L			11/13/17 16:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		72 - 124		11/13/17 16:24	1
Dibromofluoromethane	90		75 - 120		11/13/17 16:24	1
1,2-Dichloroethane-d4 (Surr)	87		75 - 126		11/13/17 16:24	1
Toluene-d8 (Surr)	105		75 - 120		11/13/17 16:24	1

**Method: 8260B - VOC - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Ethylbenzene</b>	<b>0.26</b>		0.0050	0.0018	mg/L			11/13/17 18:40	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		72 - 124		11/13/17 18:40	10
Dibromofluoromethane	88		75 - 120		11/13/17 18:40	10

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-G01**

**Lab Sample ID: 500-136786-4**

**Date Collected: 11/03/17 11:15**

**Matrix: Water**

**Date Received: 11/03/17 16:27**

**Method: 8260B - VOC - DL (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		75 - 126		11/13/17 18:40	10
Toluene-d8 (Surr)	105		75 - 120		11/13/17 18:40	10

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.0017		0.0017	0.00052	mg/L		11/07/17 08:30	11/08/17 17:42	2
Acenaphthylene	<0.0017		0.0017	0.00045	mg/L		11/07/17 08:30	11/08/17 17:42	2
Anthracene	<0.0017		0.0017	0.00056	mg/L		11/07/17 08:30	11/08/17 17:42	2
Benzo[a]anthracene	<0.00027		0.00027	0.000096	mg/L		11/07/17 08:30	11/08/17 17:42	2
Benzo[a]pyrene	<0.00034		0.00034	0.00017	mg/L		11/07/17 08:30	11/08/17 17:42	2
Benzo[b]fluoranthene	<0.00034		0.00034	0.00014	mg/L		11/07/17 08:30	11/08/17 17:42	2
Benzo[g,h,i]perylene	<0.0017		0.0017	0.00063	mg/L		11/07/17 08:30	11/08/17 17:42	2
Benzo[k]fluoranthene	<0.00034		0.00034	0.00011	mg/L		11/07/17 08:30	11/08/17 17:42	2
Bis(2-chloroethoxy)methane	<0.0034		0.0034	0.00048	mg/L		11/07/17 08:30	11/08/17 17:42	2
Bis(2-chloroethyl)ether	<0.0034		0.0034	0.00049	mg/L		11/07/17 08:30	11/08/17 17:42	2
Bis(2-ethylhexyl) phthalate	<0.017		0.017	0.0029	mg/L		11/07/17 08:30	11/08/17 17:42	2
4-Bromophenyl phenyl ether	<0.0084		0.0084	0.00091	mg/L		11/07/17 08:30	11/08/17 17:42	2
Butyl benzyl phthalate	<0.0034		0.0034	0.00081	mg/L		11/07/17 08:30	11/08/17 17:42	2
Carbazole	<0.0084		0.0084	0.00060	mg/L		11/07/17 08:30	11/08/17 17:42	2
4-Chloroaniline	<0.017		0.017	0.0034	mg/L		11/07/17 08:30	11/08/17 17:42	2
4-Chloro-3-methylphenol	<0.017		0.017	0.0039	mg/L		11/07/17 08:30	11/08/17 17:42	2
2-Chloronaphthalene	<0.0034		0.0034	0.00040	mg/L		11/07/17 08:30	11/08/17 17:42	2
2-Chlorophenol	<0.0084		0.0084	0.00094	mg/L		11/07/17 08:30	11/08/17 17:42	2
4-Chlorophenyl phenyl ether	<0.0084		0.0084	0.0011	mg/L		11/07/17 08:30	11/08/17 17:42	2
Chrysene	<0.00034		0.00034	0.00012	mg/L		11/07/17 08:30	11/08/17 17:42	2
Dibenz(a,h)anthracene	<0.00051		0.00051	0.000086	mg/L		11/07/17 08:30	11/08/17 17:42	2
Dibenzofuran	<0.0034		0.0034	0.00044	mg/L		11/07/17 08:30	11/08/17 17:42	2
1,2-Dichlorobenzene	<0.0034		0.0034	0.00042	mg/L		11/07/17 08:30	11/08/17 17:42	2
1,3-Dichlorobenzene	<0.0034		0.0034	0.00035	mg/L		11/07/17 08:30	11/08/17 17:42	2
1,4-Dichlorobenzene	<0.0034		0.0034	0.00035	mg/L		11/07/17 08:30	11/08/17 17:42	2
3,3'-Dichlorobenzidine	<0.0084		0.0084	0.0029	mg/L		11/07/17 08:30	11/08/17 17:42	2
2,4-Dichlorophenol	<0.017		0.017	0.0044	mg/L		11/07/17 08:30	11/08/17 17:42	2
Diethyl phthalate	<0.0084		0.0084	0.00061	mg/L		11/07/17 08:30	11/08/17 17:42	2
2,4-Dimethylphenol	<0.017		0.017	0.0030	mg/L		11/07/17 08:30	11/08/17 17:42	2
Dimethyl phthalate	<0.0084		0.0084	0.00053	mg/L		11/07/17 08:30	11/08/17 17:42	2
Di-n-butyl phthalate	<0.0084		0.0084	0.0012	mg/L		11/07/17 08:30	11/08/17 17:42	2
4,6-Dinitro-2-methylphenol	<0.034		0.034	0.010	mg/L		11/07/17 08:30	11/08/17 17:42	2
2,4-Dinitrophenol	<0.034		0.034	0.015	mg/L		11/07/17 08:30	11/08/17 17:42	2
2,4-Dinitrotoluene	<0.0017		0.0017	0.00041	mg/L		11/07/17 08:30	11/08/17 17:42	2
2,6-Dinitrotoluene	<0.0017		0.0017	0.00012	mg/L		11/07/17 08:30	11/08/17 17:42	2
Di-n-octyl phthalate	<0.017		0.017	0.0018	mg/L		11/07/17 08:30	11/08/17 17:42	2
Fluoranthene	<0.0017		0.0017	0.00077	mg/L		11/07/17 08:30	11/08/17 17:42	2
Fluorene	<0.0017		0.0017	0.00041	mg/L		11/07/17 08:30	11/08/17 17:42	2
Hexachlorobenzene	<0.00084		0.00084	0.00013	mg/L		11/07/17 08:30	11/08/17 17:42	2
Hexachlorobutadiene	<0.0084		0.0084	0.00087	mg/L		11/07/17 08:30	11/08/17 17:42	2
Hexachlorocyclopentadiene	<0.034		0.034	0.011	mg/L		11/07/17 08:30	11/08/17 17:42	2
Hexachloroethane	<0.0084		0.0084	0.0010	mg/L		11/07/17 08:30	11/08/17 17:42	2
Indeno[1,2,3-cd]pyrene	<0.00034		0.00034	0.00013	mg/L		11/07/17 08:30	11/08/17 17:42	2
Isophorone	<0.0034		0.0034	0.00063	mg/L		11/07/17 08:30	11/08/17 17:42	2

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-G01**

**Lab Sample ID: 500-136786-4**

**Date Collected: 11/03/17 11:15**

**Matrix: Water**

**Date Received: 11/03/17 16:27**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>2-Methylnaphthalene</b>	<b>0.050</b>		0.0034	0.00011	mg/L		11/07/17 08:30	11/08/17 17:42	2
2-Methylphenol	<0.0034		0.0034	0.00052	mg/L		11/07/17 08:30	11/08/17 17:42	2
3 & 4 Methylphenol	<0.0034		0.0034	0.00076	mg/L		11/07/17 08:30	11/08/17 17:42	2
<b>Naphthalene</b>	<b>0.11</b>		0.0017	0.00052	mg/L		11/07/17 08:30	11/08/17 17:42	2
2-Nitroaniline	<0.0084		0.0084	0.0022	mg/L		11/07/17 08:30	11/08/17 17:42	2
3-Nitroaniline	<0.017		0.017	0.0030	mg/L		11/07/17 08:30	11/08/17 17:42	2
4-Nitroaniline	<0.017		0.017	0.0028	mg/L		11/07/17 08:30	11/08/17 17:42	2
Nitrobenzene	<0.0017		0.0017	0.00076	mg/L		11/07/17 08:30	11/08/17 17:42	2
2-Nitrophenol	<0.017		0.017	0.0042	mg/L		11/07/17 08:30	11/08/17 17:42	2
4-Nitrophenol	<0.034		0.034	0.013	mg/L		11/07/17 08:30	11/08/17 17:42	2
N-Nitrosodi-n-propylamine	<0.00084		0.00084	0.00026	mg/L		11/07/17 08:30	11/08/17 17:42	2
N-Nitrosodiphenylamine	<0.0034		0.0034	0.00063	mg/L		11/07/17 08:30	11/08/17 17:42	2
2,2'-oxybis[1-chloropropane]	<0.0034		0.0034	0.00064	mg/L		11/07/17 08:30	11/08/17 17:42	2
Pentachlorophenol	<0.034		0.034	0.0067	mg/L		11/07/17 08:30	11/08/17 17:42	2
Phenanthrene	<0.0017		0.0017	0.00051	mg/L		11/07/17 08:30	11/08/17 17:42	2
Phenol	<0.0084		0.0084	0.0011	mg/L		11/07/17 08:30	11/08/17 17:42	2
Pyrene	<0.0017		0.0017	0.00072	mg/L		11/07/17 08:30	11/08/17 17:42	2
1,2,4-Trichlorobenzene	<0.0034		0.0034	0.00040	mg/L		11/07/17 08:30	11/08/17 17:42	2
2,4,5-Trichlorophenol	<0.017		0.017	0.0043	mg/L		11/07/17 08:30	11/08/17 17:42	2
2,4,6-Trichlorophenol	<0.0084		0.0084	0.0012	mg/L		11/07/17 08:30	11/08/17 17:42	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	81		34 - 110	11/07/17 08:30	11/08/17 17:42	2
2-Fluorophenol	85		27 - 110	11/07/17 08:30	11/08/17 17:42	2
Nitrobenzene-d5	83		36 - 120	11/07/17 08:30	11/08/17 17:42	2
Phenol-d5	53		20 - 100	11/07/17 08:30	11/08/17 17:42	2
Terphenyl-d14	81		40 - 145	11/07/17 08:30	11/08/17 17:42	2
2,4,6-Tribromophenol	99		40 - 145	11/07/17 08:30	11/08/17 17:42	2

**Method: 6020A - Metals (ICP/MS) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.0016</b>	<b>J</b>	0.0030	0.0013	mg/L		11/04/17 10:02	11/06/17 14:11	1
<b>Arsenic</b>	<b>0.089</b>		0.0010	0.00023	mg/L		11/04/17 10:02	11/06/17 14:11	1
<b>Barium</b>	<b>0.57</b>		0.0050	0.0015	mg/L		11/04/17 10:02	11/06/17 15:00	2
Beryllium	<0.0050		0.0050	0.0027	mg/L		11/04/17 10:02	11/06/17 15:04	5
<b>Cadmium</b>	<b>0.0031</b>		0.00050	0.00017	mg/L		11/04/17 10:02	11/06/17 14:11	1
<b>Calcium</b>	<b>820</b>		1.0	0.22	mg/L		11/04/17 10:02	11/06/17 15:04	5
<b>Chromium</b>	<b>0.093</b>		0.025	0.0057	mg/L		11/04/17 10:02	11/06/17 15:04	5
<b>Cobalt</b>	<b>0.069</b>		0.0050	0.0020	mg/L		11/04/17 10:02	11/06/17 15:04	5
<b>Copper</b>	<b>0.20</b>		0.0020	0.00050	mg/L		11/04/17 10:02	11/06/17 14:11	1
<b>Iron</b>	<b>140</b>		0.50	0.23	mg/L		11/04/17 10:02	11/06/17 15:04	5
<b>Lead</b>	<b>0.085</b>		0.00050	0.00019	mg/L		11/04/17 10:02	11/06/17 14:11	1
<b>Magnesium</b>	<b>420</b>		1.0	0.25	mg/L		11/04/17 10:02	11/06/17 15:04	5
<b>Manganese</b>	<b>3.6</b>		0.013	0.0040	mg/L		11/04/17 10:02	11/07/17 11:54	5
<b>Nickel</b>	<b>0.15</b>		0.010	0.0031	mg/L		11/04/17 10:02	11/06/17 15:04	5
<b>Potassium</b>	<b>28</b>		2.5	0.56	mg/L		11/04/17 10:02	11/06/17 15:04	5
<b>Selenium</b>	<b>0.0074</b>		0.0025	0.00098	mg/L		11/04/17 10:02	11/06/17 14:11	1
<b>Silver</b>	<b>0.00046</b>	<b>J</b>	0.00050	0.00012	mg/L		11/04/17 10:02	11/06/17 14:11	1
<b>Sodium</b>	<b>200</b>		1.0	0.39	mg/L		11/04/17 10:02	11/07/17 11:54	5
<b>Thallium</b>	<b>0.0049</b>		0.0020	0.00057	mg/L		11/04/17 10:02	11/06/17 14:11	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-G01**

**Lab Sample ID: 500-136786-4**

Date Collected: 11/03/17 11:15

Matrix: Water

Date Received: 11/03/17 16:27

**Method: 6020A - Metals (ICP/MS) - Total Recoverable (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vanadium	0.084		0.025	0.011	mg/L		11/04/17 10:02	11/06/17 15:04	5
Zinc	0.41		0.020	0.0069	mg/L		11/04/17 10:02	11/06/17 14:11	1

**Method: 7470A - Mercury**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00014	J	0.00020	0.000098	mg/L		11/06/17 14:30	11/07/17 07:11	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.010		0.010	0.0035	mg/L		11/14/17 11:10	11/14/17 15:31	1



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B02 (0-5)**

**Lab Sample ID: 500-136786-5**

Date Collected: 11/03/17 10:30

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 86.4

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.042</b>		0.023	0.010	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Benzene	<0.0023		0.0023	0.00060	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Bromodichloromethane	<0.0023		0.0023	0.00048	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Bromoform	<0.0023		0.0023	0.00068	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Bromomethane	<0.0058		0.0058	0.0022	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
2-Butanone (MEK)	<0.0058		0.0058	0.0026	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Carbon disulfide	<0.0058		0.0058	0.0012	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Carbon tetrachloride	<0.0023		0.0023	0.00068	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Chlorobenzene	<0.0023		0.0023	0.00086	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Chloroethane	<0.0058		0.0058	0.0017	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Chloroform	<0.0023		0.0023	0.00081	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Chloromethane	<0.0058		0.0058	0.0024	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
cis-1,2-Dichloroethene	<0.0023		0.0023	0.00065	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
cis-1,3-Dichloropropene	<0.0023		0.0023	0.00071	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Dibromochloromethane	<0.0023		0.0023	0.00076	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
1,1-Dichloroethane	<0.0023		0.0023	0.00080	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
1,2-Dichloroethane	<0.0058		0.0058	0.0018	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
1,1-Dichloroethene	<0.0023		0.0023	0.00080	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
1,2-Dichloropropane	<0.0023		0.0023	0.00060	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
1,3-Dichloropropene, Total	<0.0023		0.0023	0.00082	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Ethylbenzene	<0.0023		0.0023	0.0011	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
2-Hexanone	<0.0058		0.0058	0.0018	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Methylene Chloride	<0.0058		0.0058	0.0023	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
4-Methyl-2-pentanone (MIBK)	<0.0058		0.0058	0.0017	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Methyl tert-butyl ether	<0.0023		0.0023	0.00069	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Styrene	<0.0023		0.0023	0.00071	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
1,1,2,2-Tetrachloroethane	<0.0023		0.0023	0.00075	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Tetrachloroethene	<0.0023		0.0023	0.00080	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Toluene	<0.0023		0.0023	0.00059	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
trans-1,2-Dichloroethene	<0.0023		0.0023	0.0010	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
trans-1,3-Dichloropropene	<0.0023		0.0023	0.00082	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
1,1,1-Trichloroethane	<0.0023		0.0023	0.00078	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
1,1,2-Trichloroethane	<0.0023		0.0023	0.0010	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Trichloroethene	<0.0023		0.0023	0.00079	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Vinyl acetate	<0.0058		0.0058	0.0020	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Vinyl chloride	<0.0023		0.0023	0.0010	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1
Xylenes, Total	<0.0047		0.0047	0.00075	mg/Kg	☼	11/04/17 08:18	11/09/17 16:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		75 - 131	11/04/17 08:18	11/09/17 16:27	1
Dibromofluoromethane	101		75 - 126	11/04/17 08:18	11/09/17 16:27	1
1,2-Dichloroethane-d4 (Surr)	91		70 - 134	11/04/17 08:18	11/09/17 16:27	1
Toluene-d8 (Surr)	99		75 - 124	11/04/17 08:18	11/09/17 16:27	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Anthracene	<0.037		0.037	0.0062	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
<b>Benzo[a]anthracene</b>	<b>0.0073</b>	<b>J</b>	0.037	0.0050	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B02 (0-5)**

**Lab Sample ID: 500-136786-5**

Date Collected: 11/03/17 10:30

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 86.4

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.028	J	0.037	0.0072	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Benzo[b]fluoranthene	0.0085	J	0.037	0.0081	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Benzo[g,h,i]perylene	0.013	J	0.037	0.012	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Benzo[k]fluoranthene	<0.037		0.037	0.011	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Carbazole	<0.19		0.19	0.093	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
4-Chloroaniline	<0.75		0.75	0.18	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Chrysene	<0.037		0.037	0.010	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
2,4-Dinitrophenol	<0.75		0.75	0.66	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
2,6-Dinitrotoluene	<0.19		0.19	0.073	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Fluoranthene	0.019	J	0.037	0.0069	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Fluorene	<0.037		0.037	0.0052	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Hexachlorobenzene	<0.075		0.075	0.0086	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Hexachlorocyclopentadiene	<0.75		0.75	0.21	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Indeno[1,2,3-cd]pyrene	<0.037		0.037	0.0097	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
2-Methylnaphthalene	<0.075		0.075	0.0069	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Naphthalene	<0.037		0.037	0.0057	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B02 (0-5)**

**Lab Sample ID: 500-136786-5**

Date Collected: 11/03/17 10:30

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 86.4

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.75		0.75	0.35	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.046	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Pentachlorophenol	<0.75		0.75	0.60	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
<b>Phenanthrene</b>	<b>0.0094</b>	<b>J</b>	0.037	0.0052	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
Phenol	<0.19		0.19	0.083	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
<b>Pyrene</b>	<b>0.069</b>		0.037	0.0074	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/11/17 09:17	11/13/17 17:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	83		44 - 121	11/11/17 09:17	11/13/17 17:33	1
2-Fluorophenol	80		46 - 133	11/11/17 09:17	11/13/17 17:33	1
Nitrobenzene-d5	77		41 - 120	11/11/17 09:17	11/13/17 17:33	1
Phenol-d5	86		46 - 125	11/11/17 09:17	11/13/17 17:33	1
Terphenyl-d14	85		35 - 160	11/11/17 09:17	11/13/17 17:33	1
2,4,6-Tribromophenol	77		25 - 139	11/11/17 09:17	11/13/17 17:33	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.29</b>	<b>J</b>	1.1	0.21	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
<b>Arsenic</b>	<b>1.5</b>		0.54	0.18	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
<b>Barium</b>	<b>5.0</b>		0.54	0.061	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
<b>Beryllium</b>	<b>0.096</b>	<b>J</b>	0.22	0.050	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
<b>Cadmium</b>	<b>0.068</b>	<b>J B</b>	0.11	0.019	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
<b>Chromium</b>	<b>2.8</b>		0.54	0.27	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
<b>Cobalt</b>	<b>1.9</b>		0.27	0.071	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
<b>Copper</b>	<b>1.7</b>		0.54	0.15	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
<b>Iron</b>	<b>2800</b>		11	5.6	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
<b>Lead</b>	<b>2.5</b>		0.27	0.12	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
<b>Magnesium</b>	<b>5000</b>		5.4	2.7	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
<b>Calcium</b>	<b>8200</b>	<b>B</b>	11	1.8	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
<b>Manganese</b>	<b>38</b>		0.54	0.078	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
<b>Nickel</b>	<b>3.2</b>		0.54	0.16	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
Selenium	<0.54		0.54	0.32	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
Silver	<0.27		0.27	0.070	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
Thallium	<0.54		0.54	0.27	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
<b>Vanadium</b>	<b>3.9</b>		0.27	0.064	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
<b>Zinc</b>	<b>12</b>		1.1	0.47	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
<b>Potassium</b>	<b>310</b>		27	9.5	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1
<b>Sodium</b>	<b>52</b>	<b>J</b>	54	8.0	mg/Kg	☼	11/07/17 16:57	11/08/17 23:41	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 16:44	11/10/17 16:15	1
<b>Barium</b>	<b>0.063</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 16:44	11/10/17 16:15	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 16:44	11/10/17 16:15	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/09/17 16:44	11/10/17 16:15	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B02 (0-5)**

**Lab Sample ID: 500-136786-5**

Date Collected: 11/03/17 10:30

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 86.4

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	210		5.0	0.50	mg/L		11/09/17 16:44	11/10/17 16:15	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:15	1
Cobalt	0.013	J	0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:15	1
Copper	0.021	J	0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:15	1
Iron	1.3		0.40	0.20	mg/L		11/09/17 16:44	11/10/17 16:15	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 16:44	11/10/17 16:15	1
Magnesium	110		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:15	1
Manganese	0.82		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:15	1
Nickel	0.012	J	0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:15	1
Potassium	1.0	J	2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:15	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 16:44	11/10/17 16:15	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:15	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:15	1
Zinc	0.055	J	0.50	0.020	mg/L		11/09/17 16:44	11/10/17 16:15	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.037		0.025	0.010	mg/L		11/09/17 16:42	11/10/17 21:55	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 16:44	11/10/17 13:47	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 16:44	11/10/17 13:47	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 15:51	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.017		0.017	0.0057	mg/Kg	☼	11/08/17 16:15	11/09/17 08:17	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.57		0.57	0.20	mg/Kg	☼	11/13/17 08:00	11/13/17 16:37	1
pH	8.6		0.20	0.20	SU			11/11/17 22:50	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B02 (5-10)**

**Lab Sample ID: 500-136786-6**

Date Collected: 11/03/17 10:35

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 84.3

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.057</b>		0.016	0.0070	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Benzene	<0.0016		0.0016	0.00041	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Bromodichloromethane	<0.0016		0.0016	0.00033	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Bromoform	<0.0016		0.0016	0.00047	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Bromomethane	<0.0040		0.0040	0.0015	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
2-Butanone (MEK)	<0.0040		0.0040	0.0018	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Carbon disulfide	<0.0040		0.0040	0.00084	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Carbon tetrachloride	<0.0016		0.0016	0.00047	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Chlorobenzene	<0.0016		0.0016	0.00060	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Chloroethane	<0.0040		0.0040	0.0012	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Chloroform	<0.0016		0.0016	0.00056	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Chloromethane	<0.0040		0.0040	0.0016	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
cis-1,2-Dichloroethene	<0.0016		0.0016	0.00045	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
cis-1,3-Dichloropropene	<0.0016		0.0016	0.00049	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Dibromochloromethane	<0.0016		0.0016	0.00053	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
1,1-Dichloroethane	<0.0016		0.0016	0.00055	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
1,2-Dichloroethane	<0.0040		0.0040	0.0013	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
1,1-Dichloroethene	<0.0016		0.0016	0.00055	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
1,2-Dichloropropane	<0.0016		0.0016	0.00042	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
1,3-Dichloropropane, Total	<0.0016		0.0016	0.00057	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Ethylbenzene	<0.0016		0.0016	0.00077	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
2-Hexanone	<0.0040		0.0040	0.0013	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Methylene Chloride	<0.0040		0.0040	0.0016	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
4-Methyl-2-pentanone (MIBK)	<0.0040		0.0040	0.0012	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Methyl tert-butyl ether	<0.0016		0.0016	0.00047	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Styrene	<0.0016		0.0016	0.00049	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
1,1,2,2-Tetrachloroethane	<0.0016		0.0016	0.00052	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Tetrachloroethene	<0.0016		0.0016	0.00055	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Toluene	<0.0016		0.0016	0.00041	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
trans-1,2-Dichloroethene	<0.0016		0.0016	0.00071	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
trans-1,3-Dichloropropene	<0.0016		0.0016	0.00057	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
1,1,1-Trichloroethane	<0.0016		0.0016	0.00054	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
1,1,2-Trichloroethane	<0.0016		0.0016	0.00069	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Trichloroethene	<0.0016		0.0016	0.00055	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Vinyl acetate	<0.0040		0.0040	0.0014	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Vinyl chloride	<0.0016		0.0016	0.00071	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1
Xylenes, Total	<0.0032		0.0032	0.00052	mg/Kg	☼	11/04/17 08:18	11/09/17 16:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		75 - 131	11/04/17 08:18	11/09/17 16:52	1
Dibromofluoromethane	101		75 - 126	11/04/17 08:18	11/09/17 16:52	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 134	11/04/17 08:18	11/09/17 16:52	1
Toluene-d8 (Surr)	100		75 - 124	11/04/17 08:18	11/09/17 16:52	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.039		0.039	0.0070	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Acenaphthylene	<0.039		0.039	0.0052	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
<b>Anthracene</b>	<b>0.023</b>	<b>J</b>	0.039	0.0065	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
<b>Benzo[a]anthracene</b>	<b>0.017</b>	<b>J</b>	0.039	0.0053	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B02 (5-10)**

**Lab Sample ID: 500-136786-6**

Date Collected: 11/03/17 10:35

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 84.3

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.055</b>		0.039	0.0076	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
<b>Benzo[b]fluoranthene</b>	<b>0.021</b>	<b>J</b>	0.039	0.0085	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
<b>Benzo[g,h,i]perylene</b>	<b>0.032</b>	<b>J</b>	0.039	0.013	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Benzo[k]fluoranthene	<0.039		0.039	0.012	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.072	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Butyl benzyl phthalate	<0.20		0.20	0.075	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Carbazole	<0.20		0.20	0.098	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
4-Chloroaniline	<0.79		0.79	0.18	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
<b>Chrysene</b>	<b>0.020</b>	<b>J</b>	0.039	0.011	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Dibenz(a,h)anthracene	<0.039		0.039	0.0076	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
1,2-Dichlorobenzene	<0.20		0.20	0.047	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
2,4-Dichlorophenol	<0.39		0.39	0.093	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Diethyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
4,6-Dinitro-2-methylphenol	<0.79		0.79	0.32	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
2,4-Dinitrophenol	<0.79		0.79	0.69	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
2,6-Dinitrotoluene	<0.20		0.20	0.077	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
<b>Fluoranthene</b>	<b>0.070</b>		0.039	0.0073	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Fluorene	<0.039		0.039	0.0055	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Hexachlorobenzene	<0.079		0.079	0.0091	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Hexachlorocyclopentadiene	<0.79		0.79	0.23	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.011</b>	<b>J</b>	0.039	0.010	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
<b>2-Methylnaphthalene</b>	<b>0.022</b>	<b>J</b>	0.079	0.0072	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Naphthalene	<0.039		0.039	0.0060	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Nitrobenzene	<0.039		0.039	0.0098	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
2-Nitrophenol	<0.39		0.39	0.093	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B02 (5-10)**

**Lab Sample ID: 500-136786-6**

Date Collected: 11/03/17 10:35

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 84.3

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.79		0.79	0.37	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
N-Nitrosodi-n-propylamine	<0.079		0.079	0.048	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.045	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Pentachlorophenol	<0.79		0.79	0.63	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
<b>Phenanthrene</b>	<b>0.052</b>		0.039	0.0055	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
Phenol	<0.20		0.20	0.087	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
<b>Pyrene</b>	<b>0.22</b>		0.039	0.0078	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
2,4,5-Trichlorophenol	<0.39		0.39	0.089	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	11/11/17 09:17	11/13/17 17:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	87		44 - 121	11/11/17 09:17	11/13/17 17:58	1
2-Fluorophenol	83		46 - 133	11/11/17 09:17	11/13/17 17:58	1
Nitrobenzene-d5	78		41 - 120	11/11/17 09:17	11/13/17 17:58	1
Phenol-d5	91		46 - 125	11/11/17 09:17	11/13/17 17:58	1
Terphenyl-d14	86		35 - 160	11/11/17 09:17	11/13/17 17:58	1
2,4,6-Tribromophenol	68		25 - 139	11/11/17 09:17	11/13/17 17:58	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.40</b>	<b>J</b>	1.2	0.23	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1
<b>Arsenic</b>	<b>7.1</b>		0.59	0.20	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1
<b>Barium</b>	<b>17</b>		0.59	0.067	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1
<b>Beryllium</b>	<b>0.34</b>		0.24	0.055	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1
<b>Cadmium</b>	<b>0.14</b>	<b>B</b>	0.12	0.021	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1
<b>Chromium</b>	<b>7.0</b>		0.59	0.29	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1
<b>Cobalt</b>	<b>4.9</b>		0.30	0.077	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1
<b>Copper</b>	<b>18</b>		0.59	0.17	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1
<b>Iron</b>	<b>14000</b>		12	6.1	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1
<b>Lead</b>	<b>10</b>		0.30	0.14	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1
<b>Magnesium</b>	<b>42000</b>		5.9	2.9	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1
<b>Calcium</b>	<b>130000</b>	<b>B</b>	120	20	mg/Kg	☼	11/07/17 16:57	11/09/17 19:35	10
<b>Manganese</b>	<b>270</b>		0.59	0.086	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1
<b>Nickel</b>	<b>13</b>		0.59	0.17	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1
<b>Selenium</b>	<b>0.65</b>		0.59	0.35	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1
Silver	<0.30		0.30	0.076	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1
Thallium	<0.59		0.59	0.29	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1
<b>Vanadium</b>	<b>11</b>		0.30	0.070	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1
<b>Zinc</b>	<b>39</b>		1.2	0.52	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1
<b>Potassium</b>	<b>1500</b>		30	10	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1
<b>Sodium</b>	<b>150</b>		59	8.7	mg/Kg	☼	11/07/17 16:57	11/08/17 23:53	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 16:44	11/10/17 16:19	1
<b>Barium</b>	<b>0.27</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 16:44	11/10/17 16:19	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 16:44	11/10/17 16:19	1
<b>Cadmium</b>	<b>0.0026</b>	<b>J</b>	0.0050	0.0020	mg/L		11/09/17 16:44	11/10/17 16:19	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B02 (5-10)**

**Lab Sample ID: 500-136786-6**

**Date Collected: 11/03/17 10:35**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 84.3**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>350</b>		5.0	0.50	mg/L		11/09/17 16:44	11/10/17 16:19	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:19	1
<b>Cobalt</b>	<b>0.013</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:19	1
Copper	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:19	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 16:44	11/10/17 16:19	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 16:44	11/10/17 16:19	1
<b>Magnesium</b>	<b>95</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:19	1
<b>Manganese</b>	<b>1.3</b>		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:19	1
<b>Nickel</b>	<b>0.027</b>		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:19	1
<b>Potassium</b>	<b>3.2</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:19	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 16:44	11/10/17 16:19	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:19	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:19	1
<b>Zinc</b>	<b>0.056</b>	<b>J</b>	0.50	0.020	mg/L		11/09/17 16:44	11/10/17 16:19	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	<0.025		0.025	0.010	mg/L		11/09/17 16:42	11/10/17 21:59	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 16:44	11/10/17 13:51	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 16:44	11/10/17 13:51	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 15:53	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.013</b>	<b>J</b>	0.018	0.0059	mg/Kg	☼	11/08/17 16:15	11/09/17 08:19	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.54		0.54	0.19	mg/Kg	☼	11/13/17 08:00	11/13/17 16:37	1
<b>pH</b>	<b>8.1</b>		0.20	0.20	SU			11/11/17 23:23	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B02 (10-15)**

**Lab Sample ID: 500-136786-7**

**Date Collected: 11/03/17 10:40**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 91.2**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.20		0.20	0.068	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
Benzene	<0.0098		0.0098	0.0057	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
Bromodichloromethane	<0.039		0.039	0.015	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
Bromoform	<0.039		0.039	0.019	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
Bromomethane	<0.078		0.078	0.031	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
2-Butanone (MEK)	<0.20		0.20	0.083	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
Carbon disulfide	<0.078		0.078	0.031	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
Carbon tetrachloride	<0.039		0.039	0.015	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
Chlorobenzene	<0.039		0.039	0.015	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
Chloroethane	<0.039		0.039	0.020	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
Chloroform	<0.078		0.078	0.015	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
Chloromethane	<0.039		0.039	0.013	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
cis-1,2-Dichloroethene	<0.039		0.039	0.016	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
cis-1,3-Dichloropropene	<0.039		0.039	0.016	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
Dibromochloromethane	<0.039		0.039	0.019	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
1,1-Dichloroethane	<0.039		0.039	0.016	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
1,2-Dichloroethane	<0.039		0.039	0.015	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
1,1-Dichloroethene	<0.039		0.039	0.015	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
1,2-Dichloropropane	<0.039		0.039	0.017	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
1,3-Dichloropropane, Total	<0.039		0.039	0.016	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
<b>Ethylbenzene</b>	<b>3.0</b>		0.0098	0.0072	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
2-Hexanone	<0.20		0.20	0.061	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
Methylene Chloride	<0.20	*	0.20	0.064	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
4-Methyl-2-pentanone (MIBK)	<0.20		0.20	0.084	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
Methyl tert-butyl ether	<0.039		0.039	0.015	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
Styrene	<0.039		0.039	0.015	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
1,1,2,2-Tetrachloroethane	<0.039		0.039	0.016	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
Tetrachloroethene	<0.039		0.039	0.015	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
<b>Toluene</b>	<b>0.011</b>		0.0098	0.0058	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
trans-1,2-Dichloroethene	<0.039		0.039	0.014	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
trans-1,3-Dichloropropene	<0.039		0.039	0.014	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
1,1,1-Trichloroethane	<0.039		0.039	0.015	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
1,1,2-Trichloroethane	<0.039		0.039	0.014	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
Trichloroethene	<0.020		0.020	0.0064	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
Vinyl acetate	<0.078		0.078	0.035	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
Vinyl chloride	<0.020		0.020	0.010	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50
<b>Xylenes, Total</b>	<b>0.92</b>		0.020	0.0086	mg/Kg	☼	11/03/17 10:40	11/13/17 16:51	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		72 - 124	11/03/17 10:40	11/13/17 16:51	50
Dibromofluoromethane	89		75 - 120	11/03/17 10:40	11/13/17 16:51	50
1,2-Dichloroethane-d4 (Surr)	89		75 - 126	11/03/17 10:40	11/13/17 16:51	50
Toluene-d8 (Surr)	104		75 - 120	11/03/17 10:40	11/13/17 16:51	50

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.035		0.035	0.0063	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Acenaphthylene	<0.035		0.035	0.0047	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Anthracene	<0.035		0.035	0.0059	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Benzo[a]anthracene	<0.035		0.035	0.0047	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B02 (10-15)**

**Lab Sample ID: 500-136786-7**

**Date Collected: 11/03/17 10:40**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 91.2**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.035		0.035	0.0068	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Benzo[b]fluoranthene	<0.035		0.035	0.0076	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Benzo[g,h,i]perylene	<0.035		0.035	0.011	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Benzo[k]fluoranthene	<0.035		0.035	0.010	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.053	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.064	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Butyl benzyl phthalate	<0.18		0.18	0.067	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Carbazole	<0.18		0.18	0.088	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
4-Chloroaniline	<0.71		0.71	0.17	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
4-Chloro-3-methylphenol	<0.35		0.35	0.12	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
2-Chlorophenol	<0.18		0.18	0.060	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.041	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Chrysene	<0.035		0.035	0.0096	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Dibenz(a,h)anthracene	<0.035		0.035	0.0068	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Dibenzofuran	<0.18		0.18	0.041	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
1,2-Dichlorobenzene	<0.18		0.18	0.042	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
1,4-Dichlorobenzene	<0.18		0.18	0.045	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.049	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
2,4-Dichlorophenol	<0.35		0.35	0.084	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Diethyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
2,4-Dimethylphenol	<0.35		0.35	0.13	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Dimethyl phthalate	<0.18		0.18	0.046	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Di-n-butyl phthalate	<0.18		0.18	0.054	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
4,6-Dinitro-2-methylphenol	<0.71		0.71	0.28	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
2,4-Dinitrophenol	<0.71		0.71	0.62	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
2,4-Dinitrotoluene	<0.18		0.18	0.056	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
2,6-Dinitrotoluene	<0.18		0.18	0.069	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Di-n-octyl phthalate	<0.18		0.18	0.058	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Fluoranthene	<0.035		0.035	0.0065	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Fluorene	<0.035		0.035	0.0050	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Hexachlorobenzene	<0.071		0.071	0.0082	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Hexachlorobutadiene	<0.18		0.18	0.055	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Hexachlorocyclopentadiene	<0.71		0.71	0.20	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Hexachloroethane	<0.18		0.18	0.054	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Indeno[1,2,3-cd]pyrene	<0.035		0.035	0.0091	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
<b>2-Methylnaphthalene</b>	<b>1.2</b>		0.071	0.0065	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
2-Methylphenol	<0.18		0.18	0.057	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
3 & 4 Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
<b>Naphthalene</b>	<b>2.3</b>		0.035	0.0054	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
2-Nitroaniline	<0.18		0.18	0.047	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
3-Nitroaniline	<0.35		0.35	0.11	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
4-Nitroaniline	<0.35		0.35	0.15	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Nitrobenzene	<0.035		0.035	0.0088	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
2-Nitrophenol	<0.35		0.35	0.083	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B02 (10-15)**

**Lab Sample ID: 500-136786-7**

Date Collected: 11/03/17 10:40

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 91.2

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.71		0.71	0.34	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
N-Nitrosodi-n-propylamine	<0.071		0.071	0.043	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Pentachlorophenol	<0.71		0.71	0.57	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
<b>Phenanthrene</b>	<b>0.0055</b>	<b>J</b>	0.035	0.0049	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Phenol	<0.18		0.18	0.078	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
Pyrene	<0.035		0.035	0.0070	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.038	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
2,4,5-Trichlorophenol	<0.35		0.35	0.081	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1
2,4,6-Trichlorophenol	<0.35		0.35	0.12	mg/Kg	☼	11/11/17 09:17	11/13/17 18:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	84		44 - 121	11/11/17 09:17	11/13/17 18:23	1
2-Fluorophenol	87		46 - 133	11/11/17 09:17	11/13/17 18:23	1
Nitrobenzene-d5	77		41 - 120	11/11/17 09:17	11/13/17 18:23	1
Phenol-d5	92		46 - 125	11/11/17 09:17	11/13/17 18:23	1
Terphenyl-d14	83		35 - 160	11/11/17 09:17	11/13/17 18:23	1
2,4,6-Tribromophenol	60		25 - 139	11/11/17 09:17	11/13/17 18:23	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.39</b>	<b>J</b>	1.1	0.21	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1
<b>Arsenic</b>	<b>2.7</b>		0.54	0.19	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1
<b>Barium</b>	<b>10</b>		0.54	0.062	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1
<b>Beryllium</b>	<b>0.32</b>		0.22	0.051	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1
<b>Cadmium</b>	<b>0.087</b>	<b>J B</b>	0.11	0.020	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1
<b>Chromium</b>	<b>6.2</b>		0.54	0.27	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1
<b>Cobalt</b>	<b>3.6</b>		0.27	0.071	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1
<b>Copper</b>	<b>7.9</b>		0.54	0.15	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1
<b>Iron</b>	<b>9000</b>		11	5.7	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1
<b>Lead</b>	<b>3.2</b>		0.27	0.13	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1
<b>Magnesium</b>	<b>52000</b>		5.4	2.7	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1
<b>Calcium</b>	<b>130000</b>	<b>B</b>	110	18	mg/Kg	☼	11/07/17 16:57	11/09/17 19:39	10
<b>Manganese</b>	<b>280</b>		0.54	0.079	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1
<b>Nickel</b>	<b>9.9</b>		0.54	0.16	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1
Selenium	<0.54		0.54	0.32	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1
Silver	<0.27		0.27	0.070	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1
Thallium	<0.54		0.54	0.27	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1
<b>Vanadium</b>	<b>6.7</b>		0.27	0.064	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1
<b>Zinc</b>	<b>19</b>		1.1	0.48	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1
<b>Potassium</b>	<b>1900</b>		27	9.6	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1
<b>Sodium</b>	<b>170</b>		54	8.1	mg/Kg	☼	11/07/17 16:57	11/08/17 23:57	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 16:44	11/10/17 16:23	1
<b>Barium</b>	<b>0.13</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 16:44	11/10/17 16:23	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 16:44	11/10/17 16:23	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/09/17 16:44	11/10/17 16:23	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B02 (10-15)**

**Lab Sample ID: 500-136786-7**

Date Collected: 11/03/17 10:40

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 91.2

### Method: 6010B - Metals (ICP) - TCLP (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>360</b>		5.0	0.50	mg/L		11/09/17 16:44	11/10/17 16:23	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:23	1
<b>Cobalt</b>	<b>0.014</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:23	1
Copper	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:23	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 16:44	11/10/17 16:23	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 16:44	11/10/17 16:23	1
<b>Magnesium</b>	<b>98</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:23	1
<b>Manganese</b>	<b>1.1</b>		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:23	1
<b>Nickel</b>	<b>0.029</b>		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:23	1
<b>Potassium</b>	<b>3.9</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:23	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 16:44	11/10/17 16:23	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:23	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:23	1
Zinc	<0.50		0.50	0.020	mg/L		11/09/17 16:44	11/10/17 16:23	1

### Method: 6010B - Metals (ICP) - SPLP East

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	<0.025		0.025	0.010	mg/L		11/09/17 16:42	11/10/17 22:03	1

### Method: 6020A - Metals (ICP/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 16:44	11/10/17 13:55	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 16:44	11/10/17 13:55	1

### Method: 7470A - TCLP Mercury - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 15:55	1

### Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.017		0.017	0.0058	mg/Kg	☼	11/08/17 16:15	11/09/17 08:22	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.52		0.52	0.18	mg/Kg	☼	11/13/17 08:00	11/13/17 16:38	1
<b>pH</b>	<b>8.4</b>		0.20	0.20	SU			11/11/17 23:57	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B02 (15-20)**

**Lab Sample ID: 500-136786-8**

**Date Collected: 11/03/17 10:45**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 90.8**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.015		0.015	0.0067	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Benzene	<0.0015		0.0015	0.00039	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Bromodichloromethane	<0.0015		0.0015	0.00031	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Bromoform	<0.0015		0.0015	0.00045	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Bromomethane	<0.0039		0.0039	0.0015	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
2-Butanone (MEK)	<0.0039		0.0039	0.0017	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Carbon disulfide	<0.0039		0.0039	0.00080	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Carbon tetrachloride	<0.0015		0.0015	0.00045	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Chlorobenzene	<0.0015		0.0015	0.00057	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Chloroethane	<0.0039		0.0039	0.0011	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Chloroform	<0.0015		0.0015	0.00053	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Chloromethane	<0.0039		0.0039	0.0015	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
cis-1,2-Dichloroethene	<0.0015		0.0015	0.00043	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
cis-1,3-Dichloropropene	<0.0015		0.0015	0.00046	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Dibromochloromethane	<0.0015		0.0015	0.00050	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
1,1-Dichloroethane	<0.0015		0.0015	0.00053	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
1,2-Dichloroethane	<0.0039		0.0039	0.0012	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
1,1-Dichloroethene	<0.0015		0.0015	0.00053	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
1,2-Dichloropropane	<0.0015		0.0015	0.00040	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
1,3-Dichloropropene, Total	<0.0015		0.0015	0.00054	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Ethylbenzene	<0.0015		0.0015	0.00074	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
2-Hexanone	<0.0039		0.0039	0.0012	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Methylene Chloride	<0.0039		0.0039	0.0015	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
4-Methyl-2-pentanone (MIBK)	<0.0039		0.0039	0.0011	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Methyl tert-butyl ether	<0.0015		0.0015	0.00045	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Styrene	<0.0015		0.0015	0.00047	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
1,1,2,2-Tetrachloroethane	<0.0015		0.0015	0.00049	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Tetrachloroethene	<0.0015		0.0015	0.00052	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Toluene	<0.0015		0.0015	0.00039	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
trans-1,2-Dichloroethene	<0.0015		0.0015	0.00068	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
trans-1,3-Dichloropropene	<0.0015		0.0015	0.00054	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
1,1,1-Trichloroethane	<0.0015		0.0015	0.00052	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
1,1,2-Trichloroethane	<0.0015		0.0015	0.00066	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Trichloroethene	<0.0015		0.0015	0.00052	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Vinyl acetate	<0.0039		0.0039	0.0013	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Vinyl chloride	<0.0015		0.0015	0.00068	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1
Xylenes, Total	<0.0031		0.0031	0.00049	mg/Kg	☼	11/04/17 08:18	11/09/17 17:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		75 - 131	11/04/17 08:18	11/09/17 17:18	1
Dibromofluoromethane	99		75 - 126	11/04/17 08:18	11/09/17 17:18	1
1,2-Dichloroethane-d4 (Surr)	93		70 - 134	11/04/17 08:18	11/09/17 17:18	1
Toluene-d8 (Surr)	99		75 - 124	11/04/17 08:18	11/09/17 17:18	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.035		0.035	0.0063	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Acenaphthylene	<0.035		0.035	0.0046	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Anthracene	<0.035		0.035	0.0059	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Benzo[a]anthracene	<0.035		0.035	0.0047	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B02 (15-20)**

**Lab Sample ID: 500-136786-8**

**Date Collected: 11/03/17 10:45**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 90.8**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.035		0.035	0.0068	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Benzo[b]fluoranthene	<0.035		0.035	0.0076	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Benzo[g,h,i]perylene	<0.035		0.035	0.011	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Benzo[k]fluoranthene	<0.035		0.035	0.010	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.053	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.064	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.046	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Butyl benzyl phthalate	<0.18		0.18	0.067	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Carbazole	<0.18		0.18	0.088	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
4-Chloroaniline	<0.71		0.71	0.16	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
4-Chloro-3-methylphenol	<0.35		0.35	0.12	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
2-Chlorophenol	<0.18		0.18	0.060	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.041	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Chrysene	<0.035		0.035	0.0096	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Dibenz(a,h)anthracene	<0.035		0.035	0.0068	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Dibenzofuran	<0.18		0.18	0.041	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
1,2-Dichlorobenzene	<0.18		0.18	0.042	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
1,3-Dichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
1,4-Dichlorobenzene	<0.18		0.18	0.045	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.049	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
2,4-Dichlorophenol	<0.35		0.35	0.083	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Diethyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
2,4-Dimethylphenol	<0.35		0.35	0.13	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Dimethyl phthalate	<0.18		0.18	0.046	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Di-n-butyl phthalate	<0.18		0.18	0.053	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
4,6-Dinitro-2-methylphenol	<0.71		0.71	0.28	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
2,4-Dinitrophenol	<0.71		0.71	0.62	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
2,4-Dinitrotoluene	<0.18		0.18	0.056	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
2,6-Dinitrotoluene	<0.18		0.18	0.069	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Di-n-octyl phthalate	<0.18		0.18	0.057	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Fluoranthene	<0.035		0.035	0.0065	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Fluorene	<0.035		0.035	0.0049	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Hexachlorobenzene	<0.071		0.071	0.0081	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Hexachlorobutadiene	<0.18		0.18	0.055	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Hexachlorocyclopentadiene	<0.71		0.71	0.20	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Hexachloroethane	<0.18		0.18	0.053	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Indeno[1,2,3-cd]pyrene	<0.035		0.035	0.0091	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Isophorone	<0.18		0.18	0.039	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
2-Methylnaphthalene	<0.071		0.071	0.0064	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
2-Methylphenol	<0.18		0.18	0.056	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
3 & 4 Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Naphthalene	<0.035		0.035	0.0054	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
2-Nitroaniline	<0.18		0.18	0.047	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
3-Nitroaniline	<0.35		0.35	0.11	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
4-Nitroaniline	<0.35		0.35	0.15	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Nitrobenzene	<0.035		0.035	0.0087	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
2-Nitrophenol	<0.35		0.35	0.083	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B02 (15-20)**

**Lab Sample ID: 500-136786-8**

Date Collected: 11/03/17 10:45

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 90.8

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.71		0.71	0.33	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
N-Nitrosodi-n-propylamine	<0.071		0.071	0.043	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
N-Nitrosodiphenylamine	<0.18		0.18	0.041	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Pentachlorophenol	<0.71		0.71	0.56	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
<b>Phenanthrene</b>	<b>0.0059</b>	<b>J</b>	0.035	0.0049	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Phenol	<0.18		0.18	0.078	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
Pyrene	<0.035		0.035	0.0070	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.038	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
2,4,5-Trichlorophenol	<0.35		0.35	0.080	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1
2,4,6-Trichlorophenol	<0.35		0.35	0.12	mg/Kg	☼	11/11/17 09:17	11/13/17 18:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	86		44 - 121	11/11/17 09:17	11/13/17 18:48	1
2-Fluorophenol	83		46 - 133	11/11/17 09:17	11/13/17 18:48	1
Nitrobenzene-d5	83		41 - 120	11/11/17 09:17	11/13/17 18:48	1
Phenol-d5	89		46 - 125	11/11/17 09:17	11/13/17 18:48	1
Terphenyl-d14	88		35 - 160	11/11/17 09:17	11/13/17 18:48	1
2,4,6-Tribromophenol	83		25 - 139	11/11/17 09:17	11/13/17 18:48	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.49</b>	<b>J</b>	1.0	0.20	mg/Kg	☼	11/07/17 16:57	11/09/17 00:01	1
<b>Arsenic</b>	<b>1.9</b>		0.51	0.17	mg/Kg	☼	11/07/17 16:57	11/09/17 00:01	1
<b>Barium</b>	<b>14</b>		0.51	0.058	mg/Kg	☼	11/07/17 16:57	11/09/17 00:01	1
<b>Beryllium</b>	<b>0.24</b>		0.20	0.048	mg/Kg	☼	11/07/17 16:57	11/09/17 00:01	1
<b>Cadmium</b>	<b>0.14</b>	<b>B</b>	0.10	0.018	mg/Kg	☼	11/07/17 16:57	11/09/17 00:01	1
<b>Chromium</b>	<b>15</b>		0.51	0.25	mg/Kg	☼	11/07/17 16:57	11/09/17 00:01	1
<b>Cobalt</b>	<b>2.7</b>		0.26	0.067	mg/Kg	☼	11/07/17 16:57	11/09/17 00:01	1
<b>Copper</b>	<b>4.7</b>		0.51	0.14	mg/Kg	☼	11/07/17 16:57	11/09/17 00:01	1
<b>Iron</b>	<b>6500</b>		10	5.3	mg/Kg	☼	11/07/17 16:57	11/09/17 00:01	1
<b>Lead</b>	<b>3.1</b>		0.26	0.12	mg/Kg	☼	11/07/17 16:57	11/09/17 00:01	1
<b>Magnesium</b>	<b>110000</b>		51	25	mg/Kg	☼	11/07/17 16:57	11/09/17 19:43	10
<b>Calcium</b>	<b>200000</b>	<b>B</b>	100	17	mg/Kg	☼	11/07/17 16:57	11/09/17 19:43	10
<b>Manganese</b>	<b>250</b>		0.51	0.074	mg/Kg	☼	11/07/17 16:57	11/09/17 00:01	1
<b>Nickel</b>	<b>7.5</b>		0.51	0.15	mg/Kg	☼	11/07/17 16:57	11/09/17 00:01	1
Selenium	<0.51		0.51	0.30	mg/Kg	☼	11/07/17 16:57	11/09/17 00:01	1
Silver	<0.26		0.26	0.066	mg/Kg	☼	11/07/17 16:57	11/09/17 00:01	1
Thallium	<0.51		0.51	0.26	mg/Kg	☼	11/07/17 16:57	11/09/17 00:01	1
<b>Vanadium</b>	<b>7.2</b>		0.26	0.060	mg/Kg	☼	11/07/17 16:57	11/09/17 00:01	1
<b>Zinc</b>	<b>26</b>		1.0	0.45	mg/Kg	☼	11/07/17 16:57	11/09/17 00:01	1
<b>Potassium</b>	<b>1300</b>		26	9.1	mg/Kg	☼	11/07/17 16:57	11/09/17 00:01	1
<b>Sodium</b>	<b>230</b>		51	7.6	mg/Kg	☼	11/07/17 16:57	11/09/17 00:01	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 16:44	11/10/17 16:27	1
<b>Barium</b>	<b>0.34</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 16:44	11/10/17 16:27	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 16:44	11/10/17 16:27	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/09/17 16:44	11/10/17 16:27	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B02 (15-20)**

**Lab Sample ID: 500-136786-8**

**Date Collected: 11/03/17 10:45**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 90.8**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>330</b>		5.0	0.50	mg/L		11/09/17 16:44	11/10/17 16:27	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:27	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:27	1
<b>Copper</b>	<b>0.024</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:27	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 16:44	11/10/17 16:27	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 16:44	11/10/17 16:27	1
<b>Magnesium</b>	<b>100</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:27	1
<b>Manganese</b>	<b>0.93</b>		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:27	1
<b>Nickel</b>	<b>0.023</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:27	1
<b>Potassium</b>	<b>4.1</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:27	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 16:44	11/10/17 16:27	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:27	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:27	1
Zinc	<0.50		0.50	0.020	mg/L		11/09/17 16:44	11/10/17 16:27	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	<0.025		0.025	0.010	mg/L		11/09/17 16:42	11/10/17 22:07	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 16:44	11/10/17 13:59	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 16:44	11/10/17 13:59	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 15:57	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.016		0.016	0.0053	mg/Kg	☼	11/08/17 16:15	11/09/17 08:24	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.52		0.52	0.18	mg/Kg	☼	11/13/17 08:00	11/13/17 16:39	1
<b>pH</b>	<b>8.3</b>		0.20	0.20	SU			11/12/17 00:30	1



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B03 (0-5)**

**Lab Sample ID: 500-136786-9**

**Date Collected: 11/03/17 12:10**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 86.4**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.27		0.27	0.093	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
<b>Benzene</b>	<b>0.27</b>		0.013	0.0079	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
Bromodichloromethane	<0.054		0.054	0.020	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
Bromoform	<0.054		0.054	0.026	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
Bromomethane	<0.11		0.11	0.043	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
2-Butanone (MEK)	<0.27		0.27	0.11	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
Carbon disulfide	<0.11		0.11	0.043	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
Carbon tetrachloride	<0.054		0.054	0.021	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
Chlorobenzene	<0.054		0.054	0.021	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
Chloroethane	<0.054		0.054	0.027	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
Chloroform	<0.11		0.11	0.020	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
Chloromethane	<0.054		0.054	0.017	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
cis-1,2-Dichloroethene	<0.054		0.054	0.022	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
cis-1,3-Dichloropropene	<0.054		0.054	0.022	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
Dibromochloromethane	<0.054		0.054	0.026	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
1,1-Dichloroethane	<0.054		0.054	0.022	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
1,2-Dichloroethane	<0.054		0.054	0.021	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
1,1-Dichloroethene	<0.054		0.054	0.021	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
1,2-Dichloropropane	<0.054		0.054	0.023	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
1,3-Dichloropropene, Total	<0.054		0.054	0.022	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
<b>Ethylbenzene</b>	<b>0.13</b>		0.013	0.0099	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
2-Hexanone	<0.27		0.27	0.084	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
Methylene Chloride	<0.27	*	0.27	0.088	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
4-Methyl-2-pentanone (MIBK)	<0.27		0.27	0.12	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
Methyl tert-butyl ether	<0.054		0.054	0.021	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
Styrene	<0.054		0.054	0.021	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
1,1,1,2-Tetrachloroethane	<0.054		0.054	0.021	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
Tetrachloroethene	<0.054		0.054	0.020	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
<b>Toluene</b>	<b>0.013</b>		0.013	0.0079	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
trans-1,2-Dichloroethene	<0.054		0.054	0.019	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
trans-1,3-Dichloropropene	<0.054		0.054	0.020	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
1,1,1-Trichloroethane	<0.054		0.054	0.020	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
1,1,2-Trichloroethane	<0.054		0.054	0.019	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
Trichloroethene	<0.027		0.027	0.0088	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
Vinyl acetate	<0.11		0.11	0.049	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
Vinyl chloride	<0.027		0.027	0.014	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50
<b>Xylenes, Total</b>	<b>0.87</b>		0.027	0.012	mg/Kg	☼	11/03/17 12:10	11/13/17 17:18	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		72 - 124	11/03/17 12:10	11/13/17 17:18	50
Dibromofluoromethane	87		75 - 120	11/03/17 12:10	11/13/17 17:18	50
1,2-Dichloroethane-d4 (Surr)	86		75 - 126	11/03/17 12:10	11/13/17 17:18	50
Toluene-d8 (Surr)	104		75 - 120	11/03/17 12:10	11/13/17 17:18	50

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Anthracene	<0.037		0.037	0.0062	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Benzo[a]anthracene	<0.037		0.037	0.0050	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B03 (0-5)**

**Lab Sample ID: 500-136786-9**

**Date Collected: 11/03/17 12:10**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 86.4**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.037		0.037	0.0072	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Benzo[b]fluoranthene	<0.037		0.037	0.0080	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Benzo[g,h,i]perylene	<0.037		0.037	0.012	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Benzo[k]fluoranthene	<0.037		0.037	0.011	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Carbazole	<0.19		0.19	0.093	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
4-Chloroaniline	<0.75		0.75	0.18	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Chrysene	<0.037		0.037	0.010	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
2,4-Dinitrophenol	<0.75		0.75	0.66	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
2,6-Dinitrotoluene	<0.19		0.19	0.073	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Fluoranthene	<0.037		0.037	0.0069	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Fluorene	<0.037		0.037	0.0052	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Hexachlorobenzene	<0.075		0.075	0.0086	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Hexachlorocyclopentadiene	<0.75		0.75	0.21	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Indeno[1,2,3-cd]pyrene	<0.037		0.037	0.0097	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
2-Methylnaphthalene	<0.075		0.075	0.0069	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Naphthalene	<0.037		0.037	0.0057	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B03 (0-5)**

**Lab Sample ID: 500-136786-9**

Date Collected: 11/03/17 12:10

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 86.4

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.75		0.75	0.35	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.046	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Pentachlorophenol	<0.75		0.75	0.60	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
<b>Phenanthrene</b>	<b>0.0058</b>	<b>J</b>	0.037	0.0052	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Phenol	<0.19		0.19	0.083	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
Pyrene	<0.037		0.037	0.0074	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/11/17 09:17	11/13/17 19:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	75		44 - 121	11/11/17 09:17	11/13/17 19:14	1
2-Fluorophenol	83		46 - 133	11/11/17 09:17	11/13/17 19:14	1
Nitrobenzene-d5	80		41 - 120	11/11/17 09:17	11/13/17 19:14	1
Phenol-d5	85		46 - 125	11/11/17 09:17	11/13/17 19:14	1
Terphenyl-d14	84		35 - 160	11/11/17 09:17	11/13/17 19:14	1
2,4,6-Tribromophenol	74		25 - 139	11/11/17 09:17	11/13/17 19:14	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.63</b>	<b>J</b>	1.1	0.22	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1
<b>Arsenic</b>	<b>8.5</b>		0.56	0.19	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1
<b>Barium</b>	<b>10</b>		0.56	0.064	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1
<b>Beryllium</b>	<b>0.25</b>		0.23	0.053	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1
<b>Cadmium</b>	<b>0.28</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1
<b>Chromium</b>	<b>5.6</b>		0.56	0.28	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1
<b>Cobalt</b>	<b>6.2</b>		0.28	0.074	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1
<b>Copper</b>	<b>19</b>		0.56	0.16	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1
<b>Iron</b>	<b>13000</b>		11	5.9	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1
<b>Lead</b>	<b>9.7</b>		0.28	0.13	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1
<b>Magnesium</b>	<b>56000</b>		5.6	2.8	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1
<b>Calcium</b>	<b>150000</b>	<b>B</b>	110	19	mg/Kg	☼	11/07/17 16:57	11/09/17 19:47	10
<b>Manganese</b>	<b>360</b>		0.56	0.082	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1
<b>Nickel</b>	<b>14</b>		0.56	0.16	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1
Selenium	<0.56		0.56	0.33	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1
Silver	<0.28		0.28	0.073	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1
<b>Vanadium</b>	<b>7.9</b>		0.28	0.067	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1
<b>Zinc</b>	<b>52</b>		1.1	0.49	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1
<b>Potassium</b>	<b>1200</b>		28	10	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1
<b>Sodium</b>	<b>140</b>		56	8.3	mg/Kg	☼	11/07/17 16:57	11/09/17 00:05	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 16:44	11/10/17 16:31	1
<b>Barium</b>	<b>0.13</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 16:44	11/10/17 16:31	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 16:44	11/10/17 16:31	1
<b>Cadmium</b>	<b>0.0027</b>	<b>J</b>	0.0050	0.0020	mg/L		11/09/17 16:44	11/10/17 16:31	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B03 (0-5)**

**Lab Sample ID: 500-136786-9**

**Date Collected: 11/03/17 12:10**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 86.4**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>310</b>		5.0	0.50	mg/L		11/09/17 16:44	11/10/17 16:31	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:31	1
<b>Cobalt</b>	<b>0.028</b>		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:31	1
Copper	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:31	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 16:44	11/10/17 16:31	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 16:44	11/10/17 16:31	1
<b>Magnesium</b>	<b>100</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:31	1
<b>Manganese</b>	<b>2.7</b>		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:31	1
<b>Nickel</b>	<b>0.051</b>		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:31	1
<b>Potassium</b>	<b>2.3 J</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:31	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 16:44	11/10/17 16:31	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:31	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:31	1
<b>Zinc</b>	<b>0.10 J</b>		0.50	0.020	mg/L		11/09/17 16:44	11/10/17 16:31	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.070</b>		0.025	0.010	mg/L		11/09/17 16:42	11/10/17 22:11	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 16:44	11/10/17 14:03	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 16:44	11/10/17 14:03	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 16:02	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.013 J</b>		0.019	0.0064	mg/Kg	☼	11/08/17 16:15	11/09/17 08:26	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.51		0.51	0.18	mg/Kg	☼	11/13/17 08:00	11/13/17 16:39	1
<b>pH</b>	<b>8.0</b>		0.20	0.20	SU			11/12/17 01:04	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B04 (0-5)**

**Lab Sample ID: 500-136786-10**

**Date Collected: 11/03/17 13:10**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 83.0**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0080	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Benzene	<0.0018		0.0018	0.00047	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Bromodichloromethane	<0.0018		0.0018	0.00037	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Bromoform	<0.0018		0.0018	0.00054	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Bromomethane	<0.0046		0.0046	0.0017	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
2-Butanone (MEK)	<0.0046		0.0046	0.0020	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Carbon disulfide	<0.0046		0.0046	0.00095	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Carbon tetrachloride	<0.0018		0.0018	0.00053	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Chlorobenzene	<0.0018		0.0018	0.00068	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Chloroethane	<0.0046		0.0046	0.0014	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Chloroform	<0.0018		0.0018	0.00064	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Chloromethane	<0.0046		0.0046	0.0018	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
cis-1,2-Dichloroethene	<0.0018		0.0018	0.00051	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
cis-1,3-Dichloropropene	<0.0018		0.0018	0.00055	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Dibromochloromethane	<0.0018		0.0018	0.00060	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
1,1-Dichloroethane	<0.0018		0.0018	0.00063	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
1,2-Dichloroethane	<0.0046		0.0046	0.0014	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
1,1-Dichloroethene	<0.0018		0.0018	0.00063	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
1,2-Dichloropropane	<0.0018		0.0018	0.00047	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
1,3-Dichloropropene, Total	<0.0018		0.0018	0.00064	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Ethylbenzene	<0.0018		0.0018	0.00088	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
2-Hexanone	<0.0046		0.0046	0.0014	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Methylene Chloride	<0.0046		0.0046	0.0018	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
4-Methyl-2-pentanone (MIBK)	<0.0046		0.0046	0.0014	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Methyl tert-butyl ether	<0.0018		0.0018	0.00054	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Styrene	<0.0018		0.0018	0.00055	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
1,1,2,2-Tetrachloroethane	<0.0018		0.0018	0.00059	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Tetrachloroethene	<0.0018		0.0018	0.00063	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Toluene	<0.0018		0.0018	0.00046	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
trans-1,2-Dichloroethene	<0.0018		0.0018	0.00081	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
trans-1,3-Dichloropropene	<0.0018		0.0018	0.00064	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
1,1,1-Trichloroethane	<0.0018		0.0018	0.00062	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
1,1,2-Trichloroethane	<0.0018		0.0018	0.00079	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Trichloroethene	<0.0018		0.0018	0.00062	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Vinyl acetate	<0.0046		0.0046	0.0016	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Vinyl chloride	<0.0018		0.0018	0.00081	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1
Xylenes, Total	<0.0037		0.0037	0.00059	mg/Kg	☼	11/04/17 08:18	11/09/17 17:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		75 - 131	11/04/17 08:18	11/09/17 17:43	1
Dibromofluoromethane	100		75 - 126	11/04/17 08:18	11/09/17 17:43	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 134	11/04/17 08:18	11/09/17 17:43	1
Toluene-d8 (Surr)	97		75 - 124	11/04/17 08:18	11/09/17 17:43	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.040		0.040	0.0072	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Acenaphthylene	<0.040		0.040	0.0052	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Anthracene	<0.040		0.040	0.0066	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
<b>Benzo[a]anthracene</b>	<b>0.015</b>	<b>J</b>	0.040	0.0054	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B04 (0-5)**

**Lab Sample ID: 500-136786-10**

Date Collected: 11/03/17 13:10

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 83.0

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.028	J	0.040	0.0077	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Benzo[b]fluoranthene	0.031	J	0.040	0.0086	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Benzo[g,h,i]perylene	0.018	J	0.040	0.013	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Benzo[k]fluoranthene	0.013	J	0.040	0.012	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.060	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.073	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Butyl benzyl phthalate	<0.20		0.20	0.076	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Carbazole	<0.20		0.20	0.099	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
4-Chloroaniline	<0.80		0.80	0.19	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
4-Chloro-3-methylphenol	<0.40		0.40	0.14	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
2-Chlorophenol	<0.20		0.20	0.068	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Chrysene	0.025	J	0.040	0.011	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Dibenz(a,h)anthracene	<0.040		0.040	0.0077	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
1,2-Dichlorobenzene	<0.20		0.20	0.048	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.056	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
2,4-Dichlorophenol	<0.40		0.40	0.095	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Diethyl phthalate	<0.20		0.20	0.067	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
2,4-Dimethylphenol	<0.40		0.40	0.15	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Dimethyl phthalate	<0.20		0.20	0.052	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Di-n-butyl phthalate	<0.20		0.20	0.061	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
4,6-Dinitro-2-methylphenol	<0.80		0.80	0.32	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
2,4-Dinitrophenol	<0.80		0.80	0.70	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
2,4-Dinitrotoluene	<0.20		0.20	0.063	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
2,6-Dinitrotoluene	<0.20		0.20	0.078	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Di-n-octyl phthalate	<0.20		0.20	0.065	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Fluoranthene	0.026	J	0.040	0.0074	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Fluorene	<0.040		0.040	0.0056	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Hexachlorobenzene	<0.080		0.080	0.0092	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Hexachlorobutadiene	<0.20		0.20	0.063	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Hexachlorocyclopentadiene	<0.80		0.80	0.23	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Indeno[1,2,3-cd]pyrene	0.010	J	0.040	0.010	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Isophorone	<0.20		0.20	0.045	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
2-Methylnaphthalene	0.0081	J	0.080	0.0073	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
2-Methylphenol	<0.20		0.20	0.064	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
3 & 4 Methylphenol	<0.20		0.20	0.066	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Naphthalene	<0.040		0.040	0.0061	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
2-Nitroaniline	<0.20		0.20	0.054	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
3-Nitroaniline	<0.40		0.40	0.12	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Nitrobenzene	<0.040		0.040	0.0099	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
2-Nitrophenol	<0.40		0.40	0.094	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B04 (0-5)**

**Lab Sample ID: 500-136786-10**

Date Collected: 11/03/17 13:10

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 83.0

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.80		0.80	0.38	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
N-Nitrosodi-n-propylamine	<0.080		0.080	0.049	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Pentachlorophenol	<0.80		0.80	0.64	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
<b>Phenanthrene</b>	<b>0.022</b>	<b>J</b>	0.040	0.0055	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
Phenol	<0.20		0.20	0.088	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
<b>Pyrene</b>	<b>0.027</b>	<b>J</b>	0.040	0.0079	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
2,4,5-Trichlorophenol	<0.40		0.40	0.091	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1
2,4,6-Trichlorophenol	<0.40		0.40	0.14	mg/Kg	☼	11/11/17 09:17	11/13/17 19:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	77		44 - 121	11/11/17 09:17	11/13/17 19:39	1
2-Fluorophenol	83		46 - 133	11/11/17 09:17	11/13/17 19:39	1
Nitrobenzene-d5	70		41 - 120	11/11/17 09:17	11/13/17 19:39	1
Phenol-d5	47		46 - 125	11/11/17 09:17	11/13/17 19:39	1
Terphenyl-d14	89		35 - 160	11/11/17 09:17	11/13/17 19:39	1
2,4,6-Tribromophenol	72		25 - 139	11/11/17 09:17	11/13/17 19:39	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.46</b>	<b>J</b>	1.2	0.23	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
<b>Arsenic</b>	<b>7.0</b>		0.60	0.20	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
<b>Barium</b>	<b>35</b>		0.60	0.068	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
<b>Beryllium</b>	<b>0.49</b>		0.24	0.056	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
<b>Cadmium</b>	<b>0.14</b>	<b>B</b>	0.12	0.021	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
<b>Chromium</b>	<b>11</b>		0.60	0.29	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
<b>Cobalt</b>	<b>9.7</b>		0.30	0.078	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
<b>Copper</b>	<b>18</b>		0.60	0.17	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
<b>Iron</b>	<b>16000</b>		12	6.2	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
<b>Lead</b>	<b>20</b>		0.30	0.14	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
<b>Magnesium</b>	<b>20000</b>		6.0	3.0	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
<b>Calcium</b>	<b>35000</b>	<b>B</b>	12	2.0	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
<b>Manganese</b>	<b>280</b>		0.60	0.086	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
<b>Nickel</b>	<b>22</b>		0.60	0.17	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
Selenium	<0.60		0.60	0.35	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
Silver	<0.30		0.30	0.077	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
Thallium	<0.60		0.60	0.30	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
<b>Vanadium</b>	<b>16</b>		0.30	0.070	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
<b>Zinc</b>	<b>89</b>		1.2	0.52	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
<b>Potassium</b>	<b>1700</b>		30	11	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1
<b>Sodium</b>	<b>560</b>		60	8.8	mg/Kg	☼	11/07/17 16:57	11/09/17 00:09	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 16:44	11/10/17 16:44	1
<b>Barium</b>	<b>0.45</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 16:44	11/10/17 16:44	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 16:44	11/10/17 16:44	1
<b>Cadmium</b>	<b>0.0029</b>	<b>J</b>	0.0050	0.0020	mg/L		11/09/17 16:44	11/10/17 16:44	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B04 (0-5)**

**Lab Sample ID: 500-136786-10**

**Date Collected: 11/03/17 13:10**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 83.0**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>370</b>		5.0	0.50	mg/L		11/09/17 16:44	11/10/17 16:44	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:44	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:44	1
<b>Copper</b>	<b>0.026</b>		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:44	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 16:44	11/10/17 16:44	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 16:44	11/10/17 16:44	1
<b>Magnesium</b>	<b>80</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:44	1
<b>Manganese</b>	<b>1.5</b>		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:44	1
<b>Nickel</b>	<b>0.013</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:44	1
<b>Potassium</b>	<b>1.3</b>	<b>J</b>	2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:44	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 16:44	11/10/17 16:44	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:44	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:44	1
<b>Zinc</b>	<b>0.035</b>	<b>J</b>	0.50	0.020	mg/L		11/09/17 16:44	11/10/17 16:44	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.48</b>		0.025	0.010	mg/L		11/09/17 16:42	11/10/17 22:15	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 16:44	11/10/17 14:15	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 16:44	11/10/17 14:15	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 16:04	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.029</b>		0.020	0.0066	mg/Kg	☼	11/08/17 16:15	11/09/17 08:28	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.59		0.59	0.20	mg/Kg	☼	11/13/17 08:00	11/13/17 16:40	1
<b>pH</b>	<b>8.4</b>		0.20	0.20	SU			11/12/17 01:37	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B05 (0-5)**

**Lab Sample ID: 500-136786-11**

**Date Collected: 11/03/17 13:45**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 85.8**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0084	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Benzene	<0.0019		0.0019	0.00049	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Bromodichloromethane	<0.0019		0.0019	0.00039	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Bromoform	<0.0019		0.0019	0.00056	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Bromomethane	<0.0048		0.0048	0.0018	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
2-Butanone (MEK)	<0.0048		0.0048	0.0021	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Carbon disulfide	<0.0048		0.0048	0.0010	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Carbon tetrachloride	<0.0019		0.0019	0.00056	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Chlorobenzene	<0.0019		0.0019	0.00071	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Chloroethane	<0.0048		0.0048	0.0014	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Chloroform	<0.0019		0.0019	0.00067	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Chloromethane	<0.0048		0.0048	0.0019	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
cis-1,2-Dichloroethene	<0.0019		0.0019	0.00054	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
cis-1,3-Dichloropropene	<0.0019		0.0019	0.00058	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Dibromochloromethane	<0.0019		0.0019	0.00063	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
1,1-Dichloroethane	<0.0019		0.0019	0.00066	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
1,2-Dichloroethane	<0.0048		0.0048	0.0015	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
1,1-Dichloroethene	<0.0019		0.0019	0.00066	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
1,2-Dichloropropane	<0.0019		0.0019	0.00050	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
1,3-Dichloropropane, Total	<0.0019		0.0019	0.00068	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Ethylbenzene	<0.0019		0.0019	0.00092	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
2-Hexanone	<0.0048		0.0048	0.0015	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Methylene Chloride	<0.0048		0.0048	0.0019	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
4-Methyl-2-pentanone (MIBK)	<0.0048		0.0048	0.0014	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Methyl tert-butyl ether	<0.0019		0.0019	0.00056	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Styrene	<0.0019		0.0019	0.00058	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
1,1,1,2-Tetrachloroethane	<0.0019		0.0019	0.00061	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Tetrachloroethene	<0.0019		0.0019	0.00065	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Toluene	<0.0019		0.0019	0.00049	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
trans-1,2-Dichloroethene	<0.0019		0.0019	0.00085	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
trans-1,3-Dichloropropene	<0.0019		0.0019	0.00068	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
1,1,1-Trichloroethane	<0.0019		0.0019	0.00065	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
1,1,2-Trichloroethane	<0.0019		0.0019	0.00083	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Trichloroethene	<0.0019		0.0019	0.00065	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Vinyl acetate	<0.0048		0.0048	0.0017	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Vinyl chloride	<0.0019		0.0019	0.00085	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1
Xylenes, Total	<0.0038		0.0038	0.00062	mg/Kg	☼	11/04/17 08:18	11/09/17 18:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		75 - 131	11/04/17 08:18	11/09/17 18:08	1
Dibromofluoromethane	98		75 - 126	11/04/17 08:18	11/09/17 18:08	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 134	11/04/17 08:18	11/09/17 18:08	1
Toluene-d8 (Surr)	97		75 - 124	11/04/17 08:18	11/09/17 18:08	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.036		0.036	0.0066	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Acenaphthylene	0.0058	J	0.036	0.0048	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Anthracene	0.0084	J	0.036	0.0061	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Benzo[a]anthracene	0.052		0.036	0.0049	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B05 (0-5)**

**Lab Sample ID: 500-136786-11**

**Date Collected: 11/03/17 13:45**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 85.8**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.073		0.036	0.0071	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Benzo[b]fluoranthene	0.11		0.036	0.0079	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Benzo[g,h,i]perylene	0.062		0.036	0.012	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Benzo[k]fluoranthene	0.029	J	0.036	0.011	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Butyl benzyl phthalate	<0.18		0.18	0.070	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Carbazole	<0.18		0.18	0.091	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Chrysene	0.067		0.036	0.010	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Dibenz(a,h)anthracene	0.016	J	0.036	0.0071	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
1,2-Dichlorobenzene	<0.18		0.18	0.044	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
2,4-Dichlorophenol	<0.36		0.36	0.087	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.29	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
2,4-Dinitrophenol	<0.74		0.74	0.64	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Di-n-octyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Fluoranthene	0.085		0.036	0.0068	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Fluorene	<0.036		0.036	0.0051	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Hexachlorobenzene	<0.074		0.074	0.0085	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Hexachloroethane	<0.18		0.18	0.056	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Indeno[1,2,3-cd]pyrene	0.057		0.036	0.0095	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
2-Methylnaphthalene	<0.074		0.074	0.0067	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
2-Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Nitrobenzene	<0.036		0.036	0.0091	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
2-Nitrophenol	<0.36		0.36	0.086	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B05 (0-5)**

**Lab Sample ID: 500-136786-11**

Date Collected: 11/03/17 13:45

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 85.8

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
<b>Phenanthrene</b>	<b>0.042</b>		0.036	0.0051	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
Phenol	<0.18		0.18	0.081	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
<b>Pyrene</b>	<b>0.077</b>		0.036	0.0073	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
2,4,5-Trichlorophenol	<0.36		0.36	0.083	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1
2,4,6-Trichlorophenol	<0.36		0.36	0.13	mg/Kg	☼	11/11/17 09:17	11/15/17 19:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	82		44 - 121	11/11/17 09:17	11/15/17 19:33	1
2-Fluorophenol	86		46 - 133	11/11/17 09:17	11/15/17 19:33	1
Nitrobenzene-d5	85		41 - 120	11/11/17 09:17	11/15/17 19:33	1
Phenol-d5	91		46 - 125	11/11/17 09:17	11/15/17 19:33	1
Terphenyl-d14	84		35 - 160	11/11/17 09:17	11/15/17 19:33	1
2,4,6-Tribromophenol	62		25 - 139	11/11/17 09:17	11/15/17 19:33	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.57</b>	<b>J</b>	1.1	0.22	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1
<b>Arsenic</b>	<b>7.2</b>		0.56	0.19	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1
<b>Barium</b>	<b>77</b>		0.56	0.064	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1
<b>Beryllium</b>	<b>0.80</b>		0.22	0.052	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1
<b>Cadmium</b>	<b>0.60</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1
<b>Chromium</b>	<b>15</b>		0.56	0.28	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1
<b>Cobalt</b>	<b>8.2</b>		0.28	0.073	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1
<b>Copper</b>	<b>24</b>		0.56	0.16	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1
<b>Iron</b>	<b>17000</b>		11	5.8	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1
<b>Lead</b>	<b>220</b>		0.28	0.13	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1
<b>Magnesium</b>	<b>25000</b>		5.6	2.8	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1
<b>Calcium</b>	<b>1100</b>	<b>B</b>	110	19	mg/Kg	☼	11/07/17 16:57	11/09/17 19:51	10
<b>Manganese</b>	<b>280</b>		0.56	0.081	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1
<b>Nickel</b>	<b>21</b>		0.56	0.16	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1
Selenium	<0.56		0.56	0.33	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1
Silver	<0.28		0.28	0.072	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1
<b>Vanadium</b>	<b>21</b>		0.28	0.066	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1
<b>Zinc</b>	<b>140</b>		1.1	0.49	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1
<b>Potassium</b>	<b>1700</b>		28	9.9	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1
<b>Sodium</b>	<b>420</b>		56	8.3	mg/Kg	☼	11/07/17 16:57	11/09/17 00:13	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 16:44	11/10/17 16:48	1
<b>Barium</b>	<b>0.48</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 16:44	11/10/17 16:48	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 16:44	11/10/17 16:48	1
<b>Cadmium</b>	<b>0.0032</b>	<b>J</b>	0.0050	0.0020	mg/L		11/09/17 16:44	11/10/17 16:48	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

**Client Sample ID: 2696V-15-B05 (0-5)**

**Lab Sample ID: 500-136786-11**

Date Collected: 11/03/17 13:45

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 85.8

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>400</b>		5.0	0.50	mg/L		11/09/17 16:44	11/10/17 16:48	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:48	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:48	1
Copper	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:48	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 16:44	11/10/17 16:48	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 16:44	11/10/17 16:48	1
<b>Magnesium</b>	<b>79</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:48	1
<b>Manganese</b>	<b>0.16</b>		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:48	1
Nickel	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:48	1
<b>Potassium</b>	<b>1.6 J</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:48	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 16:44	11/10/17 16:48	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:48	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:48	1
<b>Zinc</b>	<b>0.024 J</b>		0.50	0.020	mg/L		11/09/17 16:44	11/10/17 16:48	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.41</b>		0.025	0.010	mg/L		11/09/17 16:42	11/10/17 22:19	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 16:44	11/10/17 14:19	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 16:44	11/10/17 14:19	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 16:06	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.025</b>		0.019	0.0064	mg/Kg	☼	11/08/17 16:15	11/09/17 08:30	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.56		0.56	0.19	mg/Kg	☼	11/13/17 08:00	11/13/17 16:40	1
<b>pH</b>	<b>8.3</b>		0.20	0.20	SU			11/12/17 02:10	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-2

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B		Water	1,3-Dichloropropene, Total
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional) \_\_\_\_\_  
 Contact: MATT WEISS  
 Company: TERRACON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional) \_\_\_\_\_  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-130786  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: 2.9.4.6

Client		Client Project #		Preservative		Parameter		# of Containers	Matrix	VOGS	SVOGS	TOTAL Z3 INORGANICS	Comments
TERRACON		11177029M											
Project Name		Project Location/State		Lab Project #		SAMPLING							
WORK ORDER 037		MARKHAM, IL				Date		Time					
SAMPLER		Lab PM											
CRAIG VARLAND		DIKK WRIGHT											
Lab ID	MS/MSD	Sample ID	Date	Time									
A		2696V-15-G01	11-3-17	1115	6	W				X	X	X	

- Preservative Key
1. HCL, Cool to 4°
  2. H2SO4, Cool to 4°
  3. HNO3, Cool to 4°
  4. NaOH, Cool to 4°
  5. NaOH/Zn, Cool to 4°
  6. NaHSO4
  7. Cool to 4°
  8. None
  9. Other

Turnaround Time Required (Business Days)  
 \_\_\_ 1 Day \_\_\_ 2 Days \_\_\_ 5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other  
 Requested Due Date: \_\_\_\_\_

Sample Disposal  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months  
 (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRACON</u> Date: <u>11-3-17</u> Time: <u>1605</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>1605</u>	Lab Courier: <u>TA</u>
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>1627</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>1627</u>	Shipped: _____
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Hand Delivered: _____

Matrix Key

WW - Wastewater	SE - Sediment
W - Water	SO - Soil
S - Soil	L - Leachate
SL - Sludge	WI - Wipe
MS - Miscellaneous	DW - Drinking Water
OL - Oil	O - Other
A - Air	

Client Comments  
NO ALUMINUM

Lab Comments:

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)  
 Contact: MATT WIGGS  
 Company: TERRACON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference#: \_\_\_\_\_

## Chain of Custody Record

Lab Job #: SW-136786  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: 4.6, 2.9

Client		Client Project #		Preservative		Parameter														Preservative Key	
<u>TERRACON</u>		<u>11177029 M</u>																		1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name		Lab Project #																			
<u>WORK ORDER 037</u>																					
Project Location/State		Lab Project #																			
<u>MARKHAM, IL</u>																					
Sampler		Lab PM																			
<u>CRAIG VARLAND</u>		<u>DICK WRIGAT</u>																			
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	NOCS	SNOCS	23 TAL METALS PH	TELP 23 TAL METALS	Comments										
			Date	Time																	
5		2696V-15-802-(0-5)	11-3-17	1030	5	S	X	X	X	X											
6		2696V-15-802-(5-10)		1035	5	S	X	X	X	X											
7		2696V-15-802-(10-15)		1040	5	S	X	X	X	X											
8		2696V-15-802-(15-20)		1045	5	S	X	X	X	X											
9		2696V-15-803-(0-5)		1210	5	S	X	X	X	X											
10		2696V-15-804-(0-5)		1310	5	S	X	X	X	X											
11		2696V-15-805-(0-5)		1345	5	S	X	X	X	X											

Turnaround Time Required (Business Days)

\_\_\_ 1 Day \_\_\_ 2 Days \_\_\_ 5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other

Requested Due Date

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRACON</u> Date: <u>11-3-17</u> Time: <u>1605</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>1605</u>	Lab Courier: <u>TA</u>
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>1627</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>1627</u>	Shipped: _____
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Hand Delivered: _____

- Matrix Key
- WW - Wastewater
  - W - Water
  - S - Soil
  - SL - Sludge
  - MS - Miscellaneous
  - OL - Oil
  - A - Air
  - SE - Sediment
  - SO - Soil
  - L - Leachate
  - WI - Wipe
  - DW - Drinking Water
  - O - Other

Client Comments  
NOXUMINUM

Lab Comments:

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136786-2

**Login Number: 136786**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9, 4.6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

Kedzie Ave (Northbound) IDOT STA 73+32 to 74+20, 75+80 to 77+20, and 78+20 to 81+10 (ISGS Site 2696V-16)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a):

Soil from borings B01, B02, B03, B05, and B06 were sampled adjacent to ISGS Site No 2696V-16. See Exhibits 6, 6E, 8, 8A, 8B, and Table 31 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136785-1. Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

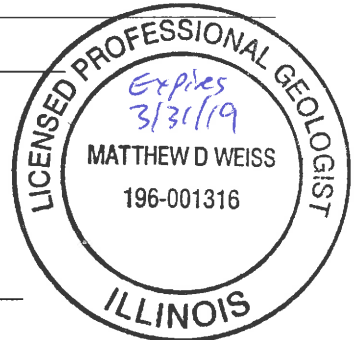
**Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))**

Company Name: Terracon Consultants, Inc  
 Street Address: 135 Ambassador Drive  
 City: Naperville State: IL Zip Code: 60540  
 Phone: 630-717-4263

Matt Weiss  
 Printed Name:

[Signature]  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

7/24/18  
 Date:



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-16)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 1 of 6

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-16-B01 (0-5)	2696V-16-B02 (0-5)
				CCDD	Sample Depth (feet)	(0-5)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/02/2017	11/02/2017
<b>Volatile Organic Analytical Parameters</b>							
Acetone	mg/kg	---	---	25		<0.015	0.074
<b>Semivolatile Organic Analytical Parameters</b>							
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.0075	<0.035
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.037	<0.035
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.043	<0.035
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.04	<0.035
Chrysene	mg/kg	1.2	2.7	88		0.01	<0.035
Fluoranthene	mg/kg	2.7	4.1	3100		0.013	<0.035
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.032	<0.035
Naphthalene	mg/kg	0.04	0.2	1.8		<0.037	<0.035
Phenanthrene	mg/kg	1.3	2.5	210		0.0074	<0.035
Pyrene	mg/kg	1.9	3.0	2300		0.012	<0.035
2-Methylnaphthalene	mg/kg	---	0.14	---		<0.075	<0.071
<b>Inorganic Analytical Parameters</b>							
Arsenic	mg/kg	---	13	11.3		9.6	3.4
Barium	mg/kg	---	110	1500		25	31
Cadmium	mg/kg	---	0.6	5.2		0.15	0.064
Chromium, total	mg/kg	---	16.2	21		8.1	15
Lead	mg/kg	---	36	107		24	6.9
Mercury	mg/kg	---	0.06	0.1		0.016	0.017
Selenium	mg/kg	---	0.48	1.3		<0.52	<0.54
Silver	mg/kg	---	0.55	4.4		<0.26	<0.27
Antimony	mg/kg	---	4.0	5		0.4	0.27
Beryllium	mg/kg	---	0.59	22		0.36	0.55
Calcium	mg/kg	---	9,300	---		91000	57000
Cobalt	mg/kg	---	8.9	20		8.2	6
Copper	mg/kg	---	19.6	2900		18	9.5
Cyanide	mg/kg	---	0.51	---		<0.52	<0.52
Iron	mg/kg	---	15,900	15000		14000	13000
Magnesium	mg/kg	---	4,820	325000		31000	13000
Manganese	mg/kg	---	636	630		360	150
Nickel	mg/kg	---	18	100		18	18
Potassium	mg/kg	---	1,268	---		1200	2600
Sodium	mg/kg	---	130	---		130	93
Thallium	mg/kg	---	0.32	2.6		<0.52	<0.54
Vanadium	mg/kg	---	25.2	550		13	18
Zinc	mg/kg	---	95	5100		50	34
pH			6.25	9		8.3	8.3

Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-16)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 2 of 6

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-16-B01 (0-5)	2696V-16-B02 (0-5)
				CCDD	Sample Depth (feet)	(0-5)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/02/2017	11/02/2017
<b>Inorganic Analytical Parameters (SPLP)</b>							
Antimony,SPLP	mg/L	---	---	---		--	--
Arsenic,SPLP	mg/L	---	---	---		--	--
Barium,SPLP	mg/L	---	---	---		--	--
Beryllium,SPLP	mg/L	---	---	---		--	--
Cadmium,SPLP	mg/L	---	---	---		--	--
Calcium,SPLP	mg/L	---	---	---		--	--
Chromium,SPLP	mg/L	---	---	---		--	--
Cobalt,SPLP	mg/L	---	---	---		--	--
Copper,SPLP	mg/L	---	---	---		--	--
Iron,SPLP	mg/L	---	---	---		--	--
Lead,SPLP	mg/L	---	---	---		--	--
Magnesium,SPLP	mg/L	---	---	---		--	--
Manganese,SPLP	mg/L	---	---	---		0.18	0.011
Mercury,SPLP	mg/L	---	---	---		--	--
Nickel,SPLP	mg/L	---	---	---		--	--
Potassium,SPLP	mg/L	---	---	---		--	--
Selenium,SPLP	mg/L	---	---	---		--	--
Silver,SPLP	mg/L	---	---	---		--	--
Sodium,SPLP	mg/L	---	---	---		--	--
Thallium,SPLP	mg/L	---	---	---		--	--
Vanadium,SPLP	mg/L	---	---	---		--	--
Zinc,SPLP	mg/L	---	---	---		--	--
Cyanide,SPLP	mg/L	---	---	---		--	--
<b>Inorganic Analytical Parameters (TCLP)</b>							
Arsenic,TCLP	mg/L	---	---	---		<0.050	<0.050
Barium,TCLP	mg/L	---	---	---		0.3	0.37
Cadmium,TCLP	mg/L	---	---	---		0.0026	<0.0050
Chromium,TCLP	mg/L	---	---	---		<0.025	<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075	<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020	<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050	<0.050
Silver,TCLP	mg/L	---	---	---		<0.025	<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060	<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040	<0.0040
Calcium,TCLP	mg/L	---	---	---		500	730
Cobalt,TCLP	mg/L	---	---	---		<0.025	<0.025
Copper,TCLP	mg/L	---	---	---		<0.025	0.011
Cyanide,TCLP	mg/L	---	---	---		----	----
Iron,TCLP	mg/L	---	---	---		<0.40	<0.40
Magnesium,TCLP	mg/L	---	---	---		42	26
Manganese,TCLP	mg/L	---	---	---		0.73	0.3
Nickel,TCLP	mg/L	---	---	---		0.012	<0.025
Potassium,TCLP	mg/L	---	---	---		2.1	2.3
Sodium,TCLP	mg/L	---	---	---		----	----
Thallium,TCLP	mg/L	---	---	---		<0.0020	<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025	<0.025
Zinc,TCLP	mg/L	---	---	---		<0.50	<0.50



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-16)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 3 of 6

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-16-B03 (0-5)	2696V-16-B03 (0-5) Dup
				CCDD	Sample Depth (feet)	(0-5)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/02/2017	11/02/2017
<b>Volatile Organic Analytical Parameters</b>							
Acetone	mg/kg	---	---	25		0.065	0.034
<b>Semivolatile Organic Analytical Parameters</b>							
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		<0.037	0.0074
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		<0.037	0.021
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		<0.037	<0.034
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		<0.037	0.015
Chrysene	mg/kg	1.2	2.7	88		<0.037	0.02
Fluoranthene	mg/kg	2.7	4.1	3100		<0.037	0.018
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		<0.037	<0.034
Naphthalene	mg/kg	0.04	0.2	1.8		<0.037	0.0055
Phenanthrene	mg/kg	1.3	2.5	210		<0.037	0.02
Pyrene	mg/kg	1.9	3.0	2300		<0.037	0.027
2-Methylnaphthalene	mg/kg	---	0.14	---		<0.076	0.0074
<b>Inorganic Analytical Parameters</b>							
Arsenic	mg/kg	---	13	11.3		8	6.8
Barium	mg/kg	---	110	1500		43	26
Cadmium	mg/kg	---	0.6	5.2		0.026	0.1
Chromium, total	mg/kg	---	16.2	21		14	10
Lead	mg/kg	---	36	107		15	11
Mercury	mg/kg	---	0.06	0.1		0.031	0.026
Selenium	mg/kg	---	0.48	1.3		<0.60	<0.53
Silver	mg/kg	---	0.55	4.4		<0.30	<0.27
Antimony	mg/kg	---	4.0	5		0.33	0.4
Beryllium	mg/kg	---	0.59	22		0.63	0.45
Calcium	mg/kg	---	9,300	---		17000	78000
Cobalt	mg/kg	---	8.9	20		9.5	8.6
Copper	mg/kg	---	19.6	2900		18	17
Cyanide	mg/kg	---	0.51	---		<0.57	<0.46
Iron	mg/kg	---	15,900	15000		20000	14000
Magnesium	mg/kg	---	4,820	325000		12000	26000
Manganese	mg/kg	---	636	630		160	300
Nickel	mg/kg	---	18	100		23	20
Potassium	mg/kg	---	1,268	---		1800	1900
Sodium	mg/kg	---	130	---		320	250
Thallium	mg/kg	---	0.32	2.6		<0.60	<0.53
Vanadium	mg/kg	---	25.2	550		20	13
Zinc	mg/kg	---	95	5100		51	40
pH			6.25	9		8.3	7.9

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-16-B03 (0-5)	2696V-16-B03 (0-5) Dup
				CCDD	Sample Depth (feet)	(0-5)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/02/2017	11/02/2017
<b>Inorganic Analytical Parameters (SPLP)</b>							
Antimony,SPLP	mg/L	---	---	---		--	--
Arsenic,SPLP	mg/L	---	---	---		--	--
Barium,SPLP	mg/L	---	---	---		--	--
Beryllium,SPLP	mg/L	---	---	---		--	--
Cadmium,SPLP	mg/L	---	---	---		--	--
Calcium,SPLP	mg/L	---	---	---		--	--
Chromium,SPLP	mg/L	---	---	---		--	--
Cobalt,SPLP	mg/L	---	---	---		--	--
Copper,SPLP	mg/L	---	---	---		--	--
Iron,SPLP	mg/L	---	---	---		--	--
Lead,SPLP	mg/L	---	---	---		--	--
Magnesium,SPLP	mg/L	---	---	---		--	--
Manganese,SPLP	mg/L	---	---	---		0.1	0.11
Mercury,SPLP	mg/L	---	---	---		--	--
Nickel,SPLP	mg/L	---	---	---		--	--
Potassium,SPLP	mg/L	---	---	---		--	--
Selenium,SPLP	mg/L	---	---	---		--	--
Silver,SPLP	mg/L	---	---	---		--	--
Sodium,SPLP	mg/L	---	---	---		--	--
Thallium,SPLP	mg/L	---	---	---		--	--
Vanadium,SPLP	mg/L	---	---	---		--	--
Zinc,SPLP	mg/L	---	---	---		--	--
Cyanide,SPLP	mg/L	---	---	---		--	--
<b>Inorganic Analytical Parameters (TCLP)</b>							
Arsenic,TCLP	mg/L	---	---	---		<0.050	<0.050
Barium,TCLP	mg/L	---	---	---		0.39	0.49
Cadmium,TCLP	mg/L	---	---	---		<0.0050	0.002
Chromium,TCLP	mg/L	---	---	---		<0.025	<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075	<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020	<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050	<0.050
Silver,TCLP	mg/L	---	---	---		<0.025	<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060	<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040	<0.0040
Calcium,TCLP	mg/L	---	---	---		390	510
Cobalt,TCLP	mg/L	---	---	---		0.01	0.021
Copper,TCLP	mg/L	---	---	---		<0.025	<0.025
Cyanide,TCLP	mg/L	---	---	---		----	----
Iron,TCLP	mg/L	---	---	---		<0.40	<0.40
Magnesium,TCLP	mg/L	---	---	---		64	21
Manganese,TCLP	mg/L	---	---	---		3.3	3.6
Nickel,TCLP	mg/L	---	---	---		0.01	0.023
Potassium,TCLP	mg/L	---	---	---		2.3	2.7
Sodium,TCLP	mg/L	---	---	---		----	----
Thallium,TCLP	mg/L	---	---	---		<0.0020	<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025	<0.025
Zinc,TCLP	mg/L	---	---	---		0.071	0.067

Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-16)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 5 of 6

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-16-B05 (0-5)	2696V-16-B06 (0-5)
				CCDD	Sample Depth (feet)	(0-5)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/02/2017	11/02/2017
<b>Volatile Organic Analytical Parameters</b>							
Acetone	mg/kg	---	---	25		0.029	<0.017
<b>Semivolatile Organic Analytical Parameters</b>							
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.012	<0.037
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.024	<0.037
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.029	<0.037
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.017	<0.037
Chrysene	mg/kg	1.2	2.7	88		0.027	<0.037
Fluoranthene	mg/kg	2.7	4.1	3100		0.029	<0.037
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		<0.037	<0.037
Naphthalene	mg/kg	0.04	0.2	1.8		<0.037	<0.037
Phenanthrene	mg/kg	1.3	2.5	210		0.022	<0.037
Pyrene	mg/kg	1.9	3.0	2300		0.036	<0.037
2-Methylnaphthalene	mg/kg	---	0.14	---		0.012	<0.076
<b>Inorganic Analytical Parameters</b>							
Arsenic	mg/kg	---	13	11.3		8.7	1.7
Barium	mg/kg	---	110	1500		25	10
Cadmium	mg/kg	---	0.6	5.2		0.2	0.069
Chromium, total	mg/kg	---	16.2	21		8.2	7.4
Lead	mg/kg	---	36	107		12	3.7
Mercury	mg/kg	---	0.06	0.1		0.016	<0.017
Selenium	mg/kg	---	0.48	1.3		<0.53	<0.56
Silver	mg/kg	---	0.55	4.4		<0.27	<0.28
Antimony	mg/kg	---	4.0	5		0.53	0.3
Beryllium	mg/kg	---	0.59	22		0.36	0.14
Calcium	mg/kg	---	9,300	---		64000	11000
Cobalt	mg/kg	---	8.9	20		11	2.9
Copper	mg/kg	---	19.6	2900		16	4.2
Cyanide	mg/kg	---	0.51	---		<0.55	<0.56
Iron	mg/kg	---	15,900	15000		12000	4400
Magnesium	mg/kg	---	4,820	325000		21000	6900
Manganese	mg/kg	---	636	630		350	110
Nickel	mg/kg	---	18	100		21	6.6
Potassium	mg/kg	---	1,268	---		1400	520
Sodium	mg/kg	---	130	---		180	75
Thallium	mg/kg	---	0.32	2.6		<0.53	<0.56
Vanadium	mg/kg	---	25.2	550		13	11
Zinc	mg/kg	---	95	5100		44	19
pH			6.25	9		7.8	8.3

Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-16)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 6 of 6

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-16-B05 (0-5)	2696V-16-B06 (0-5)
				CCDD	Sample Depth (feet)	(0-5)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/02/2017	11/02/2017
<b>Inorganic Analytical Parameters (SPLP)</b>							
Antimony,SPLP	mg/L	---	---	---		--	--
Arsenic,SPLP	mg/L	---	---	---		--	--
Barium,SPLP	mg/L	---	---	---		--	--
Beryllium,SPLP	mg/L	---	---	---		--	--
Cadmium,SPLP	mg/L	---	---	---		--	--
Calcium,SPLP	mg/L	---	---	---		--	--
Chromium,SPLP	mg/L	---	---	---		--	--
Cobalt,SPLP	mg/L	---	---	---		--	--
Copper,SPLP	mg/L	---	---	---		--	--
Iron,SPLP	mg/L	---	---	---		--	--
Lead,SPLP	mg/L	---	---	---		--	--
Magnesium,SPLP	mg/L	---	---	---		--	--
Manganese,SPLP	mg/L	---	---	---		0.079	0.032
Mercury,SPLP	mg/L	---	---	---		--	--
Nickel,SPLP	mg/L	---	---	---		--	--
Potassium,SPLP	mg/L	---	---	---		--	--
Selenium,SPLP	mg/L	---	---	---		--	--
Silver,SPLP	mg/L	---	---	---		--	--
Sodium,SPLP	mg/L	---	---	---		--	--
Thallium,SPLP	mg/L	---	---	---		--	--
Vanadium,SPLP	mg/L	---	---	---		--	--
Zinc,SPLP	mg/L	---	---	---		--	--
Cyanide,SPLP	mg/L	---	---	---		--	--
<b>Inorganic Analytical Parameters (TCLP)</b>							
Arsenic,TCLP	mg/L	---	---	---		<0.050	<0.050
Barium,TCLP	mg/L	---	---	---		0.22	0.13
Cadmium,TCLP	mg/L	---	---	---		0.0028	<0.0050
Chromium,TCLP	mg/L	---	---	---		<0.025	<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075	<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020	<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050	<0.050
Silver,TCLP	mg/L	---	---	---		<0.025	<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060	<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040	<0.0040
Calcium,TCLP	mg/L	---	---	---		450	230
Cobalt,TCLP	mg/L	---	---	---		0.044	<0.025
Copper,TCLP	mg/L	---	---	---		0.012	0.017
Cyanide,TCLP	mg/L	---	---	---		----	----
Iron,TCLP	mg/L	---	---	---		<0.40	<0.40
Magnesium,TCLP	mg/L	---	---	---		75	130
Manganese,TCLP	mg/L	---	---	---		3.5	1.1
Nickel,TCLP	mg/L	---	---	---		0.056	<0.025
Potassium,TCLP	mg/L	---	---	---		2.7	0.64
Sodium,TCLP	mg/L	---	---	---		----	----
Thallium,TCLP	mg/L	---	---	---		<0.0020	<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025	<0.025
Zinc,TCLP	mg/L	---	---	---		0.049	0.022

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

TestAmerica Job ID: 500-136785-1  
Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:  
Terracon Consulting Eng & Scientists  
135 Ambassador Drive  
Naperville, Illinois 60540

Attn: Mr. Matthew Weiss



Authorized for release by:  
11/15/2017 5:33:13 PM

Richard Wright, Senior Project Manager  
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### LINKS

Review your project  
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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

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**Job ID: 500-136785-1**

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**Laboratory: TestAmerica Chicago**

## Narrative

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**Job Narrative  
500-136785-1**

### Receipt

The samples were received on 11/3/2017 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.6° C and 3.8° C.

### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### Metals

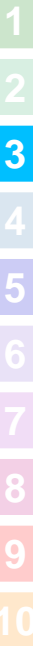
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.





# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B03 (0-5)**

**Lab Sample ID: 500-136785-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.065		0.018	0.0079	mg/Kg	1	☼	8260B	Total/NA
Antimony	0.33	J	1.2	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	8.0		0.60	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	43		0.60	0.068	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.63		0.24	0.056	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.026	J B	0.12	0.021	mg/Kg	1	☼	6010B	Total/NA
Chromium	14		0.60	0.29	mg/Kg	1	☼	6010B	Total/NA
Cobalt	9.5		0.30	0.078	mg/Kg	1	☼	6010B	Total/NA
Copper	18		0.60	0.17	mg/Kg	1	☼	6010B	Total/NA
Iron	20000		12	6.2	mg/Kg	1	☼	6010B	Total/NA
Lead	15		0.30	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	12000		6.0	3.0	mg/Kg	1	☼	6010B	Total/NA
Calcium	17000	B	12	2.0	mg/Kg	1	☼	6010B	Total/NA
Manganese	160		0.60	0.086	mg/Kg	1	☼	6010B	Total/NA
Nickel	23		0.60	0.17	mg/Kg	1	☼	6010B	Total/NA
Vanadium	20		0.30	0.070	mg/Kg	1	☼	6010B	Total/NA
Zinc	51		1.2	0.52	mg/Kg	1	☼	6010B	Total/NA
Potassium	1800		30	11	mg/Kg	1	☼	6010B	Total/NA
Sodium	320		60	8.8	mg/Kg	1	☼	6010B	Total/NA
Barium	0.39	J	0.50	0.050	mg/L	1		6010B	TCLP
Calcium	390		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.010	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	64		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	3.3		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.010	J	0.025	0.010	mg/L	1		6010B	TCLP
Potassium	2.3	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.071	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.10		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.031		0.018	0.0058	mg/Kg	1	☼	7471B	Total/NA
pH	8.3		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-16-B03 (0-5) Dup**

**Lab Sample ID: 500-136785-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.034		0.016	0.0071	mg/Kg	1	☼	8260B	Total/NA
Benzo[a]anthracene	0.0074	J	0.034	0.0047	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.021	J	0.034	0.0067	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.015	J	0.034	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.020	J	0.034	0.0095	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.018	J	0.034	0.0064	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.0074	J	0.070	0.0064	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.0055	J	0.034	0.0053	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.020	J	0.034	0.0048	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.027	J	0.034	0.0069	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.40	J F1	1.1	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	6.8	F1	0.53	0.18	mg/Kg	1	☼	6010B	Total/NA
Barium	26		0.53	0.061	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.45		0.21	0.050	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.10	J B	0.11	0.019	mg/Kg	1	☼	6010B	Total/NA
Chromium	10		0.53	0.26	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

## Client Sample ID: 2696V-16-B03 (0-5) Dup (Continued)

## Lab Sample ID: 500-136785-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	8.6		0.27	0.070	mg/Kg	1	☼	6010B	Total/NA
Copper	17		0.53	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	14000		11	5.6	mg/Kg	1	☼	6010B	Total/NA
Lead	11		0.27	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	26000		5.3	2.7	mg/Kg	1	☼	6010B	Total/NA
Calcium	78000	B	110	18	mg/Kg	10	☼	6010B	Total/NA
Manganese	300		0.53	0.078	mg/Kg	1	☼	6010B	Total/NA
Nickel	20		0.53	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.27	0.063	mg/Kg	1	☼	6010B	Total/NA
Zinc	40		1.1	0.47	mg/Kg	1	☼	6010B	Total/NA
Potassium	1900	F1	27	9.5	mg/Kg	1	☼	6010B	Total/NA
Sodium	250		53	7.9	mg/Kg	1	☼	6010B	Total/NA
Barium	0.49	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0020	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	510		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.021	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	21		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	3.6		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.023	J	0.025	0.010	mg/L	1		6010B	TCLP
Potassium	2.7		2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.067	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.11		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.026		0.017	0.0057	mg/Kg	1	☼	7471B	Total/NA
pH	7.9		0.20	0.20	SU	1		9045D	Total/NA

## Client Sample ID: 2696V-16-B04 (0-5)

## Lab Sample ID: 500-136785-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.048		0.014	0.0062	mg/Kg	1	☼	8260B	Total/NA
Benzo[a]anthracene	0.0096	J	0.035	0.0047	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.023	J	0.035	0.0068	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.030	J	0.035	0.0075	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.014	J	0.035	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.028	J	0.035	0.0095	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.038		0.035	0.0065	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.021	J	0.035	0.0049	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.038		0.035	0.0069	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.45	J	1.0	0.20	mg/Kg	1	☼	6010B	Total/NA
Arsenic	20		0.50	0.17	mg/Kg	1	☼	6010B	Total/NA
Barium	19		0.50	0.058	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.30		0.20	0.047	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.15	B	0.10	0.018	mg/Kg	1	☼	6010B	Total/NA
Chromium	7.0		0.50	0.25	mg/Kg	1	☼	6010B	Total/NA
Cobalt	11		0.25	0.066	mg/Kg	1	☼	6010B	Total/NA
Copper	15		0.50	0.14	mg/Kg	1	☼	6010B	Total/NA
Iron	13000		10	5.2	mg/Kg	1	☼	6010B	Total/NA
Lead	10		0.25	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	18000		5.0	2.5	mg/Kg	1	☼	6010B	Total/NA
Calcium	51000	B	100	17	mg/Kg	10	☼	6010B	Total/NA
Manganese	210		0.50	0.073	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

## Client Sample ID: 2696V-16-B04 (0-5) (Continued)

## Lab Sample ID: 500-136785-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nickel	18		0.50	0.15	mg/Kg	1	☼	6010B	Total/NA
Vanadium	12		0.25	0.060	mg/Kg	1	☼	6010B	Total/NA
Zinc	48		1.0	0.44	mg/Kg	1	☼	6010B	Total/NA
Potassium	1200		25	8.9	mg/Kg	1	☼	6010B	Total/NA
Sodium	200		50	7.5	mg/Kg	1	☼	6010B	Total/NA
Barium	0.55		0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0026	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	510		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.018	J	0.025	0.010	mg/L	1		6010B	TCLP
Copper	0.011	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	25		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	3.2		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.032		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	3.3		2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.024	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.032		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.015	J	0.016	0.0052	mg/Kg	1	☼	7471B	Total/NA
pH	8.3		0.20	0.20	SU	1		9045D	Total/NA

## Client Sample ID: 2696V-16-B05 (0-5)

## Lab Sample ID: 500-136785-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.029		0.015	0.0065	mg/Kg	1	☼	8260B	Total/NA
Benzo[a]anthracene	0.012	J	0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.024	J	0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.029	J	0.037	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.017	J	0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.027	J	0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.029	J	0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.012	J	0.075	0.0069	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.022	J	0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.036	J	0.037	0.0074	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.53	J	1.1	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	8.7		0.53	0.18	mg/Kg	1	☼	6010B	Total/NA
Barium	25		0.53	0.061	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.36		0.21	0.050	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.20	B	0.11	0.019	mg/Kg	1	☼	6010B	Total/NA
Chromium	8.2		0.53	0.26	mg/Kg	1	☼	6010B	Total/NA
Cobalt	11		0.27	0.070	mg/Kg	1	☼	6010B	Total/NA
Copper	16		0.53	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	12000		11	5.6	mg/Kg	1	☼	6010B	Total/NA
Lead	12		0.27	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	21000		5.3	2.7	mg/Kg	1	☼	6010B	Total/NA
Calcium	64000	B	110	18	mg/Kg	10	☼	6010B	Total/NA
Manganese	350		0.53	0.078	mg/Kg	1	☼	6010B	Total/NA
Nickel	21		0.53	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.27	0.063	mg/Kg	1	☼	6010B	Total/NA
Zinc	44		1.1	0.47	mg/Kg	1	☼	6010B	Total/NA
Potassium	1400		27	9.5	mg/Kg	1	☼	6010B	Total/NA
Sodium	180		53	7.9	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

## Client Sample ID: 2696V-16-B05 (0-5) (Continued)

## Lab Sample ID: 500-136785-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.22	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0028	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	450		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.044		0.025	0.010	mg/L	1		6010B	TCLP
Copper	0.012	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	75		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	3.5		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.056		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	2.7		2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.049	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.079		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.016	J	0.017	0.0057	mg/Kg	1	☼	7471B	Total/NA
pH	7.8		0.20	0.20	SU	1		9045D	Total/NA

## Client Sample ID: 2696V-16-B02 (0-5)

## Lab Sample ID: 500-136785-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.074		0.017	0.0074	mg/Kg	1	☼	8260B	Total/NA
Antimony	0.27	J	1.1	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.4		0.54	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	31		0.54	0.062	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.55		0.22	0.051	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.064	J B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	15		0.54	0.27	mg/Kg	1	☼	6010B	Total/NA
Cobalt	6.0		0.27	0.071	mg/Kg	1	☼	6010B	Total/NA
Copper	9.5		0.54	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	13000		11	5.7	mg/Kg	1	☼	6010B	Total/NA
Lead	6.9		0.27	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	13000		5.4	2.7	mg/Kg	1	☼	6010B	Total/NA
Calcium	57000	B	110	18	mg/Kg	10	☼	6010B	Total/NA
Manganese	150		0.54	0.079	mg/Kg	1	☼	6010B	Total/NA
Nickel	18		0.54	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	18		0.27	0.064	mg/Kg	1	☼	6010B	Total/NA
Zinc	34		1.1	0.48	mg/Kg	1	☼	6010B	Total/NA
Potassium	2600		27	9.6	mg/Kg	1	☼	6010B	Total/NA
Sodium	93		54	8.1	mg/Kg	1	☼	6010B	Total/NA
Barium	0.37	J	0.50	0.050	mg/L	1		6010B	TCLP
Calcium	730		50	5.0	mg/L	10		6010B	TCLP
Copper	0.011	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	26		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.30		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	2.3	J	2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.011	J	0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.017	J	0.018	0.0059	mg/Kg	1	☼	7471B	Total/NA
pH	8.3		0.20	0.20	SU	1		9045D	Total/NA

## Client Sample ID: 2696V-16-B01 (0-5)

## Lab Sample ID: 500-136785-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.0075	J	0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B01 (0-5) (Continued)**

**Lab Sample ID: 500-136785-6**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	0.037		0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.043		0.037	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.040		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.010	J	0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.013	J	0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.032	J	0.037	0.0097	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.0074	J	0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.012	J	0.037	0.0074	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.40	J	1.0	0.20	mg/Kg	1	☼	6010B	Total/NA
Arsenic	9.6		0.52	0.18	mg/Kg	1	☼	6010B	Total/NA
Barium	25		0.52	0.060	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.36		0.21	0.049	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.15	B	0.10	0.019	mg/Kg	1	☼	6010B	Total/NA
Chromium	8.1		0.52	0.26	mg/Kg	1	☼	6010B	Total/NA
Cobalt	8.2		0.26	0.069	mg/Kg	1	☼	6010B	Total/NA
Copper	18		0.52	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	14000		10	5.4	mg/Kg	1	☼	6010B	Total/NA
Lead	24		0.26	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	31000		5.2	2.6	mg/Kg	1	☼	6010B	Total/NA
Calcium	91000	B	100	18	mg/Kg	10	☼	6010B	Total/NA
Manganese	360		0.52	0.076	mg/Kg	1	☼	6010B	Total/NA
Nickel	18		0.52	0.15	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.26	0.062	mg/Kg	1	☼	6010B	Total/NA
Zinc	50		1.0	0.46	mg/Kg	1	☼	6010B	Total/NA
Potassium	1200		26	9.3	mg/Kg	1	☼	6010B	Total/NA
Sodium	130		52	7.8	mg/Kg	1	☼	6010B	Total/NA
Barium	0.30	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0026	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	500		5.0	0.50	mg/L	1		6010B	TCLP
Magnesium	42		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.73		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.012	J	0.025	0.010	mg/L	1		6010B	TCLP
Potassium	2.1	J	2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.18		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.016	J	0.017	0.0058	mg/Kg	1	☼	7471B	Total/NA
pH	8.3		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-16-B06 (0-5)**

**Lab Sample ID: 500-136785-7**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.30	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	1.7		0.56	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	10		0.56	0.063	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.14	J	0.22	0.052	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.069	J B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	7.4		0.56	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	2.9		0.28	0.073	mg/Kg	1	☼	6010B	Total/NA
Copper	4.2		0.56	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	4400		11	5.8	mg/Kg	1	☼	6010B	Total/NA
Lead	3.7		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B06 (0-5) (Continued)**

**Lab Sample ID: 500-136785-7**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	6900		5.6	2.8	mg/Kg	1	☼	6010B	Total/NA
Calcium	11000	B	11	1.9	mg/Kg	1	☼	6010B	Total/NA
Manganese	110		0.56	0.081	mg/Kg	1	☼	6010B	Total/NA
Nickel	6.6		0.56	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	11		0.28	0.066	mg/Kg	1	☼	6010B	Total/NA
Zinc	19		1.1	0.49	mg/Kg	1	☼	6010B	Total/NA
Potassium	520		28	9.8	mg/Kg	1	☼	6010B	Total/NA
Sodium	75		56	8.2	mg/Kg	1	☼	6010B	Total/NA
Barium	0.13	J	0.50	0.050	mg/L	1		6010B	TCLP
Calcium	230		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.017	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	130		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	1.1		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	0.64	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.022	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.032		0.025	0.010	mg/L	1		6010B	SPLP East
pH	8.3		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136785-1	2696V-16-B03 (0-5)	Solid	11/02/17 09:15	11/03/17 09:45
500-136785-2	2696V-16-B03 (0-5) Dup	Solid	11/02/17 09:15	11/03/17 09:45
500-136785-3	2696V-16-B04 (0-5)	Solid	11/02/17 09:30	11/03/17 09:45
500-136785-4	2696V-16-B05 (0-5)	Solid	11/02/17 09:45	11/03/17 09:45
500-136785-5	2696V-16-B02 (0-5)	Solid	11/02/17 14:15	11/03/17 09:45
500-136785-6	2696V-16-B01 (0-5)	Solid	11/02/17 14:35	11/03/17 09:45
500-136785-7	2696V-16-B06 (0-5)	Solid	11/02/17 11:35	11/03/17 09:45





# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B03 (0-5)**

**Lab Sample ID: 500-136785-1**

**Date Collected: 11/02/17 09:15**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 83.3**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.065</b>		0.018	0.0079	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Benzene	<0.0018		0.0018	0.00046	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Bromodichloromethane	<0.0018		0.0018	0.00037	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Bromoform	<0.0018		0.0018	0.00053	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Bromomethane	<0.0045		0.0045	0.0017	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
2-Butanone (MEK)	<0.0045		0.0045	0.0020	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Carbon disulfide	<0.0045		0.0045	0.00094	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Carbon tetrachloride	<0.0018		0.0018	0.00052	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Chlorobenzene	<0.0018		0.0018	0.00067	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Chloroethane	<0.0045		0.0045	0.0013	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Chloroform	<0.0018		0.0018	0.00063	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Chloromethane	<0.0045		0.0045	0.0018	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
cis-1,2-Dichloroethene	<0.0018		0.0018	0.00051	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
cis-1,3-Dichloropropene	<0.0018		0.0018	0.00054	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Dibromochloromethane	<0.0018		0.0018	0.00059	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
1,1-Dichloroethane	<0.0018		0.0018	0.00062	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
1,2-Dichloroethane	<0.0045		0.0045	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
1,1-Dichloroethene	<0.0018		0.0018	0.00062	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
1,2-Dichloropropane	<0.0018		0.0018	0.00047	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
1,3-Dichloropropane, Total	<0.0018		0.0018	0.00063	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Ethylbenzene	<0.0018		0.0018	0.00086	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
2-Hexanone	<0.0045		0.0045	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Methylene Chloride	<0.0045		0.0045	0.0018	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
4-Methyl-2-pentanone (MIBK)	<0.0045		0.0045	0.0013	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Methyl tert-butyl ether	<0.0018		0.0018	0.00053	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Styrene	<0.0018		0.0018	0.00055	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
1,1,2,2-Tetrachloroethane	<0.0018		0.0018	0.00058	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Tetrachloroethene	<0.0018		0.0018	0.00062	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Toluene	<0.0018		0.0018	0.00046	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
trans-1,2-Dichloroethene	<0.0018		0.0018	0.00080	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
trans-1,3-Dichloropropene	<0.0018		0.0018	0.00063	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
1,1,1-Trichloroethane	<0.0018		0.0018	0.00061	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
1,1,2-Trichloroethane	<0.0018		0.0018	0.00078	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Trichloroethene	<0.0018		0.0018	0.00061	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Vinyl acetate	<0.0045		0.0045	0.0016	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Vinyl chloride	<0.0018		0.0018	0.00080	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1
Xylenes, Total	<0.0036		0.0036	0.00058	mg/Kg	☼	11/04/17 08:18	11/08/17 14:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		75 - 131	11/04/17 08:18	11/08/17 14:57	1
Dibromofluoromethane	106		75 - 126	11/04/17 08:18	11/08/17 14:57	1
1,2-Dichloroethane-d4 (Surr)	111		70 - 134	11/04/17 08:18	11/08/17 14:57	1
Toluene-d8 (Surr)	99		75 - 124	11/04/17 08:18	11/08/17 14:57	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Anthracene	<0.037		0.037	0.0063	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Benzo[a]anthracene	<0.037		0.037	0.0050	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B03 (0-5)**

**Lab Sample ID: 500-136785-1**

**Date Collected: 11/02/17 09:15**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 83.3**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.037		0.037	0.0072	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Benzo[b]fluoranthene	<0.037		0.037	0.0081	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Benzo[g,h,i]perylene	<0.037		0.037	0.012	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Benzo[k]fluoranthene	<0.037		0.037	0.011	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Chrysene	<0.037		0.037	0.010	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
2,4-Dinitrophenol	<0.76		0.76	0.66	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Fluoranthene	<0.037		0.037	0.0069	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Hexachlorobenzene	<0.076		0.076	0.0087	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Indeno[1,2,3-cd]pyrene	<0.037		0.037	0.0097	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
2-Methylnaphthalene	<0.076		0.076	0.0069	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Naphthalene	<0.037		0.037	0.0058	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B03 (0-5)**

**Lab Sample ID: 500-136785-1**

Date Collected: 11/02/17 09:15

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 83.3

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Pentachlorophenol	<0.76		0.76	0.60	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Phenanthrene	<0.037		0.037	0.0052	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Phenol	<0.19		0.19	0.083	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
Pyrene	<0.037		0.037	0.0074	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/13/17 17:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	64		44 - 121	11/10/17 17:29	11/13/17 17:14	1
2-Fluorophenol	70		46 - 133	11/10/17 17:29	11/13/17 17:14	1
Nitrobenzene-d5	66		41 - 120	11/10/17 17:29	11/13/17 17:14	1
Phenol-d5	70		46 - 125	11/10/17 17:29	11/13/17 17:14	1
Terphenyl-d14	83		35 - 160	11/10/17 17:29	11/13/17 17:14	1
2,4,6-Tribromophenol	56		25 - 139	11/10/17 17:29	11/13/17 17:14	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.33</b>	<b>J</b>	1.2	0.23	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
<b>Arsenic</b>	<b>8.0</b>		0.60	0.20	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
<b>Barium</b>	<b>43</b>		0.60	0.068	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
<b>Beryllium</b>	<b>0.63</b>		0.24	0.056	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
<b>Cadmium</b>	<b>0.026</b>	<b>J B</b>	0.12	0.021	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
<b>Chromium</b>	<b>14</b>		0.60	0.29	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
<b>Cobalt</b>	<b>9.5</b>		0.30	0.078	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
<b>Copper</b>	<b>18</b>		0.60	0.17	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
<b>Iron</b>	<b>20000</b>		12	6.2	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
<b>Lead</b>	<b>15</b>		0.30	0.14	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
<b>Magnesium</b>	<b>12000</b>		6.0	3.0	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
<b>Calcium</b>	<b>17000</b>	<b>B</b>	12	2.0	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
<b>Manganese</b>	<b>160</b>		0.60	0.086	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
<b>Nickel</b>	<b>23</b>		0.60	0.17	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
Selenium	<0.60		0.60	0.35	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
Silver	<0.30		0.30	0.077	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
Thallium	<0.60		0.60	0.30	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
<b>Vanadium</b>	<b>20</b>		0.30	0.070	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
<b>Zinc</b>	<b>51</b>		1.2	0.52	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
<b>Potassium</b>	<b>1800</b>		30	11	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1
<b>Sodium</b>	<b>320</b>		60	8.8	mg/Kg	☼	11/07/17 16:54	11/09/17 01:03	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 08:42	11/09/17 15:28	1
<b>Barium</b>	<b>0.39</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 08:42	11/09/17 15:28	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 08:42	11/09/17 15:28	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/09/17 08:42	11/09/17 15:28	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B03 (0-5)**

**Lab Sample ID: 500-136785-1**

Date Collected: 11/02/17 09:15

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 83.3

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>390</b>		5.0	0.50	mg/L		11/09/17 08:42	11/09/17 15:28	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:28	1
<b>Cobalt</b>	<b>0.010</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:28	1
Copper	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:28	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 08:42	11/09/17 15:28	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 08:42	11/09/17 15:28	1
<b>Magnesium</b>	<b>64</b>		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 15:28	1
<b>Manganese</b>	<b>3.3</b>		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:28	1
<b>Nickel</b>	<b>0.010</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:28	1
<b>Potassium</b>	<b>2.3</b>	<b>J</b>	2.5	0.50	mg/L		11/09/17 08:42	11/09/17 15:28	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 08:42	11/09/17 15:28	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:28	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:28	1
<b>Zinc</b>	<b>0.071</b>	<b>J</b>	0.50	0.020	mg/L		11/09/17 08:42	11/09/17 15:28	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.10</b>		0.025	0.010	mg/L		11/09/17 16:40	11/10/17 20:04	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 08:42	11/10/17 11:32	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 08:42	11/10/17 11:32	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 14:47	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.031</b>		0.018	0.0058	mg/Kg	☼	11/07/17 13:20	11/08/17 09:27	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.57		0.57	0.20	mg/Kg	☼	11/11/17 12:30	11/11/17 15:31	1
<b>pH</b>	<b>8.3</b>		0.20	0.20	SU			11/11/17 12:15	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B03 (0-5) Dup**

**Lab Sample ID: 500-136785-2**

Date Collected: 11/02/17 09:15

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 92.1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.034</b>		0.016	0.0071	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Benzene	<0.0016		0.0016	0.00042	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Bromodichloromethane	<0.0016		0.0016	0.00033	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Bromoform	<0.0016		0.0016	0.00048	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Bromomethane	<0.0041		0.0041	0.0015	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
2-Butanone (MEK)	<0.0041		0.0041	0.0018	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Carbon disulfide	<0.0041		0.0041	0.00085	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Carbon tetrachloride	<0.0016		0.0016	0.00047	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Chlorobenzene	<0.0016		0.0016	0.00060	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Chloroethane	<0.0041		0.0041	0.0012	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Chloroform	<0.0016		0.0016	0.00057	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Chloromethane	<0.0041		0.0041	0.0016	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
cis-1,2-Dichloroethene	<0.0016		0.0016	0.00046	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
cis-1,3-Dichloropropene	<0.0016		0.0016	0.00049	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Dibromochloromethane	<0.0016		0.0016	0.00053	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
1,1-Dichloroethane	<0.0016		0.0016	0.00056	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
1,2-Dichloroethane	<0.0041		0.0041	0.0013	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
1,1-Dichloroethene	<0.0016		0.0016	0.00056	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
1,2-Dichloropropane	<0.0016		0.0016	0.00042	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
1,3-Dichloropropane, Total	<0.0016		0.0016	0.00057	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Ethylbenzene	<0.0016		0.0016	0.00078	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
2-Hexanone	<0.0041		0.0041	0.0013	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Methylene Chloride	<0.0041		0.0041	0.0016	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
4-Methyl-2-pentanone (MIBK)	<0.0041		0.0041	0.0012	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Methyl tert-butyl ether	<0.0016		0.0016	0.00048	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Styrene	<0.0016		0.0016	0.00049	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
1,1,2,2-Tetrachloroethane	<0.0016		0.0016	0.00052	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Tetrachloroethene	<0.0016		0.0016	0.00056	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Toluene	<0.0016		0.0016	0.00041	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
trans-1,2-Dichloroethene	<0.0016		0.0016	0.00072	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
trans-1,3-Dichloropropene	<0.0016		0.0016	0.00057	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
1,1,1-Trichloroethane	<0.0016		0.0016	0.00055	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
1,1,2-Trichloroethane	<0.0016		0.0016	0.00070	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Trichloroethene	<0.0016		0.0016	0.00055	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Vinyl acetate	<0.0041		0.0041	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Vinyl chloride	<0.0016		0.0016	0.00072	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1
Xylenes, Total	<0.0033		0.0033	0.00052	mg/Kg	☼	11/04/17 08:18	11/08/17 15:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		75 - 131	11/04/17 08:18	11/08/17 15:23	1
Dibromofluoromethane	104		75 - 126	11/04/17 08:18	11/08/17 15:23	1
1,2-Dichloroethane-d4 (Surr)	105		70 - 134	11/04/17 08:18	11/08/17 15:23	1
Toluene-d8 (Surr)	97		75 - 124	11/04/17 08:18	11/08/17 15:23	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.034		0.034	0.0062	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Acenaphthylene	<0.034		0.034	0.0046	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Anthracene	<0.034		0.034	0.0058	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
<b>Benzo[a]anthracene</b>	<b>0.0074</b>	<b>J</b>	0.034	0.0047	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B03 (0-5) Dup**

**Lab Sample ID: 500-136785-2**

**Date Collected: 11/02/17 09:15**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 92.1**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.021</b>	<b>J</b>	0.034	0.0067	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Benzo[b]fluoranthene	<0.034		0.034	0.0075	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
<b>Benzo[g,h,i]perylene</b>	<b>0.015</b>	<b>J</b>	0.034	0.011	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Benzo[k]fluoranthene	<0.034		0.034	0.010	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Bis(2-chloroethoxy)methane	<0.17		0.17	0.035	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Bis(2-chloroethyl)ether	<0.17		0.17	0.052	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Bis(2-ethylhexyl) phthalate	<0.17		0.17	0.063	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
4-Bromophenyl phenyl ether	<0.17		0.17	0.046	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Butyl benzyl phthalate	<0.17		0.17	0.066	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Carbazole	<0.17		0.17	0.087	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
4-Chloroaniline	<0.70		0.70	0.16	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
4-Chloro-3-methylphenol	<0.34		0.34	0.12	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
2-Chloronaphthalene	<0.17		0.17	0.038	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
2-Chlorophenol	<0.17		0.17	0.059	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
4-Chlorophenyl phenyl ether	<0.17		0.17	0.041	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
<b>Chrysene</b>	<b>0.020</b>	<b>J</b>	0.034	0.0095	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Dibenz(a,h)anthracene	<0.034		0.034	0.0067	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Dibenzofuran	<0.17		0.17	0.041	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
1,2-Dichlorobenzene	<0.17		0.17	0.041	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
1,3-Dichlorobenzene	<0.17		0.17	0.039	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
1,4-Dichlorobenzene	<0.17		0.17	0.044	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
3,3'-Dichlorobenzidine	<0.17		0.17	0.049	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
2,4-Dichlorophenol	<0.34		0.34	0.082	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Diethyl phthalate	<0.17		0.17	0.059	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
2,4-Dimethylphenol	<0.34		0.34	0.13	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Dimethyl phthalate	<0.17		0.17	0.045	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Di-n-butyl phthalate	<0.17		0.17	0.053	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
4,6-Dinitro-2-methylphenol	<0.70		0.70	0.28	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
2,4-Dinitrophenol	<0.70		0.70	0.61	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
2,4-Dinitrotoluene	<0.17		0.17	0.055	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
2,6-Dinitrotoluene	<0.17		0.17	0.068	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Di-n-octyl phthalate	<0.17		0.17	0.057	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
<b>Fluoranthene</b>	<b>0.018</b>	<b>J</b>	0.034	0.0064	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Fluorene	<0.034		0.034	0.0049	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Hexachlorobenzene	<0.070		0.070	0.0080	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Hexachlorobutadiene	<0.17		0.17	0.055	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Hexachlorocyclopentadiene	<0.70		0.70	0.20	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Hexachloroethane	<0.17		0.17	0.053	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Indeno[1,2,3-cd]pyrene	<0.034		0.034	0.0090	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Isophorone	<0.17		0.17	0.039	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
<b>2-Methylnaphthalene</b>	<b>0.0074</b>	<b>J</b>	0.070	0.0064	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
2-Methylphenol	<0.17		0.17	0.056	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
3 & 4 Methylphenol	<0.17		0.17	0.058	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
<b>Naphthalene</b>	<b>0.0055</b>	<b>J</b>	0.034	0.0053	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
2-Nitroaniline	<0.17		0.17	0.047	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
3-Nitroaniline	<0.34		0.34	0.11	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
4-Nitroaniline	<0.34		0.34	0.15	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Nitrobenzene	<0.034		0.034	0.0087	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
2-Nitrophenol	<0.34		0.34	0.082	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B03 (0-5) Dup**

**Lab Sample ID: 500-136785-2**

Date Collected: 11/02/17 09:15

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 92.1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.70		0.70	0.33	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
N-Nitrosodi-n-propylamine	<0.070		0.070	0.042	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
N-Nitrosodiphenylamine	<0.17		0.17	0.041	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
2,2'-oxybis[1-chloropropane]	<0.17		0.17	0.040	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Pentachlorophenol	<0.70		0.70	0.56	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
<b>Phenanthrene</b>	<b>0.020</b>	<b>J</b>	0.034	0.0048	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
Phenol	<0.17		0.17	0.077	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
<b>Pyrene</b>	<b>0.027</b>	<b>J</b>	0.034	0.0069	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
1,2,4-Trichlorobenzene	<0.17		0.17	0.037	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
2,4,5-Trichlorophenol	<0.34		0.34	0.079	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1
2,4,6-Trichlorophenol	<0.34		0.34	0.12	mg/Kg	☼	11/10/17 17:29	11/14/17 13:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	72		44 - 121	11/10/17 17:29	11/14/17 13:15	1
2-Fluorophenol	76		46 - 133	11/10/17 17:29	11/14/17 13:15	1
Nitrobenzene-d5	62		41 - 120	11/10/17 17:29	11/14/17 13:15	1
Phenol-d5	77		46 - 125	11/10/17 17:29	11/14/17 13:15	1
Terphenyl-d14	84		35 - 160	11/10/17 17:29	11/14/17 13:15	1
2,4,6-Tribromophenol	72		25 - 139	11/10/17 17:29	11/14/17 13:15	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.40</b>	<b>J F1</b>	1.1	0.21	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1
<b>Arsenic</b>	<b>6.8</b>	<b>F1</b>	0.53	0.18	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1
<b>Barium</b>	<b>26</b>		0.53	0.061	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1
<b>Beryllium</b>	<b>0.45</b>		0.21	0.050	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1
<b>Cadmium</b>	<b>0.10</b>	<b>J B</b>	0.11	0.019	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1
<b>Chromium</b>	<b>10</b>		0.53	0.26	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1
<b>Cobalt</b>	<b>8.6</b>		0.27	0.070	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1
<b>Copper</b>	<b>17</b>		0.53	0.15	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1
<b>Iron</b>	<b>14000</b>		11	5.6	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1
<b>Lead</b>	<b>11</b>		0.27	0.12	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1
<b>Magnesium</b>	<b>26000</b>		5.3	2.7	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1
<b>Calcium</b>	<b>78000</b>	<b>B</b>	110	18	mg/Kg	☼	11/07/17 16:54	11/09/17 18:44	10
<b>Manganese</b>	<b>300</b>		0.53	0.078	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1
<b>Nickel</b>	<b>20</b>		0.53	0.16	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1
Selenium	<0.53		0.53	0.31	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1
Silver	<0.27		0.27	0.069	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1
Thallium	<0.53		0.53	0.27	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1
<b>Vanadium</b>	<b>13</b>		0.27	0.063	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1
<b>Zinc</b>	<b>40</b>		1.1	0.47	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1
<b>Potassium</b>	<b>1900</b>	<b>F1</b>	27	9.5	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1
<b>Sodium</b>	<b>250</b>		53	7.9	mg/Kg	☼	11/07/17 16:54	11/09/17 01:07	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 08:42	11/09/17 15:32	1
<b>Barium</b>	<b>0.49</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 08:42	11/09/17 15:32	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 08:42	11/09/17 15:32	1
<b>Cadmium</b>	<b>0.0020</b>	<b>J</b>	0.0050	0.0020	mg/L		11/09/17 08:42	11/09/17 15:32	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B03 (0-5) Dup**

**Lab Sample ID: 500-136785-2**

Date Collected: 11/02/17 09:15

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 92.1

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>510</b>		5.0	0.50	mg/L		11/09/17 08:42	11/09/17 15:32	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:32	1
<b>Cobalt</b>	<b>0.021</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:32	1
Copper	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:32	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 08:42	11/09/17 15:32	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 08:42	11/09/17 15:32	1
<b>Magnesium</b>	<b>21</b>		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 15:32	1
<b>Manganese</b>	<b>3.6</b>		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:32	1
<b>Nickel</b>	<b>0.023</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:32	1
<b>Potassium</b>	<b>2.7</b>		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 15:32	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 08:42	11/09/17 15:32	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:32	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:32	1
<b>Zinc</b>	<b>0.067</b>	<b>J</b>	0.50	0.020	mg/L		11/09/17 08:42	11/09/17 15:32	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.11</b>		0.025	0.010	mg/L		11/09/17 16:40	11/10/17 20:08	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 08:42	11/10/17 11:36	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 08:42	11/10/17 11:36	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 14:54	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.026</b>		0.017	0.0057	mg/Kg	☼	11/07/17 13:20	11/08/17 09:29	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.46		0.46	0.16	mg/Kg	☼	11/11/17 12:30	11/11/17 15:32	1
<b>pH</b>	<b>7.9</b>		0.20	0.20	SU			11/11/17 12:48	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B04 (0-5)**

**Lab Sample ID: 500-136785-3**

**Date Collected: 11/02/17 09:30**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 94.2**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.048</b>		0.014	0.0062	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Benzene	<0.0014		0.0014	0.00036	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Bromodichloromethane	<0.0014		0.0014	0.00029	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Bromoform	<0.0014		0.0014	0.00041	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Bromomethane	<0.0035		0.0035	0.0013	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
2-Butanone (MEK)	<0.0035		0.0035	0.0016	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Carbon disulfide	<0.0035		0.0035	0.00073	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Carbon tetrachloride	<0.0014		0.0014	0.00041	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Chlorobenzene	<0.0014		0.0014	0.00052	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Chloroethane	<0.0035		0.0035	0.0010	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Chloroform	<0.0014		0.0014	0.00049	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Chloromethane	<0.0035		0.0035	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
cis-1,2-Dichloroethene	<0.0014		0.0014	0.00039	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
cis-1,3-Dichloropropene	<0.0014		0.0014	0.00043	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Dibromochloromethane	<0.0014		0.0014	0.00046	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
1,1-Dichloroethane	<0.0014		0.0014	0.00048	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
1,2-Dichloroethane	<0.0035		0.0035	0.0011	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
1,1-Dichloroethene	<0.0014		0.0014	0.00049	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
1,2-Dichloropropane	<0.0014		0.0014	0.00037	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
1,3-Dichloropropane, Total	<0.0014		0.0014	0.00050	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Ethylbenzene	<0.0014		0.0014	0.00068	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
2-Hexanone	<0.0035		0.0035	0.0011	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Methylene Chloride	<0.0035		0.0035	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
4-Methyl-2-pentanone (MIBK)	<0.0035		0.0035	0.0010	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Methyl tert-butyl ether	<0.0014		0.0014	0.00041	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Styrene	<0.0014		0.0014	0.00043	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
1,1,2,2-Tetrachloroethane	<0.0014		0.0014	0.00045	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Tetrachloroethene	<0.0014		0.0014	0.00048	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Toluene	<0.0014		0.0014	0.00036	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
trans-1,2-Dichloroethene	<0.0014		0.0014	0.00063	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
trans-1,3-Dichloropropene	<0.0014		0.0014	0.00050	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
1,1,1-Trichloroethane	<0.0014		0.0014	0.00047	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
1,1,2-Trichloroethane	<0.0014		0.0014	0.00061	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Trichloroethene	<0.0014		0.0014	0.00048	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Vinyl acetate	<0.0035		0.0035	0.0012	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Vinyl chloride	<0.0014		0.0014	0.00063	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1
Xylenes, Total	<0.0028		0.0028	0.00045	mg/Kg	☼	11/04/17 08:18	11/08/17 15:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		75 - 131	11/04/17 08:18	11/08/17 15:48	1
Dibromofluoromethane	107		75 - 126	11/04/17 08:18	11/08/17 15:48	1
1,2-Dichloroethane-d4 (Surr)	116		70 - 134	11/04/17 08:18	11/08/17 15:48	1
Toluene-d8 (Surr)	98		75 - 124	11/04/17 08:18	11/08/17 15:48	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.035		0.035	0.0063	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Acenaphthylene	<0.035		0.035	0.0046	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Anthracene	<0.035		0.035	0.0058	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
<b>Benzo[a]anthracene</b>	<b>0.0096</b>	<b>J</b>	0.035	0.0047	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B04 (0-5)**

**Lab Sample ID: 500-136785-3**

**Date Collected: 11/02/17 09:30**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 94.2**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.023</b>	<b>J</b>	0.035	0.0068	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
<b>Benzo[b]fluoranthene</b>	<b>0.030</b>	<b>J</b>	0.035	0.0075	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
<b>Benzo[g,h,i]perylene</b>	<b>0.014</b>	<b>J</b>	0.035	0.011	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Benzo[k]fluoranthene	<0.035		0.035	0.010	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.052	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.064	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.046	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Butyl benzyl phthalate	<0.18		0.18	0.066	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Carbazole	<0.18		0.18	0.087	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
4-Chloroaniline	<0.70		0.70	0.16	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
4-Chloro-3-methylphenol	<0.35		0.35	0.12	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
2-Chlorophenol	<0.18		0.18	0.060	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.041	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
<b>Chrysene</b>	<b>0.028</b>	<b>J</b>	0.035	0.0095	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Dibenz(a,h)anthracene	<0.035		0.035	0.0067	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Dibenzofuran	<0.18		0.18	0.041	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
1,2-Dichlorobenzene	<0.18		0.18	0.042	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
1,3-Dichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
1,4-Dichlorobenzene	<0.18		0.18	0.045	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.049	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
2,4-Dichlorophenol	<0.35		0.35	0.083	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Diethyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
2,4-Dimethylphenol	<0.35		0.35	0.13	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Dimethyl phthalate	<0.18		0.18	0.046	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Di-n-butyl phthalate	<0.18		0.18	0.053	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
4,6-Dinitro-2-methylphenol	<0.70		0.70	0.28	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
2,4-Dinitrophenol	<0.70		0.70	0.61	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
2,4-Dinitrotoluene	<0.18		0.18	0.055	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
2,6-Dinitrotoluene	<0.18		0.18	0.069	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Di-n-octyl phthalate	<0.18		0.18	0.057	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
<b>Fluoranthene</b>	<b>0.038</b>		0.035	0.0065	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Fluorene	<0.035		0.035	0.0049	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Hexachlorobenzene	<0.070		0.070	0.0081	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Hexachlorobutadiene	<0.18		0.18	0.055	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Hexachlorocyclopentadiene	<0.70		0.70	0.20	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Hexachloroethane	<0.18		0.18	0.053	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Indeno[1,2,3-cd]pyrene	<0.035		0.035	0.0090	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Isophorone	<0.18		0.18	0.039	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
2-Methylnaphthalene	<0.070		0.070	0.0064	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
2-Methylphenol	<0.18		0.18	0.056	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
3 & 4 Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Naphthalene	<0.035		0.035	0.0054	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
2-Nitroaniline	<0.18		0.18	0.047	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
3-Nitroaniline	<0.35		0.35	0.11	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
4-Nitroaniline	<0.35		0.35	0.15	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Nitrobenzene	<0.035		0.035	0.0087	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
2-Nitrophenol	<0.35		0.35	0.082	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B04 (0-5)**

**Lab Sample ID: 500-136785-3**

Date Collected: 11/02/17 09:30

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 94.2

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.70		0.70	0.33	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
N-Nitrosodi-n-propylamine	<0.070		0.070	0.043	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
N-Nitrosodiphenylamine	<0.18		0.18	0.041	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.040	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Pentachlorophenol	<0.70		0.70	0.56	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
<b>Phenanthrene</b>	<b>0.021</b>	<b>J</b>	0.035	0.0049	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
Phenol	<0.18		0.18	0.078	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
<b>Pyrene</b>	<b>0.038</b>		0.035	0.0069	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.038	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
2,4,5-Trichlorophenol	<0.35		0.35	0.080	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1
2,4,6-Trichlorophenol	<0.35		0.35	0.12	mg/Kg	☼	11/10/17 17:29	11/14/17 13:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	63		44 - 121	11/10/17 17:29	11/14/17 13:41	1
2-Fluorophenol	67		46 - 133	11/10/17 17:29	11/14/17 13:41	1
Nitrobenzene-d5	55		41 - 120	11/10/17 17:29	11/14/17 13:41	1
Phenol-d5	70		46 - 125	11/10/17 17:29	11/14/17 13:41	1
Terphenyl-d14	74		35 - 160	11/10/17 17:29	11/14/17 13:41	1
2,4,6-Tribromophenol	70		25 - 139	11/10/17 17:29	11/14/17 13:41	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.45</b>	<b>J</b>	1.0	0.20	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1
<b>Arsenic</b>	<b>20</b>		0.50	0.17	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1
<b>Barium</b>	<b>19</b>		0.50	0.058	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1
<b>Beryllium</b>	<b>0.30</b>		0.20	0.047	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1
<b>Cadmium</b>	<b>0.15</b>	<b>B</b>	0.10	0.018	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1
<b>Chromium</b>	<b>7.0</b>		0.50	0.25	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1
<b>Cobalt</b>	<b>11</b>		0.25	0.066	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1
<b>Copper</b>	<b>15</b>		0.50	0.14	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1
<b>Iron</b>	<b>13000</b>		10	5.2	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1
<b>Lead</b>	<b>10</b>		0.25	0.12	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1
<b>Magnesium</b>	<b>18000</b>		5.0	2.5	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1
<b>Calcium</b>	<b>51000</b>	<b>B</b>	100	17	mg/Kg	☼	11/07/17 16:54	11/09/17 19:03	10
<b>Manganese</b>	<b>210</b>		0.50	0.073	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1
<b>Nickel</b>	<b>18</b>		0.50	0.15	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1
Selenium	<0.50		0.50	0.30	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1
Silver	<0.25		0.25	0.065	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1
Thallium	<0.50		0.50	0.25	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1
<b>Vanadium</b>	<b>12</b>		0.25	0.060	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1
<b>Zinc</b>	<b>48</b>		1.0	0.44	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1
<b>Potassium</b>	<b>1200</b>		25	8.9	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1
<b>Sodium</b>	<b>200</b>		50	7.5	mg/Kg	☼	11/07/17 16:54	11/09/17 01:36	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 08:42	11/09/17 15:36	1
<b>Barium</b>	<b>0.55</b>		0.50	0.050	mg/L		11/09/17 08:42	11/09/17 15:36	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 08:42	11/09/17 15:36	1
<b>Cadmium</b>	<b>0.0026</b>	<b>J</b>	0.0050	0.0020	mg/L		11/09/17 08:42	11/09/17 15:36	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B04 (0-5)**

**Lab Sample ID: 500-136785-3**

Date Collected: 11/02/17 09:30

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 94.2

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	510		5.0	0.50	mg/L		11/09/17 08:42	11/09/17 15:36	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:36	1
Cobalt	0.018	J	0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:36	1
Copper	0.011	J	0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:36	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 08:42	11/09/17 15:36	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 08:42	11/09/17 15:36	1
Magnesium	25		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 15:36	1
Manganese	3.2		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:36	1
Nickel	0.032		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:36	1
Potassium	3.3		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 15:36	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 08:42	11/09/17 15:36	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:36	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:36	1
Zinc	0.024	J	0.50	0.020	mg/L		11/09/17 08:42	11/09/17 15:36	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.032		0.025	0.010	mg/L		11/09/17 16:40	11/10/17 20:12	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 08:42	11/10/17 11:40	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 08:42	11/10/17 11:40	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 14:56	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.015	J	0.016	0.0052	mg/Kg	☼	11/07/17 13:20	11/08/17 09:38	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.52		0.52	0.18	mg/Kg	☼	11/11/17 12:30	11/11/17 15:32	1
pH	8.3		0.20	0.20	SU			11/11/17 13:22	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B05 (0-5)**

**Lab Sample ID: 500-136785-4**

**Date Collected: 11/02/17 09:45**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 88.6**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.029</b>		0.015	0.0065	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Benzene	<0.0015		0.0015	0.00038	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Bromodichloromethane	<0.0015		0.0015	0.00030	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Bromoform	<0.0015		0.0015	0.00043	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Bromomethane	<0.0037		0.0037	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
2-Butanone (MEK)	<0.0037		0.0037	0.0016	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Carbon disulfide	<0.0037		0.0037	0.00077	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Carbon tetrachloride	<0.0015		0.0015	0.00043	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Chlorobenzene	<0.0015		0.0015	0.00055	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Chloroethane	<0.0037		0.0037	0.0011	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Chloroform	<0.0015		0.0015	0.00052	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Chloromethane	<0.0037		0.0037	0.0015	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
cis-1,2-Dichloroethene	<0.0015		0.0015	0.00042	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
cis-1,3-Dichloropropene	<0.0015		0.0015	0.00045	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Dibromochloromethane	<0.0015		0.0015	0.00049	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
1,1-Dichloroethane	<0.0015		0.0015	0.00051	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
1,2-Dichloroethane	<0.0037		0.0037	0.0012	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
1,1-Dichloroethene	<0.0015		0.0015	0.00051	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
1,2-Dichloropropane	<0.0015		0.0015	0.00038	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
1,3-Dichloropropane, Total	<0.0015		0.0015	0.00052	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Ethylbenzene	<0.0015		0.0015	0.00071	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
2-Hexanone	<0.0037		0.0037	0.0012	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Methylene Chloride	<0.0037		0.0037	0.0015	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
4-Methyl-2-pentanone (MIBK)	<0.0037		0.0037	0.0011	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Methyl tert-butyl ether	<0.0015		0.0015	0.00044	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Styrene	<0.0015		0.0015	0.00045	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
1,1,2,2-Tetrachloroethane	<0.0015		0.0015	0.00047	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Tetrachloroethene	<0.0015		0.0015	0.00051	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Toluene	<0.0015		0.0015	0.00038	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
trans-1,2-Dichloroethene	<0.0015		0.0015	0.00066	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
trans-1,3-Dichloropropene	<0.0015		0.0015	0.00052	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
1,1,1-Trichloroethane	<0.0015		0.0015	0.00050	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
1,1,2-Trichloroethane	<0.0015		0.0015	0.00064	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Trichloroethene	<0.0015		0.0015	0.00050	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Vinyl acetate	<0.0037		0.0037	0.0013	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Vinyl chloride	<0.0015		0.0015	0.00066	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1
Xylenes, Total	<0.0030		0.0030	0.00048	mg/Kg	☼	11/04/17 08:18	11/08/17 16:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		75 - 131	11/04/17 08:18	11/08/17 16:13	1
Dibromofluoromethane	109		75 - 126	11/04/17 08:18	11/08/17 16:13	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 134	11/04/17 08:18	11/08/17 16:13	1
Toluene-d8 (Surr)	97		75 - 124	11/04/17 08:18	11/08/17 16:13	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Anthracene	<0.037		0.037	0.0063	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
<b>Benzo[a]anthracene</b>	<b>0.012</b>	<b>J</b>	0.037	0.0050	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B05 (0-5)**

**Lab Sample ID: 500-136785-4**

**Date Collected: 11/02/17 09:45**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 88.6**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.024</b>	<b>J</b>	0.037	0.0072	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
<b>Benzo[b]fluoranthene</b>	<b>0.029</b>	<b>J</b>	0.037	0.0081	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
<b>Benzo[g,h,i]perylene</b>	<b>0.017</b>	<b>J</b>	0.037	0.012	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Benzo[k]fluoranthene	<0.037		0.037	0.011	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
4-Chloroaniline	<0.75		0.75	0.18	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
<b>Chrysene</b>	<b>0.027</b>	<b>J</b>	0.037	0.010	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
2,4-Dinitrophenol	<0.75		0.75	0.66	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
<b>Fluoranthene</b>	<b>0.029</b>	<b>J</b>	0.037	0.0069	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Hexachlorobenzene	<0.075		0.075	0.0087	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Hexachlorocyclopentadiene	<0.75		0.75	0.22	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Indeno[1,2,3-cd]pyrene	<0.037		0.037	0.0097	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
<b>2-Methylnaphthalene</b>	<b>0.012</b>	<b>J</b>	0.075	0.0069	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Naphthalene	<0.037		0.037	0.0058	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B05 (0-5)**

**Lab Sample ID: 500-136785-4**

Date Collected: 11/02/17 09:45

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 88.6

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.75		0.75	0.36	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.046	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Pentachlorophenol	<0.75		0.75	0.60	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
<b>Phenanthrene</b>	<b>0.022</b>	<b>J</b>	0.037	0.0052	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
Phenol	<0.19		0.19	0.083	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
<b>Pyrene</b>	<b>0.036</b>	<b>J</b>	0.037	0.0074	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/14/17 14:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	81		44 - 121	11/10/17 17:29	11/14/17 14:07	1
2-Fluorophenol	88		46 - 133	11/10/17 17:29	11/14/17 14:07	1
Nitrobenzene-d5	77		41 - 120	11/10/17 17:29	11/14/17 14:07	1
Phenol-d5	87		46 - 125	11/10/17 17:29	11/14/17 14:07	1
Terphenyl-d14	83		35 - 160	11/10/17 17:29	11/14/17 14:07	1
2,4,6-Tribromophenol	84		25 - 139	11/10/17 17:29	11/14/17 14:07	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.53</b>	<b>J</b>	1.1	0.21	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1
<b>Arsenic</b>	<b>8.7</b>		0.53	0.18	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1
<b>Barium</b>	<b>25</b>		0.53	0.061	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1
<b>Beryllium</b>	<b>0.36</b>		0.21	0.050	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1
<b>Cadmium</b>	<b>0.20</b>	<b>B</b>	0.11	0.019	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1
<b>Chromium</b>	<b>8.2</b>		0.53	0.26	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1
<b>Cobalt</b>	<b>11</b>		0.27	0.070	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1
<b>Copper</b>	<b>16</b>		0.53	0.15	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1
<b>Iron</b>	<b>12000</b>		11	5.6	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1
<b>Lead</b>	<b>12</b>		0.27	0.12	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1
<b>Magnesium</b>	<b>21000</b>		5.3	2.7	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1
<b>Calcium</b>	<b>64000</b>	<b>B</b>	110	18	mg/Kg	☼	11/07/17 16:54	11/09/17 19:07	10
<b>Manganese</b>	<b>350</b>		0.53	0.078	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1
<b>Nickel</b>	<b>21</b>		0.53	0.16	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1
Selenium	<0.53		0.53	0.31	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1
Silver	<0.27		0.27	0.069	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1
Thallium	<0.53		0.53	0.27	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1
<b>Vanadium</b>	<b>13</b>		0.27	0.063	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1
<b>Zinc</b>	<b>44</b>		1.1	0.47	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1
<b>Potassium</b>	<b>1400</b>		27	9.5	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1
<b>Sodium</b>	<b>180</b>		53	7.9	mg/Kg	☼	11/07/17 16:54	11/09/17 01:40	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 08:42	11/09/17 15:40	1
<b>Barium</b>	<b>0.22</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 08:42	11/09/17 15:40	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 08:42	11/09/17 15:40	1
<b>Cadmium</b>	<b>0.0028</b>	<b>J</b>	0.0050	0.0020	mg/L		11/09/17 08:42	11/09/17 15:40	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B05 (0-5)**

**Lab Sample ID: 500-136785-4**

**Date Collected: 11/02/17 09:45**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 88.6**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	450		5.0	0.50	mg/L		11/09/17 08:42	11/09/17 15:40	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:40	1
Cobalt	0.044		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:40	1
Copper	0.012	J	0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:40	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 08:42	11/09/17 15:40	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 08:42	11/09/17 15:40	1
Magnesium	75		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 15:40	1
Manganese	3.5		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:40	1
Nickel	0.056		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:40	1
Potassium	2.7		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 15:40	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 08:42	11/09/17 15:40	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:40	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:40	1
Zinc	0.049	J	0.50	0.020	mg/L		11/09/17 08:42	11/09/17 15:40	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.079		0.025	0.010	mg/L		11/09/17 16:40	11/10/17 20:16	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 08:42	11/10/17 11:44	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 08:42	11/10/17 11:44	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 14:58	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.016	J	0.017	0.0057	mg/Kg	☼	11/07/17 13:20	11/08/17 09:41	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.55		0.55	0.19	mg/Kg	☼	11/11/17 12:30	11/11/17 15:32	1
pH	7.8		0.20	0.20	SU			11/11/17 13:55	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B02 (0-5)**

**Lab Sample ID: 500-136785-5**

**Date Collected: 11/02/17 14:15**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 91.4**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.074</b>		0.017	0.0074	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Benzene	<0.0017		0.0017	0.00043	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Bromodichloromethane	<0.0017		0.0017	0.00035	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Bromoform	<0.0017		0.0017	0.00050	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Bromomethane	<0.0043		0.0043	0.0016	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
2-Butanone (MEK)	<0.0043		0.0043	0.0019	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Carbon disulfide	<0.0043		0.0043	0.00088	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Carbon tetrachloride	<0.0017		0.0017	0.00049	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Chlorobenzene	<0.0017		0.0017	0.00063	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Chloroethane	<0.0043		0.0043	0.0013	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Chloroform	<0.0017		0.0017	0.00059	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Chloromethane	<0.0043		0.0043	0.0017	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
cis-1,2-Dichloroethene	<0.0017		0.0017	0.00048	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
cis-1,3-Dichloropropene	<0.0017		0.0017	0.00051	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Dibromochloromethane	<0.0017		0.0017	0.00056	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
1,1-Dichloroethane	<0.0017		0.0017	0.00058	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
1,2-Dichloroethane	<0.0043		0.0043	0.0013	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
1,1-Dichloroethene	<0.0017		0.0017	0.00058	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
1,2-Dichloropropane	<0.0017		0.0017	0.00044	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
1,3-Dichloropropane, Total	<0.0017		0.0017	0.00060	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Ethylbenzene	<0.0017		0.0017	0.00081	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
2-Hexanone	<0.0043		0.0043	0.0013	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Methylene Chloride	<0.0043		0.0043	0.0017	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
4-Methyl-2-pentanone (MIBK)	<0.0043		0.0043	0.0013	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Methyl tert-butyl ether	<0.0017		0.0017	0.00050	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Styrene	<0.0017		0.0017	0.00051	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
1,1,2,2-Tetrachloroethane	<0.0017		0.0017	0.00054	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Tetrachloroethene	<0.0017		0.0017	0.00058	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Toluene	<0.0017		0.0017	0.00043	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
trans-1,2-Dichloroethene	<0.0017		0.0017	0.00075	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
trans-1,3-Dichloropropene	<0.0017		0.0017	0.00060	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
1,1,1-Trichloroethane	<0.0017		0.0017	0.00057	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
1,1,2-Trichloroethane	<0.0017		0.0017	0.00073	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Trichloroethene	<0.0017		0.0017	0.00057	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Vinyl acetate	<0.0043		0.0043	0.0015	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Vinyl chloride	<0.0017		0.0017	0.00075	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1
Xylenes, Total	<0.0034		0.0034	0.00054	mg/Kg	☼	11/04/17 08:18	11/08/17 16:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		75 - 131	11/04/17 08:18	11/08/17 16:38	1
Dibromofluoromethane	105		75 - 126	11/04/17 08:18	11/08/17 16:38	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 134	11/04/17 08:18	11/08/17 16:38	1
Toluene-d8 (Surr)	96		75 - 124	11/04/17 08:18	11/08/17 16:38	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.035		0.035	0.0063	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Acenaphthylene	<0.035		0.035	0.0046	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Anthracene	<0.035		0.035	0.0059	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Benzo[a]anthracene	<0.035		0.035	0.0047	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B02 (0-5)**

**Lab Sample ID: 500-136785-5**

**Date Collected: 11/02/17 14:15**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 91.4**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.035		0.035	0.0068	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Benzo[b]fluoranthene	<0.035		0.035	0.0076	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Benzo[g,h,i]perylene	<0.035		0.035	0.011	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Benzo[k]fluoranthene	<0.035		0.035	0.010	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.052	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.064	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.046	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Butyl benzyl phthalate	<0.18		0.18	0.067	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Carbazole	<0.18		0.18	0.087	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
4-Chloroaniline	<0.71		0.71	0.16	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
4-Chloro-3-methylphenol	<0.35		0.35	0.12	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
2-Chlorophenol	<0.18		0.18	0.060	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.041	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Chrysene	<0.035		0.035	0.0095	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Dibenz(a,h)anthracene	<0.035		0.035	0.0068	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Dibenzofuran	<0.18		0.18	0.041	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
1,2-Dichlorobenzene	<0.18		0.18	0.042	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
1,3-Dichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
1,4-Dichlorobenzene	<0.18		0.18	0.045	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.049	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
2,4-Dichlorophenol	<0.35		0.35	0.083	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Diethyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
2,4-Dimethylphenol	<0.35		0.35	0.13	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Dimethyl phthalate	<0.18		0.18	0.046	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Di-n-butyl phthalate	<0.18		0.18	0.053	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
4,6-Dinitro-2-methylphenol	<0.71		0.71	0.28	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
2,4-Dinitrophenol	<0.71		0.71	0.62	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
2,4-Dinitrotoluene	<0.18		0.18	0.056	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
2,6-Dinitrotoluene	<0.18		0.18	0.069	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Di-n-octyl phthalate	<0.18		0.18	0.057	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Fluoranthene	<0.035		0.035	0.0065	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Fluorene	<0.035		0.035	0.0049	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Hexachlorobenzene	<0.071		0.071	0.0081	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Hexachlorobutadiene	<0.18		0.18	0.055	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Hexachlorocyclopentadiene	<0.71		0.71	0.20	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Hexachloroethane	<0.18		0.18	0.053	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Indeno[1,2,3-cd]pyrene	<0.035		0.035	0.0091	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Isophorone	<0.18		0.18	0.039	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
2-Methylnaphthalene	<0.071		0.071	0.0064	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
2-Methylphenol	<0.18		0.18	0.056	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
3 & 4 Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Naphthalene	<0.035		0.035	0.0054	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
2-Nitroaniline	<0.18		0.18	0.047	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
3-Nitroaniline	<0.35		0.35	0.11	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
4-Nitroaniline	<0.35		0.35	0.15	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Nitrobenzene	<0.035		0.035	0.0087	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
2-Nitrophenol	<0.35		0.35	0.083	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B02 (0-5)**

**Lab Sample ID: 500-136785-5**

Date Collected: 11/02/17 14:15

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 91.4

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.71		0.71	0.33	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
N-Nitrosodi-n-propylamine	<0.071		0.071	0.043	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
N-Nitrosodiphenylamine	<0.18		0.18	0.041	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Pentachlorophenol	<0.71		0.71	0.56	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Phenanthrene	<0.035		0.035	0.0049	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Phenol	<0.18		0.18	0.078	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
Pyrene	<0.035		0.035	0.0070	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.038	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
2,4,5-Trichlorophenol	<0.35		0.35	0.080	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1
2,4,6-Trichlorophenol	<0.35		0.35	0.12	mg/Kg	☼	11/10/17 17:29	11/13/17 17:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	79		44 - 121	11/10/17 17:29	11/13/17 17:38	1
2-Fluorophenol	89		46 - 133	11/10/17 17:29	11/13/17 17:38	1
Nitrobenzene-d5	83		41 - 120	11/10/17 17:29	11/13/17 17:38	1
Phenol-d5	79		46 - 125	11/10/17 17:29	11/13/17 17:38	1
Terphenyl-d14	85		35 - 160	11/10/17 17:29	11/13/17 17:38	1
2,4,6-Tribromophenol	61		25 - 139	11/10/17 17:29	11/13/17 17:38	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.27	J	1.1	0.21	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1
Arsenic	3.4		0.54	0.19	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1
Barium	31		0.54	0.062	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1
Beryllium	0.55		0.22	0.051	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1
Cadmium	0.064	J B	0.11	0.020	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1
Chromium	15		0.54	0.27	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1
Cobalt	6.0		0.27	0.071	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1
Copper	9.5		0.54	0.15	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1
Iron	13000		11	5.7	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1
Lead	6.9		0.27	0.13	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1
Magnesium	13000		5.4	2.7	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1
Calcium	57000	B	110	18	mg/Kg	☼	11/07/17 16:54	11/09/17 19:11	10
Manganese	150		0.54	0.079	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1
Nickel	18		0.54	0.16	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1
Selenium	<0.54		0.54	0.32	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1
Silver	<0.27		0.27	0.070	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1
Thallium	<0.54		0.54	0.27	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1
Vanadium	18		0.27	0.064	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1
Zinc	34		1.1	0.48	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1
Potassium	2600		27	9.6	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1
Sodium	93		54	8.1	mg/Kg	☼	11/07/17 16:54	11/09/17 01:44	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 08:42	11/09/17 15:44	1
Barium	0.37	J	0.50	0.050	mg/L		11/09/17 08:42	11/09/17 15:44	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 08:42	11/09/17 15:44	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/09/17 08:42	11/09/17 15:44	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B02 (0-5)**

**Lab Sample ID: 500-136785-5**

Date Collected: 11/02/17 14:15

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 91.4

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>730</b>		50	5.0	mg/L		11/09/17 08:42	11/10/17 16:38	10
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:44	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:44	1
<b>Copper</b>	<b>0.011</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:44	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 08:42	11/09/17 15:44	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 08:42	11/09/17 15:44	1
<b>Magnesium</b>	<b>26</b>		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 15:44	1
<b>Manganese</b>	<b>0.30</b>		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:44	1
Nickel	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:44	1
<b>Potassium</b>	<b>2.3</b>	<b>J</b>	2.5	0.50	mg/L		11/09/17 08:42	11/09/17 15:44	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 08:42	11/09/17 15:44	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:44	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:44	1
Zinc	<0.50		0.50	0.020	mg/L		11/09/17 08:42	11/09/17 15:44	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.011</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 16:40	11/10/17 20:20	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 08:42	11/10/17 11:48	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 08:42	11/10/17 11:48	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 15:01	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.017</b>	<b>J</b>	0.018	0.0059	mg/Kg	☼	11/07/17 13:20	11/08/17 09:47	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.52		0.52	0.18	mg/Kg	☼	11/11/17 12:30	11/11/17 15:33	1
<b>pH</b>	<b>8.3</b>		0.20	0.20	SU			11/11/17 14:28	1



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B01 (0-5)**

**Lab Sample ID: 500-136785-6**

**Date Collected: 11/02/17 14:35**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 87.2**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.015		0.015	0.0065	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Benzene	<0.0015		0.0015	0.00038	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Bromodichloromethane	<0.0015		0.0015	0.00030	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Bromoform	<0.0015		0.0015	0.00044	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Bromomethane	<0.0037		0.0037	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
2-Butanone (MEK)	<0.0037		0.0037	0.0017	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Carbon disulfide	<0.0037		0.0037	0.00078	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Carbon tetrachloride	<0.0015		0.0015	0.00043	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Chlorobenzene	<0.0015		0.0015	0.00055	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Chloroethane	<0.0037		0.0037	0.0011	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Chloroform	<0.0015		0.0015	0.00052	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Chloromethane	<0.0037		0.0037	0.0015	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
cis-1,2-Dichloroethene	<0.0015		0.0015	0.00042	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
cis-1,3-Dichloropropene	<0.0015		0.0015	0.00045	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Dibromochloromethane	<0.0015		0.0015	0.00049	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
1,1-Dichloroethane	<0.0015		0.0015	0.00051	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
1,2-Dichloroethane	<0.0037		0.0037	0.0012	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
1,1-Dichloroethene	<0.0015		0.0015	0.00051	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
1,2-Dichloropropane	<0.0015		0.0015	0.00039	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
1,3-Dichloropropene, Total	<0.0015		0.0015	0.00052	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Ethylbenzene	<0.0015		0.0015	0.00072	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
2-Hexanone	<0.0037		0.0037	0.0012	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Methylene Chloride	<0.0037		0.0037	0.0015	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
4-Methyl-2-pentanone (MIBK)	<0.0037		0.0037	0.0011	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Methyl tert-butyl ether	<0.0015		0.0015	0.00044	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Styrene	<0.0015		0.0015	0.00045	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
1,1,2,2-Tetrachloroethane	<0.0015		0.0015	0.00048	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Tetrachloroethene	<0.0015		0.0015	0.00051	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Toluene	<0.0015		0.0015	0.00038	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
trans-1,2-Dichloroethene	<0.0015		0.0015	0.00066	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
trans-1,3-Dichloropropene	<0.0015		0.0015	0.00052	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
1,1,1-Trichloroethane	<0.0015		0.0015	0.00050	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
1,1,2-Trichloroethane	<0.0015		0.0015	0.00064	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Trichloroethene	<0.0015		0.0015	0.00051	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Vinyl acetate	<0.0037		0.0037	0.0013	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Vinyl chloride	<0.0015		0.0015	0.00066	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1
Xylenes, Total	<0.0030		0.0030	0.00048	mg/Kg	☼	11/04/17 08:18	11/08/17 17:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		75 - 131	11/04/17 08:18	11/08/17 17:04	1
Dibromofluoromethane	105		75 - 126	11/04/17 08:18	11/08/17 17:04	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 134	11/04/17 08:18	11/08/17 17:04	1
Toluene-d8 (Surr)	98		75 - 124	11/04/17 08:18	11/08/17 17:04	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Anthracene	<0.037		0.037	0.0063	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
<b>Benzo[a]anthracene</b>	<b>0.0075</b>	<b>J</b>	0.037	0.0050	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B01 (0-5)**

**Lab Sample ID: 500-136785-6**

**Date Collected: 11/02/17 14:35**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 87.2**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.037</b>		0.037	0.0072	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
<b>Benzo[b]fluoranthene</b>	<b>0.043</b>		0.037	0.0081	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
<b>Benzo[g,h,i]perylene</b>	<b>0.040</b>		0.037	0.012	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Benzo[k]fluoranthene	<0.037		0.037	0.011	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Carbazole	<0.19		0.19	0.093	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
4-Chloroaniline	<0.75		0.75	0.18	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
<b>Chrysene</b>	<b>0.010</b>	<b>J</b>	0.037	0.010	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
2,4-Dinitrophenol	<0.75		0.75	0.66	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
<b>Fluoranthene</b>	<b>0.013</b>	<b>J</b>	0.037	0.0069	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Hexachlorobenzene	<0.075		0.075	0.0087	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Hexachlorocyclopentadiene	<0.75		0.75	0.22	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.032</b>	<b>J</b>	0.037	0.0097	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
2-Methylnaphthalene	<0.075		0.075	0.0069	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Naphthalene	<0.037		0.037	0.0058	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B01 (0-5)**

**Lab Sample ID: 500-136785-6**

Date Collected: 11/02/17 14:35

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 87.2

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.75		0.75	0.36	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.046	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Pentachlorophenol	<0.75		0.75	0.60	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
<b>Phenanthrene</b>	<b>0.0074</b>	<b>J</b>	0.037	0.0052	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
Phenol	<0.19		0.19	0.083	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
<b>Pyrene</b>	<b>0.012</b>	<b>J</b>	0.037	0.0074	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/15/17 14:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	82		44 - 121	11/10/17 17:29	11/15/17 14:14	1
2-Fluorophenol	98		46 - 133	11/10/17 17:29	11/15/17 14:14	1
Nitrobenzene-d5	84		41 - 120	11/10/17 17:29	11/15/17 14:14	1
Phenol-d5	97		46 - 125	11/10/17 17:29	11/15/17 14:14	1
Terphenyl-d14	82		35 - 160	11/10/17 17:29	11/15/17 14:14	1
2,4,6-Tribromophenol	74		25 - 139	11/10/17 17:29	11/15/17 14:14	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.40</b>	<b>J</b>	1.0	0.20	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1
<b>Arsenic</b>	<b>9.6</b>		0.52	0.18	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1
<b>Barium</b>	<b>25</b>		0.52	0.060	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1
<b>Beryllium</b>	<b>0.36</b>		0.21	0.049	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1
<b>Cadmium</b>	<b>0.15</b>	<b>B</b>	0.10	0.019	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1
<b>Chromium</b>	<b>8.1</b>		0.52	0.26	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1
<b>Cobalt</b>	<b>8.2</b>		0.26	0.069	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1
<b>Copper</b>	<b>18</b>		0.52	0.15	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1
<b>Iron</b>	<b>14000</b>		10	5.4	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1
<b>Lead</b>	<b>24</b>		0.26	0.12	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1
<b>Magnesium</b>	<b>31000</b>		5.2	2.6	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1
<b>Calcium</b>	<b>91000</b>	<b>B</b>	100	18	mg/Kg	☼	11/07/17 16:54	11/09/17 19:23	10
<b>Manganese</b>	<b>360</b>		0.52	0.076	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1
<b>Nickel</b>	<b>18</b>		0.52	0.15	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1
Selenium	<0.52		0.52	0.31	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1
Silver	<0.26		0.26	0.068	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1
Thallium	<0.52		0.52	0.26	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1
<b>Vanadium</b>	<b>13</b>		0.26	0.062	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1
<b>Zinc</b>	<b>50</b>		1.0	0.46	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1
<b>Potassium</b>	<b>1200</b>		26	9.3	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1
<b>Sodium</b>	<b>130</b>		52	7.8	mg/Kg	☼	11/07/17 16:54	11/09/17 01:48	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 08:42	11/09/17 15:48	1
<b>Barium</b>	<b>0.30</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 08:42	11/09/17 15:48	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 08:42	11/09/17 15:48	1
<b>Cadmium</b>	<b>0.0026</b>	<b>J</b>	0.0050	0.0020	mg/L		11/09/17 08:42	11/09/17 15:48	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B01 (0-5)**

**Lab Sample ID: 500-136785-6**

Date Collected: 11/02/17 14:35

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 87.2

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>500</b>		5.0	0.50	mg/L		11/09/17 08:42	11/09/17 15:48	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:48	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:48	1
Copper	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:48	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 08:42	11/09/17 15:48	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 08:42	11/09/17 15:48	1
<b>Magnesium</b>	<b>42</b>		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 15:48	1
<b>Manganese</b>	<b>0.73</b>		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:48	1
<b>Nickel</b>	<b>0.012</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:48	1
<b>Potassium</b>	<b>2.1</b>	<b>J</b>	2.5	0.50	mg/L		11/09/17 08:42	11/09/17 15:48	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 08:42	11/09/17 15:48	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:48	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:48	1
Zinc	<0.50		0.50	0.020	mg/L		11/09/17 08:42	11/09/17 15:48	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.18</b>		0.025	0.010	mg/L		11/09/17 16:40	11/10/17 20:24	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 08:42	11/10/17 11:52	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 08:42	11/10/17 11:52	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 15:03	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.016</b>	<b>J</b>	0.017	0.0058	mg/Kg	☼	11/07/17 13:20	11/08/17 09:50	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.52		0.52	0.18	mg/Kg	☼	11/11/17 12:30	11/11/17 15:34	1
<b>pH</b>	<b>8.3</b>		0.20	0.20	SU			11/11/17 15:02	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B06 (0-5)**

**Lab Sample ID: 500-136785-7**

**Date Collected: 11/02/17 11:35**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 85.4**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.017		0.017	0.0073	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Benzene	<0.0017		0.0017	0.00043	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Bromodichloromethane	<0.0017		0.0017	0.00034	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Bromoform	<0.0017		0.0017	0.00049	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Bromomethane	<0.0042		0.0042	0.0016	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
2-Butanone (MEK)	<0.0042		0.0042	0.0019	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Carbon disulfide	<0.0042		0.0042	0.00088	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Carbon tetrachloride	<0.0017		0.0017	0.00049	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Chlorobenzene	<0.0017		0.0017	0.00062	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Chloroethane	<0.0042		0.0042	0.0012	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Chloroform	<0.0017		0.0017	0.00059	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Chloromethane	<0.0042		0.0042	0.0017	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
cis-1,2-Dichloroethene	<0.0017		0.0017	0.00047	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
cis-1,3-Dichloropropene	<0.0017		0.0017	0.00051	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Dibromochloromethane	<0.0017		0.0017	0.00055	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
1,1-Dichloroethane	<0.0017		0.0017	0.00058	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
1,2-Dichloroethane	<0.0042		0.0042	0.0013	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
1,1-Dichloroethene	<0.0017		0.0017	0.00058	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
1,2-Dichloropropane	<0.0017		0.0017	0.00044	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
1,3-Dichloropropane, Total	<0.0017		0.0017	0.00059	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Ethylbenzene	<0.0017		0.0017	0.00081	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
2-Hexanone	<0.0042		0.0042	0.0013	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Methylene Chloride	<0.0042		0.0042	0.0017	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
4-Methyl-2-pentanone (MIBK)	<0.0042		0.0042	0.0012	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Methyl tert-butyl ether	<0.0017		0.0017	0.00050	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Styrene	<0.0017		0.0017	0.00051	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
1,1,2,2-Tetrachloroethane	<0.0017		0.0017	0.00054	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Tetrachloroethene	<0.0017		0.0017	0.00057	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Toluene	<0.0017		0.0017	0.00043	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
trans-1,2-Dichloroethene	<0.0017		0.0017	0.00075	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
trans-1,3-Dichloropropene	<0.0017		0.0017	0.00059	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
1,1,1-Trichloroethane	<0.0017		0.0017	0.00057	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
1,1,2-Trichloroethane	<0.0017		0.0017	0.00072	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Trichloroethene	<0.0017		0.0017	0.00057	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Vinyl acetate	<0.0042		0.0042	0.0015	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Vinyl chloride	<0.0017		0.0017	0.00075	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1
Xylenes, Total	<0.0034		0.0034	0.00054	mg/Kg	☼	11/04/17 08:18	11/08/17 17:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		75 - 131	11/04/17 08:18	11/08/17 17:28	1
Dibromofluoromethane	105		75 - 126	11/04/17 08:18	11/08/17 17:28	1
1,2-Dichloroethane-d4 (Surr)	111		70 - 134	11/04/17 08:18	11/08/17 17:28	1
Toluene-d8 (Surr)	96		75 - 124	11/04/17 08:18	11/08/17 17:28	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Anthracene	<0.037		0.037	0.0063	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Benzo[a]anthracene	<0.037		0.037	0.0050	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B06 (0-5)**

**Lab Sample ID: 500-136785-7**

**Date Collected: 11/02/17 11:35**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 85.4**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.037		0.037	0.0073	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Benzo[b]fluoranthene	<0.037		0.037	0.0081	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Benzo[g,h,i]perylene	<0.037		0.037	0.012	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Benzo[k]fluoranthene	<0.037		0.037	0.011	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.069	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Chrysene	<0.037		0.037	0.010	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
2,4-Dinitrophenol	<0.76		0.76	0.66	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Fluoranthene	<0.037		0.037	0.0070	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Hexachlorobenzene	<0.076		0.076	0.0087	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Indeno[1,2,3-cd]pyrene	<0.037		0.037	0.0097	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
2-Methylnaphthalene	<0.076		0.076	0.0069	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Naphthalene	<0.037		0.037	0.0058	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Nitrobenzene	<0.037		0.037	0.0094	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
2-Nitrophenol	<0.37		0.37	0.089	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B06 (0-5)**

**Lab Sample ID: 500-136785-7**

Date Collected: 11/02/17 11:35

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 85.4

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Pentachlorophenol	<0.76		0.76	0.60	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Phenanthrene	<0.037		0.037	0.0052	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Phenol	<0.19		0.19	0.083	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
Pyrene	<0.037		0.037	0.0075	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
2,4,5-Trichlorophenol	<0.37		0.37	0.086	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/13/17 18:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	78		44 - 121	11/10/17 17:29	11/13/17 18:02	1
2-Fluorophenol	91		46 - 133	11/10/17 17:29	11/13/17 18:02	1
Nitrobenzene-d5	81		41 - 120	11/10/17 17:29	11/13/17 18:02	1
Phenol-d5	86		46 - 125	11/10/17 17:29	11/13/17 18:02	1
Terphenyl-d14	86		35 - 160	11/10/17 17:29	11/13/17 18:02	1
2,4,6-Tribromophenol	65		25 - 139	11/10/17 17:29	11/13/17 18:02	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.30</b>	<b>J</b>	1.1	0.22	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
<b>Arsenic</b>	<b>1.7</b>		0.56	0.19	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
<b>Barium</b>	<b>10</b>		0.56	0.063	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
<b>Beryllium</b>	<b>0.14</b>	<b>J</b>	0.22	0.052	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
<b>Cadmium</b>	<b>0.069</b>	<b>J B</b>	0.11	0.020	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
<b>Chromium</b>	<b>7.4</b>		0.56	0.28	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
<b>Cobalt</b>	<b>2.9</b>		0.28	0.073	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
<b>Copper</b>	<b>4.2</b>		0.56	0.16	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
<b>Iron</b>	<b>4400</b>		11	5.8	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
<b>Lead</b>	<b>3.7</b>		0.28	0.13	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
<b>Magnesium</b>	<b>6900</b>		5.6	2.8	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
<b>Calcium</b>	<b>11000</b>	<b>B</b>	11	1.9	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
<b>Manganese</b>	<b>110</b>		0.56	0.081	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
<b>Nickel</b>	<b>6.6</b>		0.56	0.16	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
Selenium	<0.56		0.56	0.33	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
Silver	<0.28		0.28	0.072	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
<b>Vanadium</b>	<b>11</b>		0.28	0.066	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
<b>Zinc</b>	<b>19</b>		1.1	0.49	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
<b>Potassium</b>	<b>520</b>		28	9.8	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1
<b>Sodium</b>	<b>75</b>		56	8.2	mg/Kg	☼	11/07/17 16:54	11/09/17 01:52	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 08:42	11/09/17 15:52	1
<b>Barium</b>	<b>0.13</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 08:42	11/09/17 15:52	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 08:42	11/09/17 15:52	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/09/17 08:42	11/09/17 15:52	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

**Client Sample ID: 2696V-16-B06 (0-5)**

**Lab Sample ID: 500-136785-7**

Date Collected: 11/02/17 11:35

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 85.4

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>230</b>		5.0	0.50	mg/L		11/09/17 08:42	11/09/17 15:52	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:52	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:52	1
<b>Copper</b>	<b>0.017</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:52	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 08:42	11/09/17 15:52	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 08:42	11/09/17 15:52	1
<b>Magnesium</b>	<b>130</b>		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 15:52	1
<b>Manganese</b>	<b>1.1</b>		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:52	1
Nickel	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:52	1
<b>Potassium</b>	<b>0.64</b>	<b>J</b>	2.5	0.50	mg/L		11/09/17 08:42	11/09/17 15:52	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 08:42	11/09/17 15:52	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:52	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 15:52	1
<b>Zinc</b>	<b>0.022</b>	<b>J</b>	0.50	0.020	mg/L		11/09/17 08:42	11/09/17 15:52	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.032</b>		0.025	0.010	mg/L		11/09/17 16:40	11/10/17 20:28	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 08:42	11/10/17 11:56	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 08:42	11/10/17 11:56	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 15:05	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.017		0.017	0.0057	mg/Kg	☼	11/07/17 13:20	11/08/17 09:52	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.56		0.56	0.19	mg/Kg	☼	11/11/17 12:30	11/11/17 15:34	1
<b>pH</b>	<b>8.3</b>		0.20	0.20	SU			11/11/17 15:35	1



# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

## Qualifiers

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
F3	Duplicate RPD exceeds the control limit
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-1

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)  
 Contact: **MATT WEISS**  
 Company: **TERRACON**  
 Address:  
 Address:  
 Phone:  
 Fax:  
 E-Mail:

Bill To (optional)  
 Contact:  
 Company:  
 Address:  
 Address:  
 Phone:  
 Fax:  
 PO#/Reference#

## Chain of Custody Record

Lab Job #: **500-136785**

Chain of Custody Number: \_\_\_\_\_

Page **1** of **1**

Temperature °C of Cooler: **3.8, 2.4**

Client		Client Project #		Preservative		Parameter														Preservative Key		
TERRACON		11177029M																		1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other		
Project Name		Lab Project #																		Comments		
WORK ORDER 038A																						
Project Location/State		Lab Project #																				
MARLBHAM, IL																						
Sampler		Lab PM																				
CRAIG VARLAND		DICK WRIGHT																				
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	NOCS	SNOCS	23 TAL METALS, PH	TCLP 23 TAL METALS												
			Date	Time																		
1		2696V-16-B03-(0-51)	11-2-17	0915	5	S	X	X	X	X												
2		2696V-16-B03-DUP-(0-51)		-	5	S	X	X	X	X												
3		2696V-16-B04-(0-51)		0930	5	S	X	X	X	X												
4		2696V-16-B05-(0-51)		0945	5	S	X	X	X	X												
5		2696V-16-B02-(0-51)		1415	5	S	X	X	X	X												
6		2696V-16-B01-(0-51)		1435	5	S	X	X	X	X												
7		2696V-16-B06-(0-51)		1135	5	S	X	X	X	X												



500-136785 COC

Turnaround Time Required (Business Days)  
 \_\_\_ 1 Day \_\_\_ 2 Days \_\_\_ 5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other  
 Requested Date: \_\_\_\_\_

Sample Disposal  
 Return to Client  Disposal by Lab  Archive for \_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <i>[Signature]</i> Company: TERRACON Date: 11-3-17 Time: 0832	Received By: <i>[Signature]</i> Company: TA Date: 11/3/17 Time: 0832	Lab Courier: TA
Relinquished By: <i>[Signature]</i> Company: TA Date: 11/3/17 Time: 0945	Received By: <i>[Signature]</i> Company: TACHF Date: 11/3/17 Time: 0945	Shipped: _____
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Hand Delivered: _____

Matrix Key  
 WW - Wastewater SE - Sediment  
 W - Water SO - Soil  
 S - Soil L - Leachate  
 SL - Sludge WI - Wipe  
 MS - Miscellaneous DW - Drinking Water  
 OL - Oil O - Other  
 A - Air

Client Comments  
**NO ALUMINUM**

Lab Comments:

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136785-1

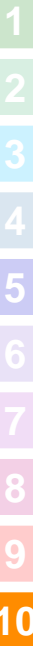
**Login Number: 136785**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6, 3.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as  
amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

Kedzie Ave (Northbound) IDOT STA 74+20 to 75+80 (ISGS Site 2696V-17)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4101

Zip Code: 60196 Phone: 847-705-4101

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

Soil from borings B01 and B02 were sampled adjacent to ISGS Site No 2696V-17. See Exhibits 8, 8B, and Table 33 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136785-4. Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

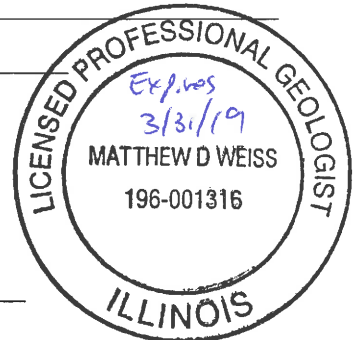
**Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))**

Company Name: Terracon Consultants, Inc  
 Street Address: 135 Ambassador Drive  
 City: Naperville State: IL Zip Code: 60540  
 Phone: 630-717-4263

Matt Weiss  
 Printed Name:

[Signature]  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

7/24/18  
 Date:



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-17)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 1 of 2

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-17-B01 (0-5)	2696V-17-B02 (0-5)
				CCDD	Sample Depth (feet)	(0-5)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/02/2017	11/02/2017
<b>Volatile Organic Analytical Parameters</b>							
Acetone	mg/kg	---	---	25		0.057	<0.019
Trichloroethene	mg/kg	---	---	0.06		<0.0019	0.0018
<b>Semivolatile Organic Analytical Parameters</b>							
Anthracene	mg/kg	0.25	0.4	12000		0.008	0.0075
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.009	0.0085
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.025	0.018
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.0085	<0.037
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.026	0.018
Fluoranthene	mg/kg	2.7	4.1	3100		0.026	0.022
Phenanthrene	mg/kg	1.3	2.5	210		0.016	0.014
Pyrene	mg/kg	1.9	3.0	2300		0.082	0.065
<b>Inorganic Analytical Parameters</b>							
Arsenic	mg/kg	---	13	11.3		4.8	4.9
Barium	mg/kg	---	110	1500		61	30
Cadmium	mg/kg	---	0.6	5.2		0.071	<0.11
Chromium, total	mg/kg	---	16.2	21		8.4	7.7
Lead	mg/kg	---	36	107		3.7	3.6
Mercury	mg/kg	---	0.06	0.1		0.019	0.014
Selenium	mg/kg	---	0.48	1.3		<0.57	<0.57
Silver	mg/kg	---	0.55	4.4		<0.28	<0.28
Antimony	mg/kg	---	4.0	5		0.26	0.33
Beryllium	mg/kg	---	0.59	22		0.22	0.23
Calcium	mg/kg	---	9,300	---		2800	740
Cobalt	mg/kg	---	8.9	20		4	6.2
Copper	mg/kg	---	19.6	2900		3	2.6
Cyanide	mg/kg	---	0.51	---		<0.53	<0.57
Iron	mg/kg	---	15,900	15000		8900	8700
Magnesium	mg/kg	---	4,820	325000		1900	800
Manganese	mg/kg	---	636	630		400	97
Nickel	mg/kg	---	18	100		6	5.2
Potassium	mg/kg	---	1,268	---		300	270
Sodium	mg/kg	---	130	---		63	36
Thallium	mg/kg	---	0.32	2.6		<0.57	<0.57
Vanadium	mg/kg	---	25.2	550		22	20
Zinc	mg/kg	---	95	5100		23	20
pH			6.25	9		7.9	7.8



**Detected Constituents to MACs-PTB 174-009;Work Order:037A**  
**Preliminary Site Investigation**  
**FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-17)**  
**Oak Forest/Markham, Cook County, IL**  
**Terracon Project No. 11177029M**  
**Page 2 of 2**

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-17-B01 (0-5)	2696V-17-B02 (0-5)
				CCDD	Sample Depth (feet)	(0-5)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/02/2017	11/02/2017
<b>Inorganic Analytical Parameters (SPLP)</b>							
Antimony,SPLP	mg/L	---	---	---		--	--
Arsenic,SPLP	mg/L	---	---	---		--	--
Barium,SPLP	mg/L	---	---	---		--	--
Beryllium,SPLP	mg/L	---	---	---		--	--
Cadmium,SPLP	mg/L	---	---	---		--	--
Calcium,SPLP	mg/L	---	---	---		--	--
Chromium,SPLP	mg/L	---	---	---		--	--
Cobalt,SPLP	mg/L	---	---	---		--	--
Copper,SPLP	mg/L	---	---	---		--	--
Iron,SPLP	mg/L	---	---	---		--	--
Lead,SPLP	mg/L	---	---	---		--	--
Magnesium,SPLP	mg/L	---	---	---		--	--
Manganese,SPLP	mg/L	---	---	---		--	--
Mercury,SPLP	mg/L	---	---	---		--	--
Nickel,SPLP	mg/L	---	---	---		--	--
Potassium,SPLP	mg/L	---	---	---		--	--
Selenium,SPLP	mg/L	---	---	---		--	--
Silver,SPLP	mg/L	---	---	---		--	--
Sodium,SPLP	mg/L	---	---	---		--	--
Thallium,SPLP	mg/L	---	---	---		--	--
Vanadium,SPLP	mg/L	---	---	---		--	--
Zinc,SPLP	mg/L	---	---	---		--	--
Cyanide,SPLP	mg/L	---	---	---		--	--
<b>Inorganic Analytical Parameters (TCLP)</b>							
Arsenic,TCLP	mg/L	---	---	---		<0.050	<0.050
Barium,TCLP	mg/L	---	---	---		0.41	0.21
Cadmium,TCLP	mg/L	---	---	---		<0.0050	<0.0050
Chromium,TCLP	mg/L	---	---	---		<0.025	<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075	<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020	<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050	<0.050
Silver,TCLP	mg/L	---	---	---		<0.025	<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060	<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040	<0.0040
Calcium,TCLP	mg/L	---	---	---		26	22
Cobalt,TCLP	mg/L	---	---	---		<0.025	<0.025
Copper,TCLP	mg/L	---	---	---		<0.025	0.02
Cyanide,TCLP	mg/L	---	---	---		----	----
Iron,TCLP	mg/L	---	---	---		<0.40	<0.40
Magnesium,TCLP	mg/L	---	---	---		8.7	6.7
Manganese,TCLP	mg/L	---	---	---		<0.025	0.051
Nickel,TCLP	mg/L	---	---	---		<0.025	<0.025
Potassium,TCLP	mg/L	---	---	---		0.87	0.72
Sodium,TCLP	mg/L	---	---	---		----	----
Thallium,TCLP	mg/L	---	---	---		<0.0020	<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025	<0.025
Zinc,TCLP	mg/L	---	---	---		<0.50	0.043

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-136785-4

Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:

Terracon Consulting Eng & Scientists

135 Ambassador Drive

Naperville, Illinois 60540

Attn: Mr. Matthew Weiss



Authorized for release by:

11/15/2017 5:34:07 PM

Richard Wright, Senior Project Manager

(708)534-5200

[richard.wright@testamericainc.com](mailto:richard.wright@testamericainc.com)

### LINKS

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results through

TotalAccess

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[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-4

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**Job ID: 500-136785-4**

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**Laboratory: TestAmerica Chicago**

## Narrative

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**Job Narrative  
500-136785-4**

### Receipt

The samples were received on 11/3/2017 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.6° C and 3.8° C.

### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### Metals

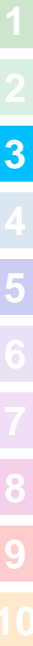
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-4

**Client Sample ID: 2696V-17-B01 (0-5)**

**Lab Sample ID: 500-136785-10**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.057		0.019	0.0081	mg/Kg	1	☼	8260B	Total/NA
Anthracene	0.0080	J	0.037	0.0063	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.0090	J	0.037	0.0051	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.025	J	0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.0085	J	0.037	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.026	J	0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.026	J	0.037	0.0070	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.016	J	0.037	0.0053	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.082		0.037	0.0075	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.26	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.8		0.57	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	61		0.57	0.065	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.22	J	0.23	0.053	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.071	J B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	8.4		0.57	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.0		0.28	0.075	mg/Kg	1	☼	6010B	Total/NA
Copper	3.0		0.57	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	8900		11	5.9	mg/Kg	1	☼	6010B	Total/NA
Lead	3.7		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	1900		5.7	2.8	mg/Kg	1	☼	6010B	Total/NA
Calcium	2800	B	11	1.9	mg/Kg	1	☼	6010B	Total/NA
Manganese	400		0.57	0.083	mg/Kg	1	☼	6010B	Total/NA
Nickel	6.0		0.57	0.17	mg/Kg	1	☼	6010B	Total/NA
Vanadium	22		0.28	0.067	mg/Kg	1	☼	6010B	Total/NA
Zinc	23		1.1	0.50	mg/Kg	1	☼	6010B	Total/NA
Potassium	300		28	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	63		57	8.4	mg/Kg	1	☼	6010B	Total/NA
Barium	0.41	J	0.50	0.050	mg/L	1		6010B	TCLP
Calcium	26		5.0	0.50	mg/L	1		6010B	TCLP
Magnesium	8.7		2.5	0.50	mg/L	1		6010B	TCLP
Potassium	0.87	J	2.5	0.50	mg/L	1		6010B	TCLP
Mercury	0.019		0.017	0.0057	mg/Kg	1	☼	7471B	Total/NA
pH	7.9		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-17-B02 (0-5)**

**Lab Sample ID: 500-136785-11**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.0018	J	0.0019	0.00064	mg/Kg	1	☼	8260B	Total/NA
Anthracene	0.0075	J	0.037	0.0063	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.0085	J	0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.018	J	0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.018	J	0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.022	J	0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.014	J	0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.065		0.037	0.0074	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.33	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.9		0.57	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	30		0.57	0.065	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.23		0.23	0.053	mg/Kg	1	☼	6010B	Total/NA
Chromium	7.7		0.57	0.28	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-4

**Client Sample ID: 2696V-17-B02 (0-5) (Continued)**

**Lab Sample ID: 500-136785-11**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	6.2		0.28	0.074	mg/Kg	1	☼	6010B	Total/NA
Copper	2.6		0.57	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	8700		11	5.9	mg/Kg	1	☼	6010B	Total/NA
Lead	3.6		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	800		5.7	2.8	mg/Kg	1	☼	6010B	Total/NA
Calcium	740	B	11	1.9	mg/Kg	1	☼	6010B	Total/NA
Manganese	97		0.57	0.082	mg/Kg	1	☼	6010B	Total/NA
Nickel	5.2		0.57	0.17	mg/Kg	1	☼	6010B	Total/NA
Vanadium	20		0.28	0.067	mg/Kg	1	☼	6010B	Total/NA
Zinc	20		1.1	0.50	mg/Kg	1	☼	6010B	Total/NA
Potassium	270		28	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	36	J	57	8.4	mg/Kg	1	☼	6010B	Total/NA
Barium	0.21	J	0.50	0.050	mg/L	1		6010B	TCLP
Calcium	22		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.020	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	6.7		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.051		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	0.72	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.043	J	0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.014	J	0.019	0.0063	mg/Kg	1	☼	7471B	Total/NA
pH	7.8		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136785-10	2696V-17-B01 (0-5)	Solid	11/02/17 11:00	11/03/17 09:45
500-136785-11	2696V-17-B02 (0-5)	Solid	11/02/17 11:15	11/03/17 09:45

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-4

**Client Sample ID: 2696V-17-B01 (0-5)**

**Lab Sample ID: 500-136785-10**

**Date Collected: 11/02/17 11:00**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 85.7**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.057</b>		0.019	0.0081	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Benzene	<0.0019		0.0019	0.00047	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Bromodichloromethane	<0.0019		0.0019	0.00038	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Bromoform	<0.0019		0.0019	0.00054	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Bromomethane	<0.0046		0.0046	0.0018	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
2-Butanone (MEK)	<0.0046		0.0046	0.0021	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Carbon disulfide	<0.0046		0.0046	0.00097	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Carbon tetrachloride	<0.0019		0.0019	0.00054	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Chlorobenzene	<0.0019		0.0019	0.00068	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Chloroethane	<0.0046		0.0046	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Chloroform	<0.0019		0.0019	0.00064	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Chloromethane	<0.0046		0.0046	0.0019	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
cis-1,2-Dichloroethene	<0.0019		0.0019	0.00052	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
cis-1,3-Dichloropropene	<0.0019		0.0019	0.00056	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Dibromochloromethane	<0.0019		0.0019	0.00061	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
1,1-Dichloroethane	<0.0019		0.0019	0.00064	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
1,2-Dichloroethane	<0.0046		0.0046	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
1,1-Dichloroethene	<0.0019		0.0019	0.00064	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
1,2-Dichloropropane	<0.0019		0.0019	0.00048	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
1,3-Dichloropropane, Total	<0.0019		0.0019	0.00065	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Ethylbenzene	<0.0019		0.0019	0.00089	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
2-Hexanone	<0.0046		0.0046	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Methylene Chloride	<0.0046		0.0046	0.0018	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
4-Methyl-2-pentanone (MIBK)	<0.0046		0.0046	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Methyl tert-butyl ether	<0.0019		0.0019	0.00054	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Styrene	<0.0019		0.0019	0.00056	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
1,1,2,2-Tetrachloroethane	<0.0019		0.0019	0.00059	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Tetrachloroethene	<0.0019		0.0019	0.00063	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Toluene	<0.0019		0.0019	0.00047	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
trans-1,2-Dichloroethene	<0.0019		0.0019	0.00082	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
trans-1,3-Dichloropropene	<0.0019		0.0019	0.00065	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
1,1,1-Trichloroethane	<0.0019		0.0019	0.00062	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
1,1,2-Trichloroethane	<0.0019		0.0019	0.00080	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Trichloroethene	<0.0019		0.0019	0.00063	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Vinyl acetate	<0.0046		0.0046	0.0016	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Vinyl chloride	<0.0019		0.0019	0.00082	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1
Xylenes, Total	<0.0037		0.0037	0.00059	mg/Kg	☼	11/04/17 08:18	11/08/17 18:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		75 - 131	11/04/17 08:18	11/08/17 18:44	1
Dibromofluoromethane	109		75 - 126	11/04/17 08:18	11/08/17 18:44	1
1,2-Dichloroethane-d4 (Surr)	108		70 - 134	11/04/17 08:18	11/08/17 18:44	1
Toluene-d8 (Surr)	95		75 - 124	11/04/17 08:18	11/08/17 18:44	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.037		0.037	0.0068	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Acenaphthylene	<0.037		0.037	0.0050	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
<b>Anthracene</b>	<b>0.0080</b>	<b>J</b>	0.037	0.0063	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
<b>Benzo[a]anthracene</b>	<b>0.0090</b>	<b>J</b>	0.037	0.0051	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-4

**Client Sample ID: 2696V-17-B01 (0-5)**

**Lab Sample ID: 500-136785-10**

**Date Collected: 11/02/17 11:00**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 85.7**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.025</b>	<b>J</b>	0.037	0.0073	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
<b>Benzo[b]fluoranthene</b>	<b>0.0085</b>	<b>J</b>	0.037	0.0081	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
<b>Benzo[g,h,i]perylene</b>	<b>0.026</b>	<b>J</b>	0.037	0.012	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Benzo[k]fluoranthene	<0.037		0.037	0.011	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.069	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Chrysene	<0.037		0.037	0.010	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0073	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
2,4-Dichlorophenol	<0.37		0.37	0.090	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
2,4-Dinitrophenol	<0.76		0.76	0.66	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
<b>Fluoranthene</b>	<b>0.026</b>	<b>J</b>	0.037	0.0070	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Hexachlorobenzene	<0.076		0.076	0.0087	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Indeno[1,2,3-cd]pyrene	<0.037		0.037	0.0098	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
2-Methylnaphthalene	<0.076		0.076	0.0069	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Naphthalene	<0.037		0.037	0.0058	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Nitrobenzene	<0.037		0.037	0.0094	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
2-Nitrophenol	<0.37		0.37	0.089	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-4

**Client Sample ID: 2696V-17-B01 (0-5)**

**Lab Sample ID: 500-136785-10**

Date Collected: 11/02/17 11:00

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 85.7

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Pentachlorophenol	<0.76		0.76	0.61	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
<b>Phenanthrene</b>	<b>0.016</b>	<b>J</b>	0.037	0.0053	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
Phenol	<0.19		0.19	0.084	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
<b>Pyrene</b>	<b>0.082</b>		0.037	0.0075	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
2,4,5-Trichlorophenol	<0.37		0.37	0.086	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/13/17 18:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	88		44 - 121	11/10/17 17:29	11/13/17 18:27	1
2-Fluorophenol	102		46 - 133	11/10/17 17:29	11/13/17 18:27	1
Nitrobenzene-d5	94		41 - 120	11/10/17 17:29	11/13/17 18:27	1
Phenol-d5	95		46 - 125	11/10/17 17:29	11/13/17 18:27	1
Terphenyl-d14	90		35 - 160	11/10/17 17:29	11/13/17 18:27	1
2,4,6-Tribromophenol	71		25 - 139	11/10/17 17:29	11/13/17 18:27	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.26</b>	<b>J</b>	1.1	0.22	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
<b>Arsenic</b>	<b>4.8</b>		0.57	0.19	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
<b>Barium</b>	<b>61</b>		0.57	0.065	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
<b>Beryllium</b>	<b>0.22</b>	<b>J</b>	0.23	0.053	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
<b>Cadmium</b>	<b>0.071</b>	<b>J B</b>	0.11	0.020	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
<b>Chromium</b>	<b>8.4</b>		0.57	0.28	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
<b>Cobalt</b>	<b>4.0</b>		0.28	0.075	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
<b>Copper</b>	<b>3.0</b>		0.57	0.16	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
<b>Iron</b>	<b>8900</b>		11	5.9	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
<b>Lead</b>	<b>3.7</b>		0.28	0.13	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
<b>Magnesium</b>	<b>1900</b>		5.7	2.8	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
<b>Calcium</b>	<b>2800</b>	<b>B</b>	11	1.9	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
<b>Manganese</b>	<b>400</b>		0.57	0.083	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
<b>Nickel</b>	<b>6.0</b>		0.57	0.17	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
Selenium	<0.57		0.57	0.33	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
Silver	<0.28		0.28	0.073	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
Thallium	<0.57		0.57	0.28	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
<b>Vanadium</b>	<b>22</b>		0.28	0.067	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
<b>Zinc</b>	<b>23</b>		1.1	0.50	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
<b>Potassium</b>	<b>300</b>		28	10	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1
<b>Sodium</b>	<b>63</b>		57	8.4	mg/Kg	☼	11/07/17 16:54	11/09/17 02:04	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 08:42	11/09/17 16:13	1
<b>Barium</b>	<b>0.41</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 08:42	11/09/17 16:13	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 08:42	11/09/17 16:13	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/09/17 08:42	11/09/17 16:13	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-4

**Client Sample ID: 2696V-17-B01 (0-5)**

**Lab Sample ID: 500-136785-10**

**Date Collected: 11/02/17 11:00**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 85.7**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>26</b>		5.0	0.50	mg/L		11/09/17 08:42	11/09/17 16:13	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:13	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:13	1
Copper	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:13	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 08:42	11/09/17 16:13	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 08:42	11/09/17 16:13	1
<b>Magnesium</b>	<b>8.7</b>		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 16:13	1
Manganese	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:13	1
Nickel	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:13	1
<b>Potassium</b>	<b>0.87 J</b>		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 16:13	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 08:42	11/09/17 16:13	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:13	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:13	1
Zinc	<0.50		0.50	0.020	mg/L		11/09/17 08:42	11/09/17 16:13	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 08:42	11/10/17 12:37	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 08:42	11/10/17 12:37	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 15:11	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.019</b>		0.017	0.0057	mg/Kg	☼	11/07/17 13:20	11/08/17 09:59	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.53		0.53	0.18	mg/Kg	☼	11/11/17 12:30	11/11/17 15:35	1
<b>pH</b>	<b>7.9</b>		0.20	0.20	SU			11/11/17 17:16	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-4

**Client Sample ID: 2696V-17-B02 (0-5)**

**Lab Sample ID: 500-136785-11**

**Date Collected: 11/02/17 11:15**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 87.4**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0082	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Benzene	<0.0019		0.0019	0.00048	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Bromodichloromethane	<0.0019		0.0019	0.00038	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Bromoform	<0.0019		0.0019	0.00055	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Bromomethane	<0.0047		0.0047	0.0018	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
2-Butanone (MEK)	<0.0047		0.0047	0.0021	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Carbon disulfide	<0.0047		0.0047	0.00098	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Carbon tetrachloride	<0.0019		0.0019	0.00055	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Chlorobenzene	<0.0019		0.0019	0.00069	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Chloroethane	<0.0047		0.0047	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Chloroform	<0.0019		0.0019	0.00065	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Chloromethane	<0.0047		0.0047	0.0019	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
cis-1,2-Dichloroethene	<0.0019		0.0019	0.00053	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
cis-1,3-Dichloropropene	<0.0019		0.0019	0.00057	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Dibromochloromethane	<0.0019		0.0019	0.00061	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
1,1-Dichloroethane	<0.0019		0.0019	0.00064	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
1,2-Dichloroethane	<0.0047		0.0047	0.0015	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
1,1-Dichloroethene	<0.0019		0.0019	0.00065	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
1,2-Dichloropropane	<0.0019		0.0019	0.00049	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
1,3-Dichloropropane, Total	<0.0019		0.0019	0.00066	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Ethylbenzene	<0.0019		0.0019	0.00090	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
2-Hexanone	<0.0047		0.0047	0.0015	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Methylene Chloride	<0.0047		0.0047	0.0019	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
4-Methyl-2-pentanone (MIBK)	<0.0047		0.0047	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Methyl tert-butyl ether	<0.0019		0.0019	0.00055	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Styrene	<0.0019		0.0019	0.00057	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
1,1,2,2-Tetrachloroethane	<0.0019		0.0019	0.00060	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Tetrachloroethene	<0.0019		0.0019	0.00064	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Toluene	<0.0019		0.0019	0.00047	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
trans-1,2-Dichloroethene	<0.0019		0.0019	0.00083	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
trans-1,3-Dichloropropene	<0.0019		0.0019	0.00066	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
1,1,1-Trichloroethane	<0.0019		0.0019	0.00063	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
1,1,2-Trichloroethane	<0.0019		0.0019	0.00081	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
<b>Trichloroethene</b>	<b>0.0018</b>	<b>J</b>	0.0019	0.00064	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Vinyl acetate	<0.0047		0.0047	0.0016	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Vinyl chloride	<0.0019		0.0019	0.00083	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1
Xylenes, Total	<0.0038		0.0038	0.00060	mg/Kg	☼	11/04/17 08:18	11/08/17 19:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		75 - 131	11/04/17 08:18	11/08/17 19:09	1
Dibromofluoromethane	105		75 - 126	11/04/17 08:18	11/08/17 19:09	1
1,2-Dichloroethane-d4 (Surr)	111		70 - 134	11/04/17 08:18	11/08/17 19:09	1
Toluene-d8 (Surr)	97		75 - 124	11/04/17 08:18	11/08/17 19:09	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
<b>Anthracene</b>	<b>0.0075</b>	<b>J</b>	0.037	0.0063	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
<b>Benzo[a]anthracene</b>	<b>0.0085</b>	<b>J</b>	0.037	0.0050	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-4

**Client Sample ID: 2696V-17-B02 (0-5)**

**Lab Sample ID: 500-136785-11**

**Date Collected: 11/02/17 11:15**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 87.4**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.018</b>	<b>J</b>	0.037	0.0073	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Benzo[b]fluoranthene	<0.037		0.037	0.0081	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
<b>Benzo[g,h,i]perylene</b>	<b>0.018</b>	<b>J</b>	0.037	0.012	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Benzo[k]fluoranthene	<0.037		0.037	0.011	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Chrysene	<0.037		0.037	0.010	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
2,4-Dinitrophenol	<0.76		0.76	0.66	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
<b>Fluoranthene</b>	<b>0.022</b>	<b>J</b>	0.037	0.0069	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Hexachlorobenzene	<0.076		0.076	0.0087	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Indeno[1,2,3-cd]pyrene	<0.037		0.037	0.0097	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
2-Methylnaphthalene	<0.076		0.076	0.0069	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Naphthalene	<0.037		0.037	0.0058	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Nitrobenzene	<0.037		0.037	0.0094	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
2-Nitrophenol	<0.37		0.37	0.089	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-4

**Client Sample ID: 2696V-17-B02 (0-5)**

**Lab Sample ID: 500-136785-11**

Date Collected: 11/02/17 11:15

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 87.4

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Pentachlorophenol	<0.76		0.76	0.60	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
<b>Phenanthrene</b>	<b>0.014</b>	<b>J</b>	0.037	0.0052	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
Phenol	<0.19		0.19	0.083	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
<b>Pyrene</b>	<b>0.065</b>		0.037	0.0074	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
2,4,5-Trichlorophenol	<0.37		0.37	0.086	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/13/17 18:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	87		44 - 121	11/10/17 17:29	11/13/17 18:51	1
2-Fluorophenol	94		46 - 133	11/10/17 17:29	11/13/17 18:51	1
Nitrobenzene-d5	91		41 - 120	11/10/17 17:29	11/13/17 18:51	1
Phenol-d5	94		46 - 125	11/10/17 17:29	11/13/17 18:51	1
Terphenyl-d14	96		35 - 160	11/10/17 17:29	11/13/17 18:51	1
2,4,6-Tribromophenol	63		25 - 139	11/10/17 17:29	11/13/17 18:51	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.33</b>	<b>J</b>	1.1	0.22	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
<b>Arsenic</b>	<b>4.9</b>		0.57	0.19	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
<b>Barium</b>	<b>30</b>		0.57	0.065	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
<b>Beryllium</b>	<b>0.23</b>		0.23	0.053	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
Cadmium	<0.11		0.11	0.020	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
<b>Chromium</b>	<b>7.7</b>		0.57	0.28	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
<b>Cobalt</b>	<b>6.2</b>		0.28	0.074	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
<b>Copper</b>	<b>2.6</b>		0.57	0.16	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
<b>Iron</b>	<b>8700</b>		11	5.9	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
<b>Lead</b>	<b>3.6</b>		0.28	0.13	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
<b>Magnesium</b>	<b>800</b>		5.7	2.8	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
<b>Calcium</b>	<b>740</b>	<b>B</b>	11	1.9	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
<b>Manganese</b>	<b>97</b>		0.57	0.082	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
<b>Nickel</b>	<b>5.2</b>		0.57	0.17	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
Selenium	<0.57		0.57	0.33	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
Silver	<0.28		0.28	0.073	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
Thallium	<0.57		0.57	0.28	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
<b>Vanadium</b>	<b>20</b>		0.28	0.067	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
<b>Zinc</b>	<b>20</b>		1.1	0.50	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
<b>Potassium</b>	<b>270</b>		28	10	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1
<b>Sodium</b>	<b>36</b>	<b>J</b>	57	8.4	mg/Kg	☼	11/07/17 16:54	11/09/17 02:08	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 08:42	11/09/17 16:17	1
<b>Barium</b>	<b>0.21</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 08:42	11/09/17 16:17	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 08:42	11/09/17 16:17	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/09/17 08:42	11/09/17 16:17	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-4

**Client Sample ID: 2696V-17-B02 (0-5)**

**Lab Sample ID: 500-136785-11**

**Date Collected: 11/02/17 11:15**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 87.4**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>22</b>		5.0	0.50	mg/L		11/09/17 08:42	11/09/17 16:17	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:17	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:17	1
<b>Copper</b>	<b>0.020</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:17	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 08:42	11/09/17 16:17	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 08:42	11/09/17 16:17	1
<b>Magnesium</b>	<b>6.7</b>		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 16:17	1
<b>Manganese</b>	<b>0.051</b>		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:17	1
Nickel	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:17	1
<b>Potassium</b>	<b>0.72</b>	<b>J</b>	2.5	0.50	mg/L		11/09/17 08:42	11/09/17 16:17	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 08:42	11/09/17 16:17	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:17	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:17	1
<b>Zinc</b>	<b>0.043</b>	<b>J</b>	0.50	0.020	mg/L		11/09/17 08:42	11/09/17 16:17	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 08:42	11/10/17 12:41	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 08:42	11/10/17 12:41	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 15:14	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.014</b>	<b>J</b>	0.019	0.0063	mg/Kg	☼	11/07/17 13:20	11/08/17 10:02	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.57		0.57	0.19	mg/Kg	☼	11/11/17 12:30	11/11/17 15:36	1
<b>pH</b>	<b>7.8</b>		0.20	0.20	SU			11/11/17 17:49	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-4

## Qualifiers

### GC/MS VOA

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

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-4

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional) \_\_\_\_\_  
 Contact: MATT WEISS  
 Company: TERRALON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional) \_\_\_\_\_  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-136785  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: 3.8, 2.6

Client		Client Project #		Preservative		Parameter		Matrix		Comments
<u>TERRALON</u>		<u>11177029M</u>								
Project Name		Lab Project #		Sampling		# of Containers		Matrix		Comments
<u>WORK ORDER 038A</u>										
Project Location/State		Lab Project #		Date		Time		Matrix		Comments
<u>MARKHAM, IL</u>										
Sampler		Lab PM		Date		Time		Matrix		Comments
<u>CRAIG VARLAND</u>		<u>DICK WRIGHT</u>								
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	Matrix	Matrix	Matrix	Comments
<u>10</u>		<u>2696V-17-B01-(O-S1)</u>	<u>11-2-17</u>	<u>1100</u>	<u>5</u>	<u>S</u>	<u>VOGS</u>	<u>SVOGS</u>	<u>ZBTAL METALS</u>	
<u>11</u>		<u>2696V-17-B02-(O-S1)</u>	<u>11-2-17</u>	<u>1115</u>	<u>5</u>	<u>S</u>	<u>VOGS</u>	<u>SVOGS</u>	<u>ZBTAL METALS</u>	

- Preservative Key
1. HCL, Cool to 4°
  2. H2SO4, Cool to 4°
  3. HNO3, Cool to 4°
  4. NaOH, Cool to 4°
  5. NaOH/Zn, Cool to 4°
  6. NaHSO4
  7. Cool to 4°
  8. None
  9. Other

Turnaround Time Required (Business Days)  
 \_\_\_ 1 Day \_\_\_ 2 Days \_\_\_ 5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other

Requested Due Date: \_\_\_\_\_

Sample Disposal  
 Return to Client  Disposal by Lab  Archive for \_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRALON</u> Date: <u>11-3-17</u> Time: <u>0832</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>0832</u>
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>0945</u>	Received By: <u>[Signature]</u> Company: <u>TACTE</u> Date: <u>11/3/17</u> Time: <u>0945</u>

Lab Courier: TA  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

- Matrix Key
- WW - Wastewater
  - W - Water
  - S - Soil
  - SL - Sludge
  - MS - Miscellaneous
  - CL - Oil
  - A - Air
  - SE - Sediment
  - SO - Soil
  - L - Leachate
  - WI - Wipe
  - DW - Drinking Water
  - O - Other

Client Comments: NO ALUMINUM

Lab Comments: \_\_\_\_\_



# Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136785-4

**Login Number: 136785**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6, 3.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

Kedzie Ave (Southbound) IDOT STA 89+50 to 91+60 (ISGS Site 2696V-19)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: \_\_\_\_\_ BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

Soil from boring B01 was sampled adjacent to ISGS Site No 2696V-19.  
See Exhibits 9, 9A, and Table 35 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136893-6.  
Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

*Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))*

Company Name: Terracon Consultants, Inc

Street Address: 135 Ambassador Drive

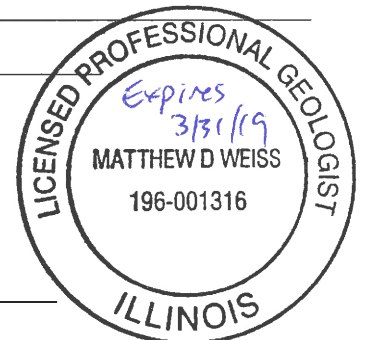
City: Naperville State: IL Zip Code: 60540

Phone: 630-717-4263

Matt Weiss  
Printed Name:

[Signature]  
Licensed Professional Engineer or  
Licensed Professional Geologist Signature:

7/24/18  
Date:





**Detected Constituents to MACs-PTB 174-009;Work Order:037A**  
**Preliminary Site Investigation**  
**FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-19)**  
**Oak Forest/Markham, Cook County, IL**  
**Terracon Project No. 11177029M**  
**Page 1 of 2**

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-19-B01 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/07/2017
<b>Semivolatile Organic Analytical Parameters</b>						
Acenaphthylene	mg/kg	0.03	0.07	85		0.0049
Anthracene	mg/kg	0.25	0.4	12000		0.014
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.062
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.074
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.11
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.039
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		0.044
Chrysene	mg/kg	1.2	2.7	88		0.07
Fluoranthene	mg/kg	2.7	4.1	3100		0.13
Fluorene	mg/kg	0.1	0.18	560		0.0057
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.033
Naphthalene	mg/kg	0.04	0.2	1.8		0.0058
Phenanthrene	mg/kg	1.3	2.5	210		0.059
Pyrene	mg/kg	1.9	3.0	2300		0.1
<b>Inorganic Analytical Parameters</b>						
Arsenic	mg/kg	---	13	11.3		7.2
Barium	mg/kg	---	110	1500		40
Cadmium	mg/kg	---	0.6	5.2		0.27
Chromium, total	mg/kg	---	16.2	21		12
Lead	mg/kg	---	36	107		39
Mercury	mg/kg	---	0.06	0.1		0.026
Selenium	mg/kg	---	0.48	1.3		<0.57
Silver	mg/kg	---	0.55	4.4		<0.28
Antimony	mg/kg	---	4.0	5		0.32
Beryllium	mg/kg	---	0.59	22		0.55
Calcium	mg/kg	---	9,300	---		71000
Cobalt	mg/kg	---	8.9	20		6.2
Copper	mg/kg	---	19.6	2900		21
Cyanide	mg/kg	---	0.51	---		0.86
Iron	mg/kg	---	15,900	15000		14000
Magnesium	mg/kg	---	4,820	325000		25000
Manganese	mg/kg	---	636	630		340
Nickel	mg/kg	---	18	100		22
Potassium	mg/kg	---	1,268	---		1200
Sodium	mg/kg	---	130	---		260
Thallium	mg/kg	---	0.32	2.6		<0.57
Vanadium	mg/kg	---	25.2	550		13
Zinc	mg/kg	---	95	5100		66
pH			6.25	9		8.6

**Detected Constituents to MACs-PTB 174-009;Work Order:037A**  
**Preliminary Site Investigation**  
**FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-19)**  
**Oak Forest/Markham, Cook County, IL**  
**Terracon Project No. 11177029M**  
**Page 2 of 2**

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-19-B01 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/07/2017
<b>Inorganic Analytical Parameters (SPLP)</b>						
Antimony,SPLP	mg/L	---	---	---		--
Arsenic,SPLP	mg/L	---	---	---		--
Barium,SPLP	mg/L	---	---	---		--
Beryllium,SPLP	mg/L	---	---	---		--
Cadmium,SPLP	mg/L	---	---	---		--
Calcium,SPLP	mg/L	---	---	---		--
Chromium,SPLP	mg/L	---	---	---		--
Cobalt,SPLP	mg/L	---	---	---		--
Copper,SPLP	mg/L	---	---	---		--
Iron,SPLP	mg/L	---	---	---		--
Lead,SPLP	mg/L	---	---	---		--
Magnesium,SPLP	mg/L	---	---	---		--
Manganese,SPLP	mg/L	---	---	---		0.19
Mercury,SPLP	mg/L	---	---	---		--
Nickel,SPLP	mg/L	---	---	---		--
Potassium,SPLP	mg/L	---	---	---		--
Selenium,SPLP	mg/L	---	---	---		--
Silver,SPLP	mg/L	---	---	---		--
Sodium,SPLP	mg/L	---	---	---		--
Thallium,SPLP	mg/L	---	---	---		--
Vanadium,SPLP	mg/L	---	---	---		--
Zinc,SPLP	mg/L	---	---	---		--
Cyanide,SPLP	mg/L	---	---	---		--
<b>Inorganic Analytical Parameters (TCLP)</b>						
Arsenic,TCLP	mg/L	---	---	---		<0.050
Barium,TCLP	mg/L	---	---	---		0.35
Cadmium,TCLP	mg/L	---	---	---		0.0026
Chromium,TCLP	mg/L	---	---	---		<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050
Silver,TCLP	mg/L	---	---	---		<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040
Calcium,TCLP	mg/L	---	---	---		420
Cobalt,TCLP	mg/L	---	---	---		<0.025
Copper,TCLP	mg/L	---	---	---		0.03
Cyanide,TCLP	mg/L	---	---	---		----
Iron,TCLP	mg/L	---	---	---		<0.40
Magnesium,TCLP	mg/L	---	---	---		120
Manganese,TCLP	mg/L	---	---	---		1.1
Nickel,TCLP	mg/L	---	---	---		<0.025
Potassium,TCLP	mg/L	---	---	---		1.8
Sodium,TCLP	mg/L	---	---	---		----
Thallium,TCLP	mg/L	---	---	---		<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025
Zinc,TCLP	mg/L	---	---	---		0.091

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-136893-6

Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:

Terracon Consulting Eng & Scientists

135 Ambassador Drive

Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:

11/17/2017 5:14:10 PM

Jodie Bracken, Project Management Assistant II

[jodie.bracken@testamericainc.com](mailto:jodie.bracken@testamericainc.com)

Designee for

Richard Wright, Senior Project Manager

(708)534-5200

[richard.wright@testamericainc.com](mailto:richard.wright@testamericainc.com)

### LINKS

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-6

**Job ID: 500-136893-6**

**Laboratory: TestAmerica Chicago**

## Narrative

### Job Narrative 500-136893-6

#### Receipt

The samples were received on 11/7/2017 4:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.9° C, 4.0° C and 5.5° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-409604 recovered above the upper control limit for Zinc. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following sample is impacted: 2696V-19-B01 (0-5) (500-136893-9).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-6

**Client Sample ID: 2696V-19-B01 (0-5)**

**Lab Sample ID: 500-136893-9**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0049	J	0.037	0.0049	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.014	J	0.037	0.0062	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.062		0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.074		0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.11		0.037	0.0080	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.039		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.044		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.070		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.13		0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.0057	J	0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.033	J	0.037	0.0096	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.0058	J	0.037	0.0057	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.059		0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.10		0.037	0.0074	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.32	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	7.2		0.57	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	40		0.57	0.065	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.55		0.23	0.053	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.27	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	12		0.57	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	6.2		0.28	0.074	mg/Kg	1	☼	6010B	Total/NA
Copper	21		0.57	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	14000	B	11	5.9	mg/Kg	1	☼	6010B	Total/NA
Lead	39		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	25000		5.7	2.8	mg/Kg	1	☼	6010B	Total/NA
Calcium	71000	B	110	19	mg/Kg	10	☼	6010B	Total/NA
Manganese	340	B	0.57	0.082	mg/Kg	1	☼	6010B	Total/NA
Nickel	22		0.57	0.17	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.28	0.067	mg/Kg	1	☼	6010B	Total/NA
Zinc	66		1.1	0.50	mg/Kg	1	☼	6010B	Total/NA
Potassium	1200		28	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	260		57	8.4	mg/Kg	1	☼	6010B	Total/NA
Barium	0.35	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0026	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	420		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.030		0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	120		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	1.1		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	1.8	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.091	J ^	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.19		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.026		0.018	0.0061	mg/Kg	1	☼	7471B	Total/NA
Cyanide, Total	0.86		0.55	0.19	mg/Kg	1	☼	9014	Total/NA
pH	8.6		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-6

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136893-9	2696V-19-B01 (0-5)	Solid	11/07/17 09:07	11/07/17 16:20

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1

2

3

4

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-6

**Client Sample ID: 2696V-19-B01 (0-5)**

**Lab Sample ID: 500-136893-9**

**Date Collected: 11/07/17 09:07**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 85.9**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.023		0.023	0.0098	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Benzene	<0.0023		0.0023	0.00057	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Bromodichloromethane	<0.0023		0.0023	0.00046	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Bromoform	<0.0023		0.0023	0.00066	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Bromomethane	<0.0056		0.0056	0.0021	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
2-Butanone (MEK)	<0.0056		0.0056	0.0025	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Carbon disulfide	<0.0056		0.0056	0.0012	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Carbon tetrachloride	<0.0023		0.0023	0.00065	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Chlorobenzene	<0.0023		0.0023	0.00083	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Chloroethane	<0.0056		0.0056	0.0017	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Chloroform	<0.0023		0.0023	0.00078	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Chloromethane	<0.0056		0.0056	0.0023	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
cis-1,2-Dichloroethene	<0.0023		0.0023	0.00063	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
cis-1,3-Dichloropropene	<0.0023		0.0023	0.00068	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Dibromochloromethane	<0.0023		0.0023	0.00074	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
1,1-Dichloroethane	<0.0023		0.0023	0.00077	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
1,2-Dichloroethane	<0.0056		0.0056	0.0018	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
1,1-Dichloroethene	<0.0023		0.0023	0.00077	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
1,2-Dichloropropane	<0.0023		0.0023	0.00058	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
1,3-Dichloropropane, Total	<0.0023		0.0023	0.00079	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Ethylbenzene	<0.0023		0.0023	0.0011	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
2-Hexanone	<0.0056		0.0056	0.0018	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Methylene Chloride	<0.0056		0.0056	0.0022	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
4-Methyl-2-pentanone (MIBK)	<0.0056		0.0056	0.0017	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Methyl tert-butyl ether	<0.0023		0.0023	0.00066	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Styrene	<0.0023		0.0023	0.00068	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
1,1,2,2-Tetrachloroethane	<0.0023		0.0023	0.00072	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Tetrachloroethene	<0.0023		0.0023	0.00077	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Toluene	<0.0023		0.0023	0.00057	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
trans-1,2-Dichloroethene	<0.0023		0.0023	0.0010	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
trans-1,3-Dichloropropene	<0.0023		0.0023	0.00079	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
1,1,1-Trichloroethane	<0.0023		0.0023	0.00076	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
1,1,2-Trichloroethane	<0.0023		0.0023	0.00097	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Trichloroethene	<0.0023		0.0023	0.00076	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Vinyl acetate	<0.0056		0.0056	0.0020	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Vinyl chloride	<0.0023		0.0023	0.0010	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1
Xylenes, Total	<0.0045		0.0045	0.00072	mg/Kg	☼	11/07/17 17:56	11/10/17 16:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		75 - 131	11/07/17 17:56	11/10/17 16:27	1
Dibromofluoromethane	100		75 - 126	11/07/17 17:56	11/10/17 16:27	1
1,2-Dichloroethane-d4 (Surr)	94		70 - 134	11/07/17 17:56	11/10/17 16:27	1
Toluene-d8 (Surr)	98		75 - 124	11/07/17 17:56	11/10/17 16:27	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Acenaphthylene	0.0049	J	0.037	0.0049	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Anthracene	0.014	J	0.037	0.0062	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Benzo[a]anthracene	0.062		0.037	0.0050	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-6

**Client Sample ID: 2696V-19-B01 (0-5)**

**Lab Sample ID: 500-136893-9**

**Date Collected: 11/07/17 09:07**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 85.9**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.074		0.037	0.0072	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Benzo[b]fluoranthene	0.11		0.037	0.0080	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Benzo[g,h,i]perylene	0.039		0.037	0.012	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Benzo[k]fluoranthene	0.044		0.037	0.011	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Carbazole	<0.19		0.19	0.093	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
4-Chloroaniline	<0.75		0.75	0.17	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
2-Chlorophenol	<0.19		0.19	0.063	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.043	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Chrysene	0.070		0.037	0.010	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Dibenzofuran	<0.19		0.19	0.043	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
1,2-Dichlorobenzene	<0.19		0.19	0.044	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
2,4-Dichlorophenol	<0.37		0.37	0.088	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
2,4-Dinitrophenol	<0.75		0.75	0.65	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
2,6-Dinitrotoluene	<0.19		0.19	0.073	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Fluoranthene	0.13		0.037	0.0069	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Fluorene	0.0057 J		0.037	0.0052	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Hexachlorobenzene	<0.075		0.075	0.0086	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Hexachlorobutadiene	<0.19		0.19	0.058	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Hexachlorocyclopentadiene	<0.75		0.75	0.21	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Hexachloroethane	<0.19		0.19	0.056	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Indeno[1,2,3-cd]pyrene	0.033 J		0.037	0.0096	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
2-Methylnaphthalene	<0.075		0.075	0.0068	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Naphthalene	0.0058 J		0.037	0.0057	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-6

**Client Sample ID: 2696V-19-B01 (0-5)**

**Lab Sample ID: 500-136893-9**

Date Collected: 11/07/17 09:07

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 85.9

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.75		0.75	0.35	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.045	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Pentachlorophenol	<0.75		0.75	0.60	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
<b>Phenanthrene</b>	<b>0.059</b>		0.037	0.0052	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
Phenol	<0.19		0.19	0.082	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
<b>Pyrene</b>	<b>0.10</b>		0.037	0.0074	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/14/17 07:55	11/15/17 23:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	82		44 - 121	11/14/17 07:55	11/15/17 23:12	1
2-Fluorophenol	104		46 - 133	11/14/17 07:55	11/15/17 23:12	1
Nitrobenzene-d5	79		41 - 120	11/14/17 07:55	11/15/17 23:12	1
Phenol-d5	92		46 - 125	11/14/17 07:55	11/15/17 23:12	1
Terphenyl-d14	86		35 - 160	11/14/17 07:55	11/15/17 23:12	1
2,4,6-Tribromophenol	85		25 - 139	11/14/17 07:55	11/15/17 23:12	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.32</b>	<b>J</b>	1.1	0.22	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1
<b>Arsenic</b>	<b>7.2</b>		0.57	0.19	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1
<b>Barium</b>	<b>40</b>		0.57	0.065	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1
<b>Beryllium</b>	<b>0.55</b>		0.23	0.053	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1
<b>Cadmium</b>	<b>0.27</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1
<b>Chromium</b>	<b>12</b>		0.57	0.28	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1
<b>Cobalt</b>	<b>6.2</b>		0.28	0.074	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1
<b>Copper</b>	<b>21</b>		0.57	0.16	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1
<b>Iron</b>	<b>14000</b>	<b>B</b>	11	5.9	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1
<b>Lead</b>	<b>39</b>		0.28	0.13	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1
<b>Magnesium</b>	<b>25000</b>		5.7	2.8	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1
<b>Calcium</b>	<b>71000</b>	<b>B</b>	110	19	mg/Kg	☼	11/08/17 16:57	11/11/17 01:03	10
<b>Manganese</b>	<b>340</b>	<b>B</b>	0.57	0.082	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1
<b>Nickel</b>	<b>22</b>		0.57	0.17	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1
Selenium	<0.57		0.57	0.33	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1
Silver	<0.28		0.28	0.073	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1
Thallium	<0.57		0.57	0.28	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1
<b>Vanadium</b>	<b>13</b>		0.28	0.067	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1
<b>Zinc</b>	<b>66</b>		1.1	0.50	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1
<b>Potassium</b>	<b>1200</b>		28	10	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1
<b>Sodium</b>	<b>260</b>		57	8.4	mg/Kg	☼	11/08/17 16:57	11/10/17 01:47	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 14:43	11/11/17 17:22	1
<b>Barium</b>	<b>0.35</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 14:43	11/11/17 17:22	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 14:43	11/11/17 17:22	1
<b>Cadmium</b>	<b>0.0026</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 14:43	11/11/17 17:22	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-6

**Client Sample ID: 2696V-19-B01 (0-5)**

**Lab Sample ID: 500-136893-9**

Date Collected: 11/07/17 09:07

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 85.9

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>420</b>		5.0	0.50	mg/L		11/10/17 14:43	11/11/17 17:22	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:22	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:22	1
<b>Copper</b>	<b>0.030</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:22	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 14:43	11/11/17 17:22	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 14:43	11/11/17 17:22	1
<b>Magnesium</b>	<b>120</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 17:22	1
<b>Manganese</b>	<b>1.1</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:22	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:22	1
<b>Potassium</b>	<b>1.8 J</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 17:22	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 14:43	11/11/17 17:22	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:22	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:22	1
<b>Zinc</b>	<b>0.091 J ^</b>		0.50	0.020	mg/L		11/10/17 14:43	11/11/17 17:22	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.19</b>		0.025	0.010	mg/L		11/10/17 14:42	11/12/17 00:07	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 14:43	11/13/17 13:31	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 14:43	11/13/17 13:31	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/13/17 16:00	11/14/17 15:10	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.026</b>		0.018	0.0061	mg/Kg	☼	11/09/17 16:15	11/10/17 09:44	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cyanide, Total</b>	<b>0.86</b>		0.55	0.19	mg/Kg	☼	11/15/17 13:10	11/15/17 16:42	1
<b>pH</b>	<b>8.6</b>		0.20	0.20	SU			11/14/17 17:36	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-6

## Qualifiers

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-6

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Report To (optional)  
 Contact: MATT WEISS  
 Company: TERRACON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference#: \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-136893  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: 55, 29, 40

Client		Client Project #		Preservative		Parameter														
Project Name		Lab Project #		Sampling		Matrix														
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix														
TERRACON																				
WORK ORDER # 037																				
MARKHAM FIL		Lab Project #																		
CRAIG VARLAND		Lab PM																		
9		2696V-19-801-(0-5)	11-7-17	0907	5	S	VOCS	SVOCs	23 TRAC METALS	TRAC 23 TRAC METALS										
																			Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
																			Comments	

Turnaround Time Required (Business Days)

\_\_\_ 1 Day \_\_\_ 2 Days \_\_\_ 5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other

Sample Disposal

Return to Client 
  Disposal by Lab 
  Archive for \_\_\_ Months 
 (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By <u>[Signature]</u> Company TERRACON	Date <u>11-7-17</u>	Time <u>1550</u>	Received By <u>M. Neal</u> Company TA	Date <u>11/7/17</u>	Time <u>1550</u>
Relinquished By <u>[Signature]</u> Company TA	Date <u>11/7/17</u>	Time <u>1620</u>	Received By <u>[Signature]</u> Company TERRACON	Date <u>11/7/17</u>	Time <u>1620</u>
Relinquished By <u>[Signature]</u> Company TA	Date <u>11/7/17</u>	Time <u>1620</u>	Received By <u>[Signature]</u> Company TERRACON	Date <u>11/7/17</u>	Time <u>1620</u>

Lab Courier: TA  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

Matrix Key

- WW - Wastewater
- W - Water
- S - Soil
- SL - Sludge
- MS - Miscellaneous
- OL - Oil
- A - Air
- SE - Sediment
- SO - Soil
- L - Leachate
- WI - Wipe
- DW - Drinking Water
- O - Other

Client Comments

NO ALUMINUM

Lab Comments:



## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136893-6

**Login Number: 136893**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9, 4.0, 5.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

Kedzie Ave (Southbound) IDOT STA 88+60 to 89+50 (ISGS Site 2696V-20)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: \_\_\_\_\_ BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located [35 Ill. Adm. Code 1100.610(a)]:

Soil from boring B01 was sampled adjacent to ISGS Site No 2696V-20.  
See Exhibits 9, 9A, and Table 37 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136893-7.  
Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

**Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))**

Company Name: Terracon Consultants, Inc

Street Address: 135 Ambassador Drive

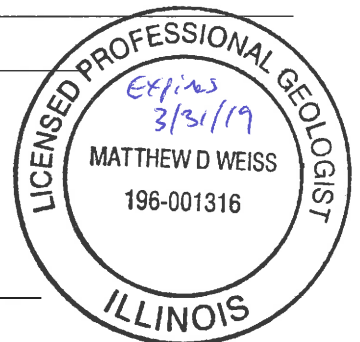
City: Naperville State: IL Zip Code: 60540

Phone: 630-717-4263

Matt Weiss  
Printed Name:

[Signature]  
Licensed Professional Engineer or  
Licensed Professional Geologist Signature:

7/24/18  
Date:



**Detected Constituents to MACs-PTB 174-009;Work Order:037A**  
**Preliminary Site Investigation**  
**FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-20)**  
**Oak Forest/Markham, Cook County, IL**  
**Terracon Project No. 11177029M**  
**Page 1 of 2**

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-20-B01 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/07/2017
<b>Inorganic Analytical Parameters</b>						
Arsenic	mg/kg	---	13	11.3		8.6
Barium	mg/kg	---	110	1500		26
Cadmium	mg/kg	---	0.6	5.2		0.078
Chromium, total	mg/kg	---	16.2	21		15
Lead	mg/kg	---	36	107		13
Mercury	mg/kg	---	0.06	0.1		0.016
Selenium	mg/kg	---	0.48	1.3		0.44
Silver	mg/kg	---	0.55	4.4		<0.29
Antimony	mg/kg	---	4.0	5		<1.2
Beryllium	mg/kg	---	0.59	22		0.62
Calcium	mg/kg	---	9,300	---		63000
Cobalt	mg/kg	---	8.9	20		11
Copper	mg/kg	---	19.6	2900		22
Cyanide	mg/kg	---	0.51	---		<0.59
Iron	mg/kg	---	15,900	15000		21000
Magnesium	mg/kg	---	4,820	325000		20000
Manganese	mg/kg	---	636	630		340
Nickel	mg/kg	---	18	100		28
Potassium	mg/kg	---	1,268	---		2400
Sodium	mg/kg	---	130	---		1300
Thallium	mg/kg	---	0.32	2.6		<0.58
Vanadium	mg/kg	---	25.2	550		18
Zinc	mg/kg	---	95	5100		53
pH			6.25	9		9
<b>Inorganic Analytical Parameters (SPLP)</b>						
Antimony,SPLP	mg/L	---	---	---		--
Arsenic,SPLP	mg/L	---	---	---		--
Barium,SPLP	mg/L	---	---	---		--
Beryllium,SPLP	mg/L	---	---	---		--
Cadmium,SPLP	mg/L	---	---	---		--
Calcium,SPLP	mg/L	---	---	---		--
Chromium,SPLP	mg/L	---	---	---		--
Cobalt,SPLP	mg/L	---	---	---		--
Copper,SPLP	mg/L	---	---	---		--
Iron,SPLP	mg/L	---	---	---		--
Lead,SPLP	mg/L	---	---	---		--
Magnesium,SPLP	mg/L	---	---	---		--
Manganese,SPLP	mg/L	---	---	---		0.47
Mercury,SPLP	mg/L	---	---	---		--
Nickel,SPLP	mg/L	---	---	---		--
Potassium,SPLP	mg/L	---	---	---		--
Selenium,SPLP	mg/L	---	---	---		--
Silver,SPLP	mg/L	---	---	---		--
Sodium,SPLP	mg/L	---	---	---		--
Thallium,SPLP	mg/L	---	---	---		--
Vanadium,SPLP	mg/L	---	---	---		--
Zinc,SPLP	mg/L	---	---	---		--
Cyanide,SPLP	mg/L	---	---	---		--

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-20-B01 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/07/2017
<b>Inorganic Analytical Parameters (TCLP)</b>						
Arsenic, TCLP	mg/L	---	---	---		<0.050
Barium, TCLP	mg/L	---	---	---		0.22
Cadmium, TCLP	mg/L	---	---	---		<0.0050
Chromium, TCLP	mg/L	---	---	---		<0.025
Lead, TCLP	mg/L	---	---	---		<0.0075
Mercury, TCLP	mg/L	---	---	---		<0.00020
Selenium, TCLP	mg/L	---	---	---		<0.050
Silver, TCLP	mg/L	---	---	---		<0.025
Antimony, TCLP	mg/L	---	---	---		<0.0060
Beryllium, TCLP	mg/L	---	---	---		<0.0040
Calcium, TCLP	mg/L	---	---	---		770
Cobalt, TCLP	mg/L	---	---	---		<0.025
Copper, TCLP	mg/L	---	---	---		0.062
Cyanide, TCLP	mg/L	---	---	---		----
Iron, TCLP	mg/L	---	---	---		<0.40
Magnesium, TCLP	mg/L	---	---	---		26
Manganese, TCLP	mg/L	---	---	---		0.47
Nickel, TCLP	mg/L	---	---	---		<0.025
Potassium, TCLP	mg/L	---	---	---		2.6
Sodium, TCLP	mg/L	---	---	---		----
Thallium, TCLP	mg/L	---	---	---		<0.0020
Vanadium, TCLP	mg/L	---	---	---		<0.025
Zinc, TCLP	mg/L	---	---	---		0.076

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-136893-7

Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:

Terracon Consulting Eng & Scientists

135 Ambassador Drive

Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:

11/17/2017 5:15:21 PM

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### LINKS

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results through

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-7

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**Job ID: 500-136893-7**

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**Laboratory: TestAmerica Chicago**

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## Narrative

### Job Narrative 500-136893-7

#### Receipt

The samples were received on 11/7/2017 4:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.9° C, 4.0° C and 5.5° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-409604 recovered above the upper control limit for Zinc. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following sample is impacted: 2696V-20-B01 (0-5) (500-136893-10).

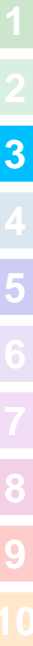
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-7

**Client Sample ID: 2696V-20-B01 (0-5)**

**Lab Sample ID: 500-136893-10**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	8.6		0.58	0.20	mg/Kg	1		☼	6010B	Total/NA
Barium	26		0.58	0.066	mg/Kg	1		☼	6010B	Total/NA
Beryllium	0.62		0.23	0.054	mg/Kg	1		☼	6010B	Total/NA
Cadmium	0.078	J B	0.12	0.021	mg/Kg	1		☼	6010B	Total/NA
Chromium	15		0.58	0.29	mg/Kg	1		☼	6010B	Total/NA
Cobalt	11		0.29	0.076	mg/Kg	1		☼	6010B	Total/NA
Copper	22		0.58	0.16	mg/Kg	1		☼	6010B	Total/NA
Iron	21000	B	12	6.0	mg/Kg	1		☼	6010B	Total/NA
Lead	13		0.29	0.13	mg/Kg	1		☼	6010B	Total/NA
Magnesium	20000		5.8	2.9	mg/Kg	1		☼	6010B	Total/NA
Calcium	63000	B	120	20	mg/Kg	10		☼	6010B	Total/NA
Manganese	340	B	0.58	0.084	mg/Kg	1		☼	6010B	Total/NA
Nickel	28		0.58	0.17	mg/Kg	1		☼	6010B	Total/NA
Selenium	0.44	J	0.58	0.34	mg/Kg	1		☼	6010B	Total/NA
Vanadium	18		0.29	0.068	mg/Kg	1		☼	6010B	Total/NA
Zinc	53		1.2	0.51	mg/Kg	1		☼	6010B	Total/NA
Potassium	2400		29	10	mg/Kg	1		☼	6010B	Total/NA
Sodium	1300		58	8.6	mg/Kg	1		☼	6010B	Total/NA
Barium	0.22	J	0.50	0.050	mg/L	1			6010B	TCLP
Calcium	770		50	5.0	mg/L	10			6010B	TCLP
Copper	0.062		0.025	0.010	mg/L	1			6010B	TCLP
Magnesium	26		2.5	0.50	mg/L	1			6010B	TCLP
Manganese	0.47		0.025	0.010	mg/L	1			6010B	TCLP
Potassium	2.6		2.5	0.50	mg/L	1			6010B	TCLP
Zinc	0.076	J ^	0.50	0.020	mg/L	1			6010B	TCLP
Manganese	0.47		0.025	0.010	mg/L	1			6010B	SPLP East
Mercury	0.016	J	0.020	0.0065	mg/Kg	1		☼	7471B	Total/NA
pH	9.0		0.20	0.20	SU	1			9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-7

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136893-10	2696V-20-B01 (0-5)	Solid	11/07/17 09:25	11/07/17 16:20

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-7

**Client Sample ID: 2696V-20-B01 (0-5)**

**Lab Sample ID: 500-136893-10**

**Date Collected: 11/07/17 09:25**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 83.1**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.026		0.026	0.011	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Benzene	<0.0026		0.0026	0.00066	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Bromodichloromethane	<0.0026		0.0026	0.00053	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Bromoform	<0.0026		0.0026	0.00076	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Bromomethane	<0.0065		0.0065	0.0025	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
2-Butanone (MEK)	<0.0065		0.0065	0.0029	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Carbon disulfide	<0.0065		0.0065	0.0014	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Carbon tetrachloride	<0.0026		0.0026	0.00076	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Chlorobenzene	<0.0026		0.0026	0.00096	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Chloroethane	<0.0065		0.0065	0.0019	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Chloroform	<0.0026		0.0026	0.00090	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Chloromethane	<0.0065		0.0065	0.0026	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
cis-1,2-Dichloroethene	<0.0026		0.0026	0.00073	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
cis-1,3-Dichloropropene	<0.0026		0.0026	0.00079	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Dibromochloromethane	<0.0026		0.0026	0.00085	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
1,1-Dichloroethane	<0.0026		0.0026	0.00089	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
1,2-Dichloroethane	<0.0065		0.0065	0.0020	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
1,1-Dichloroethene	<0.0026		0.0026	0.00090	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
1,2-Dichloropropane	<0.0026		0.0026	0.00067	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
1,3-Dichloropropane, Total	<0.0026		0.0026	0.00091	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Ethylbenzene	<0.0026		0.0026	0.0012	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
2-Hexanone	<0.0065		0.0065	0.0020	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Methylene Chloride	<0.0065		0.0065	0.0026	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
4-Methyl-2-pentanone (MIBK)	<0.0065		0.0065	0.0019	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Methyl tert-butyl ether	<0.0026		0.0026	0.00077	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Styrene	<0.0026		0.0026	0.00079	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
1,1,2,2-Tetrachloroethane	<0.0026		0.0026	0.00083	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Tetrachloroethene	<0.0026		0.0026	0.00089	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Toluene	<0.0026		0.0026	0.00066	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
trans-1,2-Dichloroethene	<0.0026		0.0026	0.0012	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
trans-1,3-Dichloropropene	<0.0026		0.0026	0.00091	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
1,1,1-Trichloroethane	<0.0026		0.0026	0.00087	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
1,1,2-Trichloroethane	<0.0026		0.0026	0.0011	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Trichloroethene	<0.0026		0.0026	0.00088	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Vinyl acetate	<0.0065		0.0065	0.0023	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Vinyl chloride	<0.0026		0.0026	0.0012	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1
Xylenes, Total	<0.0052		0.0052	0.00083	mg/Kg	☼	11/07/17 17:56	11/10/17 16:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		75 - 131	11/07/17 17:56	11/10/17 16:53	1
Dibromofluoromethane	101		75 - 126	11/07/17 17:56	11/10/17 16:53	1
1,2-Dichloroethane-d4 (Surr)	94		70 - 134	11/07/17 17:56	11/10/17 16:53	1
Toluene-d8 (Surr)	98		75 - 124	11/07/17 17:56	11/10/17 16:53	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.039		0.039	0.0070	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Acenaphthylene	<0.039		0.039	0.0051	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Anthracene	<0.039		0.039	0.0065	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Benzo[a]anthracene	<0.039		0.039	0.0052	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-7

**Client Sample ID: 2696V-20-B01 (0-5)**

**Lab Sample ID: 500-136893-10**

**Date Collected: 11/07/17 09:25**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 83.1**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.039		0.039	0.0075	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Benzo[b]fluoranthene	<0.039		0.039	0.0084	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Benzo[g,h,i]perylene	<0.039		0.039	0.013	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Benzo[k]fluoranthene	<0.039		0.039	0.011	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.058	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.071	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.051	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Butyl benzyl phthalate	<0.20		0.20	0.074	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Carbazole	<0.20		0.20	0.097	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
4-Chloroaniline	<0.78		0.78	0.18	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
2-Chlorophenol	<0.20		0.20	0.066	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.045	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Chrysene	<0.039		0.039	0.011	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Dibenz(a,h)anthracene	<0.039		0.039	0.0075	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
1,2-Dichlorobenzene	<0.20		0.20	0.046	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.054	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
2,4-Dichlorophenol	<0.39		0.39	0.092	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Diethyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Di-n-butyl phthalate	<0.20		0.20	0.059	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
4,6-Dinitro-2-methylphenol	<0.78		0.78	0.31	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
2,4-Dinitrophenol	<0.78		0.78	0.69	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
2,6-Dinitrotoluene	<0.20		0.20	0.076	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Di-n-octyl phthalate	<0.20		0.20	0.063	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Fluoranthene	<0.039		0.039	0.0072	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Fluorene	<0.039		0.039	0.0055	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Hexachlorobenzene	<0.078		0.078	0.0090	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Hexachlorobutadiene	<0.20		0.20	0.061	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Hexachlorocyclopentadiene	<0.78		0.78	0.22	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Hexachloroethane	<0.20		0.20	0.059	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Indeno[1,2,3-cd]pyrene	<0.039		0.039	0.010	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
2-Methylnaphthalene	<0.078		0.078	0.0072	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
2-Methylphenol	<0.20		0.20	0.062	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Naphthalene	<0.039		0.039	0.0060	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
2-Nitroaniline	<0.20		0.20	0.052	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Nitrobenzene	<0.039		0.039	0.0097	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
2-Nitrophenol	<0.39		0.39	0.092	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-7

**Client Sample ID: 2696V-20-B01 (0-5)**

**Lab Sample ID: 500-136893-10**

Date Collected: 11/07/17 09:25

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 83.1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.78		0.78	0.37	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
N-Nitrosodi-n-propylamine	<0.078		0.078	0.048	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.045	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Pentachlorophenol	<0.78		0.78	0.62	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Phenanthrene	<0.039		0.039	0.0054	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Phenol	<0.20		0.20	0.086	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
Pyrene	<0.039		0.039	0.0077	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
2,4,5-Trichlorophenol	<0.39		0.39	0.089	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	11/14/17 07:55	11/15/17 23:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	79		44 - 121	11/14/17 07:55	11/15/17 23:37	1
2-Fluorophenol	91		46 - 133	11/14/17 07:55	11/15/17 23:37	1
Nitrobenzene-d5	79		41 - 120	11/14/17 07:55	11/15/17 23:37	1
Phenol-d5	95		46 - 125	11/14/17 07:55	11/15/17 23:37	1
Terphenyl-d14	79		35 - 160	11/14/17 07:55	11/15/17 23:37	1
2,4,6-Tribromophenol	66		25 - 139	11/14/17 07:55	11/15/17 23:37	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.23	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1
<b>Arsenic</b>	<b>8.6</b>		0.58	0.20	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1
<b>Barium</b>	<b>26</b>		0.58	0.066	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1
<b>Beryllium</b>	<b>0.62</b>		0.23	0.054	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1
<b>Cadmium</b>	<b>0.078</b>	<b>J B</b>	0.12	0.021	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1
<b>Chromium</b>	<b>15</b>		0.58	0.29	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1
<b>Cobalt</b>	<b>11</b>		0.29	0.076	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1
<b>Copper</b>	<b>22</b>		0.58	0.16	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1
<b>Iron</b>	<b>21000</b>	<b>B</b>	12	6.0	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1
<b>Lead</b>	<b>13</b>		0.29	0.13	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1
<b>Magnesium</b>	<b>20000</b>		5.8	2.9	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1
<b>Calcium</b>	<b>63000</b>	<b>B</b>	120	20	mg/Kg	☼	11/08/17 16:57	11/11/17 01:07	10
<b>Manganese</b>	<b>340</b>	<b>B</b>	0.58	0.084	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1
<b>Nickel</b>	<b>28</b>		0.58	0.17	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1
<b>Selenium</b>	<b>0.44</b>	<b>J</b>	0.58	0.34	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1
Silver	<0.29		0.29	0.075	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1
Thallium	<0.58		0.58	0.29	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1
<b>Vanadium</b>	<b>18</b>		0.29	0.068	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1
<b>Zinc</b>	<b>53</b>		1.2	0.51	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1
<b>Potassium</b>	<b>2400</b>		29	10	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1
<b>Sodium</b>	<b>1300</b>		58	8.6	mg/Kg	☼	11/08/17 16:57	11/10/17 01:51	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 14:43	11/11/17 17:26	1
<b>Barium</b>	<b>0.22</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 14:43	11/11/17 17:26	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 14:43	11/11/17 17:26	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/10/17 14:43	11/11/17 17:26	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-7

**Client Sample ID: 2696V-20-B01 (0-5)**

**Lab Sample ID: 500-136893-10**

Date Collected: 11/07/17 09:25

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 83.1

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>770</b>		50	5.0	mg/L		11/10/17 14:43	11/13/17 17:05	10
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:26	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:26	1
<b>Copper</b>	<b>0.062</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:26	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 14:43	11/11/17 17:26	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 14:43	11/11/17 17:26	1
<b>Magnesium</b>	<b>26</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 17:26	1
<b>Manganese</b>	<b>0.47</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:26	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:26	1
<b>Potassium</b>	<b>2.6</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 17:26	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 14:43	11/11/17 17:26	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:26	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:26	1
<b>Zinc</b>	<b>0.076</b>	J ^	0.50	0.020	mg/L		11/10/17 14:43	11/11/17 17:26	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.47</b>		0.025	0.010	mg/L		11/10/17 14:42	11/12/17 00:11	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 14:43	11/13/17 13:34	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 14:43	11/13/17 13:34	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/13/17 16:00	11/14/17 15:16	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.016</b>	J	0.020	0.0065	mg/Kg	☼	11/09/17 16:15	11/10/17 09:46	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.59		0.59	0.20	mg/Kg	☼	11/15/17 13:10	11/15/17 16:42	1
<b>pH</b>	<b>9.0</b>		0.20	0.20	SU			11/14/17 17:36	1



# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-7

## Qualifiers

### Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-7

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To: (optional)  
 Contact: MATT WEISS  
 Company: TERRALON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To: (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference#: \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-136893  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: 29.403.5

Client		Client Project #		Preservative		Parameter		Matrix		Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other
Project Name		Lab Project #		# of Containers		Matrix		Matrix		
Project Location/State		Lab Project #		# of Containers		Matrix		Matrix		
<u>TERRALON</u>		<u>11177029 M</u>								
<u>WORK ORDER 037</u>										
<u>MARKHAM, IL</u>										
Sampler <u>CRAIG VARLAND</u>		Lab PM <u>DIKIL WRIGHT</u>								Comments
Lab ID	MS/MSD	Sample ID		Sampling		# of Containers	Matrix	Matrix	Matrix	
		Date	Time							
<u>10</u>		<u>2696V-20-B01-(0-5)</u>		<u>11-7-17</u>	<u>0925</u>	<u>5</u>	<u>S</u>	<u>VOCS</u>	<u>SNOGS</u>	
								<u>23 TAL METALS</u>	<u>23 TAL METALS</u>	
								<u>PH</u>	<u>TEMP 23 TAL</u>	
									<u>METALS</u>	

Turnaround Time Required (Business Days)

\_\_\_ 1 Day \_\_\_ 2 Days \_\_\_ 5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other

Requested Date

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRALON</u> Date: <u>11-7-17</u> Time: <u>1550</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/7/17</u> Time: <u>1550</u>
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/7/17</u> Time: <u>1620</u>	Received By: <u>[Signature]</u> Company: <u>TALCUM</u> Date: <u>11/7/17</u> Time: <u>1620</u>
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____

Lab Courier: TA  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

Matrix Key

WW - Wastewater SE - Sediment  
 W - Water SO - Soil  
 S - Soil L - Leachate  
 SL - Sludge WI - Wipe  
 MS - Miscellaneous DW - Drinking Water  
 OL - Oil O - Other  
 A - Air

Client Comments

NO ALUMINUM

Lab Comments:

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136893-7

**Login Number: 136893**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9, 4.0, 5.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

Kedzie Ave (Southbound) IDOT STA 87+50 to 88+60 (ISGS Site 2696V-21)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a):

Soil from boring B01 was sampled adjacent to ISGS Site No 2696V-21.  
See Exhibits 9, 9A, and Table 39 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136893-8.  
Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

**Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))**

Company Name: Terracon Consultants, Inc

Street Address: 135 Ambassador Drive

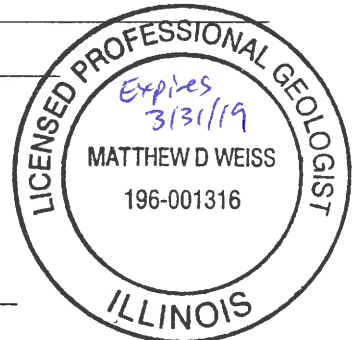
City: Naperville State: IL Zip Code: 60540

Phone: 630-717-4263

Matt Weiss  
Printed Name:

[Signature]  
Licensed Professional Engineer or  
Licensed Professional Geologist Signature:

7/24/18  
Date:



**Detected Constituents to MACs-PTB 174-009;Work Order:037A**  
**Preliminary Site Investigation**  
**FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-21)**  
**Oak Forest/Markham, Cook County, IL**  
**Terracon Project No. 11177029M**  
**Page 1 of 2**

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-21-B01 (0-2)
				CCDD	Sample Depth (feet)	(0-2)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/07/2017
<b>Semivolatile Organic Analytical Parameters</b>						
Acenaphthene	mg/kg	0.09	0.13	570		0.019
Anthracene	mg/kg	0.25	0.4	12000		0.05
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.18
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.18
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.27
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.068
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		0.1
Chrysene	mg/kg	1.2	2.7	88		0.18
Fluoranthene	mg/kg	2.7	4.1	3100		0.48
Fluorene	mg/kg	0.1	0.18	560		0.019
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.069
Phenanthrene	mg/kg	1.3	2.5	210		0.3
Pyrene	mg/kg	1.9	3.0	2300		0.37
bis(2-Ethylhexyl)phthalate	mg/kg	---	---	46		0.085
<b>Inorganic Analytical Parameters</b>						
Arsenic	mg/kg	---	13	11.3		9.6
Barium	mg/kg	---	110	1500		45
Cadmium	mg/kg	---	0.6	5.2		0.25
Chromium, total	mg/kg	---	16.2	21		12
Lead	mg/kg	---	36	107		17
Mercury	mg/kg	---	0.06	0.1		0.019
Selenium	mg/kg	---	0.48	1.3		0.78
Silver	mg/kg	---	0.55	4.4		<0.29
Antimony	mg/kg	---	4.0	5		0.28
Beryllium	mg/kg	---	0.59	22		0.6
Calcium	mg/kg	---	9,300	---		60000
Cobalt	mg/kg	---	8.9	20		10
Copper	mg/kg	---	19.6	2900		19
Cyanide	mg/kg	---	0.51	---		0.6
Iron	mg/kg	---	15,900	15000		19000
Magnesium	mg/kg	---	4,820	325000		20000
Manganese	mg/kg	---	636	630		650
Nickel	mg/kg	---	18	100		27
Potassium	mg/kg	---	1,268	---		1300
Sodium	mg/kg	---	130	---		290
Thallium	mg/kg	---	0.32	2.6		<0.58
Vanadium	mg/kg	---	25.2	550		17
Zinc	mg/kg	---	95	5100		58
pH			6.25	9		8.6



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
 Preliminary Site Investigation  
 FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-21)  
 Oak Forest/Markham, Cook County, IL  
 Terracon Project No. 11177029M  
 Page 2 of 2

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-21-B01 (0-2)
				CCDD	Sample Depth (feet)	(0-2)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/07/2017
<b>Inorganic Analytical Parameters (SPLP)</b>						
Antimony,SPLP	mg/L	---	---	---		--
Arsenic,SPLP	mg/L	---	---	---		--
Barium,SPLP	mg/L	---	---	---		--
Beryllium,SPLP	mg/L	---	---	---		--
Cadmium,SPLP	mg/L	---	---	---		--
Calcium,SPLP	mg/L	---	---	---		--
Chromium,SPLP	mg/L	---	---	---		--
Cobalt,SPLP	mg/L	---	---	---		--
Copper,SPLP	mg/L	---	---	---		--
Iron,SPLP	mg/L	---	---	---		--
Lead,SPLP	mg/L	---	---	---		--
Magnesium,SPLP	mg/L	---	---	---		--
Manganese,SPLP	mg/L	---	---	---		0.15
Mercury,SPLP	mg/L	---	---	---		--
Nickel,SPLP	mg/L	---	---	---		--
Potassium,SPLP	mg/L	---	---	---		--
Selenium,SPLP	mg/L	---	---	---		--
Silver,SPLP	mg/L	---	---	---		--
Sodium,SPLP	mg/L	---	---	---		--
Thallium,SPLP	mg/L	---	---	---		--
Vanadium,SPLP	mg/L	---	---	---		--
Zinc,SPLP	mg/L	---	---	---		--
Cyanide,SPLP	mg/L	---	---	---		--
<b>Inorganic Analytical Parameters (TCLP)</b>						
Arsenic,TCLP	mg/L	---	---	---		<0.050
Barium,TCLP	mg/L	---	---	---		0.28
Cadmium,TCLP	mg/L	---	---	---		0.002
Chromium,TCLP	mg/L	---	---	---		<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050
Silver,TCLP	mg/L	---	---	---		<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040
Calcium,TCLP	mg/L	---	---	---		480
Cobalt,TCLP	mg/L	---	---	---		<0.025
Copper,TCLP	mg/L	---	---	---		0.026
Cyanide,TCLP	mg/L	---	---	---		----
Iron,TCLP	mg/L	---	---	---		<0.40
Magnesium,TCLP	mg/L	---	---	---		92
Manganese,TCLP	mg/L	---	---	---		0.48
Nickel,TCLP	mg/L	---	---	---		<0.025
Potassium,TCLP	mg/L	---	---	---		1.4
Sodium,TCLP	mg/L	---	---	---		----
Thallium,TCLP	mg/L	---	---	---		<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025
Zinc,TCLP	mg/L	---	---	---		0.058

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

TestAmerica Job ID: 500-136893-8  
Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:  
Terracon Consulting Eng & Scientists  
135 Ambassador Drive  
Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:  
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Designee for  
Richard Wright, Senior Project Manager  
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### LINKS

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results through  
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[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-8

**Job ID: 500-136893-8**

**Laboratory: TestAmerica Chicago**

## Narrative

### Job Narrative 500-136893-8

#### Receipt

The samples were received on 11/7/2017 4:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.9° C, 4.0° C and 5.5° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270D: The following sample contained one base surrogate outside acceptance limits: 2696V-21-B01 (0-2) (500-136893-11). The laboratory's SOP allows one acid and one base surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Metals

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-409604 recovered above the upper control limit for Zinc. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following sample is impacted: 2696V-21-B01 (0-2) (500-136893-11).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-8

**Client Sample ID: 2696V-21-B01 (0-2)**

**Lab Sample ID: 500-136893-11**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acenaphthene	0.019	J	0.040	0.0072	mg/Kg	1	☼	8270D	Total/NA	
Anthracene	0.050		0.040	0.0067	mg/Kg	1	☼	8270D	Total/NA	
Benzo[a]anthracene	0.18		0.040	0.0054	mg/Kg	1	☼	8270D	Total/NA	
Benzo[a]pyrene	0.18		0.040	0.0078	mg/Kg	1	☼	8270D	Total/NA	
Benzo[b]fluoranthene	0.27		0.040	0.0087	mg/Kg	1	☼	8270D	Total/NA	
Benzo[g,h,i]perylene	0.068		0.040	0.013	mg/Kg	1	☼	8270D	Total/NA	
Benzo[k]fluoranthene	0.10		0.040	0.012	mg/Kg	1	☼	8270D	Total/NA	
Bis(2-ethylhexyl) phthalate	0.085	J	0.20	0.073	mg/Kg	1	☼	8270D	Total/NA	
Chrysene	0.18		0.040	0.011	mg/Kg	1	☼	8270D	Total/NA	
Fluoranthene	0.48		0.040	0.0074	mg/Kg	1	☼	8270D	Total/NA	
Fluorene	0.019	J	0.040	0.0056	mg/Kg	1	☼	8270D	Total/NA	
Indeno[1,2,3-cd]pyrene	0.069		0.040	0.010	mg/Kg	1	☼	8270D	Total/NA	
Phenanthrene	0.30		0.040	0.0056	mg/Kg	1	☼	8270D	Total/NA	
Pyrene	0.37		0.040	0.0080	mg/Kg	1	☼	8270D	Total/NA	
Antimony	0.28	J	1.2	0.22	mg/Kg	1	☼	6010B	Total/NA	
Arsenic	9.6		0.58	0.20	mg/Kg	1	☼	6010B	Total/NA	
Barium	45		0.58	0.066	mg/Kg	1	☼	6010B	Total/NA	
Beryllium	0.60		0.23	0.054	mg/Kg	1	☼	6010B	Total/NA	
Cadmium	0.25	B	0.12	0.021	mg/Kg	1	☼	6010B	Total/NA	
Chromium	12		0.58	0.29	mg/Kg	1	☼	6010B	Total/NA	
Cobalt	10		0.29	0.075	mg/Kg	1	☼	6010B	Total/NA	
Copper	19		0.58	0.16	mg/Kg	1	☼	6010B	Total/NA	
Iron	19000	B	12	6.0	mg/Kg	1	☼	6010B	Total/NA	
Lead	17		0.29	0.13	mg/Kg	1	☼	6010B	Total/NA	
Magnesium	20000		5.8	2.9	mg/Kg	1	☼	6010B	Total/NA	
Calcium	60000	B	120	20	mg/Kg	10	☼	6010B	Total/NA	
Manganese	650	B	0.58	0.084	mg/Kg	1	☼	6010B	Total/NA	
Nickel	27		0.58	0.17	mg/Kg	1	☼	6010B	Total/NA	
Selenium	0.78		0.58	0.34	mg/Kg	1	☼	6010B	Total/NA	
Vanadium	17		0.29	0.068	mg/Kg	1	☼	6010B	Total/NA	
Zinc	58		1.2	0.51	mg/Kg	1	☼	6010B	Total/NA	
Potassium	1300		29	10	mg/Kg	1	☼	6010B	Total/NA	
Sodium	290		58	8.5	mg/Kg	1	☼	6010B	Total/NA	
Barium	0.28	J	0.50	0.050	mg/L	1		6010B	TCLP	
Cadmium	0.0020	J	0.0050	0.0020	mg/L	1		6010B	TCLP	
Calcium	480		5.0	0.50	mg/L	1		6010B	TCLP	
Copper	0.026		0.025	0.010	mg/L	1		6010B	TCLP	
Magnesium	92		2.5	0.50	mg/L	1		6010B	TCLP	
Manganese	0.48		0.025	0.010	mg/L	1		6010B	TCLP	
Potassium	1.4	J	2.5	0.50	mg/L	1		6010B	TCLP	
Zinc	0.058	J ^	0.50	0.020	mg/L	1		6010B	TCLP	
Manganese	0.15		0.025	0.010	mg/L	1		6010B	SPLP East	
Mercury	0.019	J	0.020	0.0066	mg/Kg	1	☼	7471B	Total/NA	
Cyanide, Total	0.60		0.53	0.18	mg/Kg	1	☼	9014	Total/NA	
pH	8.6		0.20	0.20	SU	1		9045D	Total/NA	

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-8

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136893-11	2696V-21-B01 (0-2)	Solid	11/07/17 09:32	11/07/17 16:20

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-8

**Client Sample ID: 2696V-21-B01 (0-2)**

**Lab Sample ID: 500-136893-11**

**Date Collected: 11/07/17 09:32**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 81.6**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.020		0.020	0.0087	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Benzene	<0.0020		0.0020	0.00051	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Bromodichloromethane	<0.0020		0.0020	0.00040	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Bromoform	<0.0020		0.0020	0.00058	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Bromomethane	<0.0050		0.0050	0.0019	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
2-Butanone (MEK)	<0.0050		0.0050	0.0022	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Carbon disulfide	<0.0050		0.0050	0.0010	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Carbon tetrachloride	<0.0020		0.0020	0.00058	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Chlorobenzene	<0.0020		0.0020	0.00073	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Chloroethane	<0.0050		0.0050	0.0015	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Chloroform	<0.0020		0.0020	0.00069	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Chloromethane	<0.0050		0.0050	0.0020	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
cis-1,2-Dichloroethene	<0.0020		0.0020	0.00056	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
cis-1,3-Dichloropropene	<0.0020		0.0020	0.00060	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Dibromochloromethane	<0.0020		0.0020	0.00065	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
1,1-Dichloroethane	<0.0020		0.0020	0.00068	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
1,2-Dichloroethane	<0.0050		0.0050	0.0016	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
1,1-Dichloroethene	<0.0020		0.0020	0.00068	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
1,2-Dichloropropane	<0.0020		0.0020	0.00051	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
1,3-Dichloropropane, Total	<0.0020		0.0020	0.00070	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Ethylbenzene	<0.0020		0.0020	0.00095	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
2-Hexanone	<0.0050		0.0050	0.0016	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Methylene Chloride	<0.0050		0.0050	0.0020	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
4-Methyl-2-pentanone (MIBK)	<0.0050		0.0050	0.0015	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Methyl tert-butyl ether	<0.0020		0.0020	0.00058	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Styrene	<0.0020		0.0020	0.00060	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
1,1,2,2-Tetrachloroethane	<0.0020		0.0020	0.00064	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Tetrachloroethene	<0.0020		0.0020	0.00068	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Toluene	<0.0020		0.0020	0.00050	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
trans-1,2-Dichloroethene	<0.0020		0.0020	0.00088	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
trans-1,3-Dichloropropene	<0.0020		0.0020	0.00070	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
1,1,1-Trichloroethane	<0.0020		0.0020	0.00067	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
1,1,2-Trichloroethane	<0.0020		0.0020	0.00085	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Trichloroethene	<0.0020		0.0020	0.00067	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Vinyl acetate	<0.0050		0.0050	0.0017	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Vinyl chloride	<0.0020		0.0020	0.00088	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1
Xylenes, Total	<0.0040		0.0040	0.00064	mg/Kg	☼	11/07/17 17:56	11/10/17 17:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		75 - 131	11/07/17 17:56	11/10/17 17:18	1
Dibromofluoromethane	99		75 - 126	11/07/17 17:56	11/10/17 17:18	1
1,2-Dichloroethane-d4 (Surr)	94		70 - 134	11/07/17 17:56	11/10/17 17:18	1
Toluene-d8 (Surr)	96		75 - 124	11/07/17 17:56	11/10/17 17:18	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.019	J	0.040	0.0072	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Acenaphthylene	<0.040		0.040	0.0053	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Anthracene	0.050		0.040	0.0067	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Benzo[a]anthracene	0.18		0.040	0.0054	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-8

**Client Sample ID: 2696V-21-B01 (0-2)**

**Lab Sample ID: 500-136893-11**

Date Collected: 11/07/17 09:32

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 81.6

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.18		0.040	0.0078	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Benzo[b]fluoranthene	0.27		0.040	0.0087	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Benzo[g,h,i]perylene	0.068		0.040	0.013	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Benzo[k]fluoranthene	0.10		0.040	0.012	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.060	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Bis(2-ethylhexyl) phthalate	0.085	J	0.20	0.073	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.053	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Butyl benzyl phthalate	<0.20		0.20	0.076	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Carbazole	<0.20		0.20	0.10	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
4-Chloroaniline	<0.81		0.81	0.19	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
4-Chloro-3-methylphenol	<0.40		0.40	0.14	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
2-Chlorophenol	<0.20		0.20	0.069	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.047	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Chrysene	0.18		0.040	0.011	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Dibenz(a,h)anthracene	<0.040		0.040	0.0078	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
1,2-Dichlorobenzene	<0.20		0.20	0.048	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
1,4-Dichlorobenzene	<0.20		0.20	0.052	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.056	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
2,4-Dichlorophenol	<0.40		0.40	0.095	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Diethyl phthalate	<0.20		0.20	0.068	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
2,4-Dimethylphenol	<0.40		0.40	0.15	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Dimethyl phthalate	<0.20		0.20	0.052	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Di-n-butyl phthalate	<0.20		0.20	0.061	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
4,6-Dinitro-2-methylphenol	<0.81		0.81	0.32	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
2,4-Dinitrophenol	<0.81		0.81	0.71	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
2,4-Dinitrotoluene	<0.20		0.20	0.064	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
2,6-Dinitrotoluene	<0.20		0.20	0.079	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Di-n-octyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Fluoranthene	0.48		0.040	0.0074	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Fluorene	0.019	J	0.040	0.0056	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Hexachlorobenzene	<0.081		0.081	0.0093	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Hexachlorobutadiene	<0.20		0.20	0.063	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Hexachlorocyclopentadiene	<0.81		0.81	0.23	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Hexachloroethane	<0.20		0.20	0.061	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Indeno[1,2,3-cd]pyrene	0.069		0.040	0.010	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Isophorone	<0.20		0.20	0.045	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
2-Methylnaphthalene	<0.081		0.081	0.0074	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
2-Methylphenol	<0.20		0.20	0.064	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
3 & 4 Methylphenol	<0.20		0.20	0.067	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Naphthalene	<0.040		0.040	0.0062	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
2-Nitroaniline	<0.20		0.20	0.054	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
3-Nitroaniline	<0.40		0.40	0.12	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Nitrobenzene	<0.040		0.040	0.010	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
2-Nitrophenol	<0.40		0.40	0.095	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-8

**Client Sample ID: 2696V-21-B01 (0-2)**

**Lab Sample ID: 500-136893-11**

Date Collected: 11/07/17 09:32

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 81.6

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.81		0.81	0.38	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
N-Nitrosodi-n-propylamine	<0.081		0.081	0.049	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.047	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Pentachlorophenol	<0.81		0.81	0.64	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
<b>Phenanthrene</b>	<b>0.30</b>		0.040	0.0056	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
Phenol	<0.20		0.20	0.089	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
<b>Pyrene</b>	<b>0.37</b>		0.040	0.0080	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
2,4,5-Trichlorophenol	<0.40		0.40	0.092	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1
2,4,6-Trichlorophenol	<0.40		0.40	0.14	mg/Kg	☼	11/14/17 07:55	11/16/17 00:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	95		44 - 121	11/14/17 07:55	11/16/17 00:01	1
2-Fluorophenol	102		46 - 133	11/14/17 07:55	11/16/17 00:01	1
Nitrobenzene-d5	123	X	41 - 120	11/14/17 07:55	11/16/17 00:01	1
Phenol-d5	109		46 - 125	11/14/17 07:55	11/16/17 00:01	1
Terphenyl-d14	103		35 - 160	11/14/17 07:55	11/16/17 00:01	1
2,4,6-Tribromophenol	86		25 - 139	11/14/17 07:55	11/16/17 00:01	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.28</b>	<b>J</b>	1.2	0.22	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1
<b>Arsenic</b>	<b>9.6</b>		0.58	0.20	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1
<b>Barium</b>	<b>45</b>		0.58	0.066	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1
<b>Beryllium</b>	<b>0.60</b>		0.23	0.054	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1
<b>Cadmium</b>	<b>0.25</b>	<b>B</b>	0.12	0.021	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1
<b>Chromium</b>	<b>12</b>		0.58	0.29	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1
<b>Cobalt</b>	<b>10</b>		0.29	0.075	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1
<b>Copper</b>	<b>19</b>		0.58	0.16	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1
<b>Iron</b>	<b>19000</b>	<b>B</b>	12	6.0	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1
<b>Lead</b>	<b>17</b>		0.29	0.13	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1
<b>Magnesium</b>	<b>20000</b>		5.8	2.9	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1
<b>Calcium</b>	<b>60000</b>	<b>B</b>	120	20	mg/Kg	☼	11/08/17 16:57	11/11/17 01:11	10
<b>Manganese</b>	<b>650</b>	<b>B</b>	0.58	0.084	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1
<b>Nickel</b>	<b>27</b>		0.58	0.17	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1
<b>Selenium</b>	<b>0.78</b>		0.58	0.34	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1
Silver	<0.29		0.29	0.074	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1
Thallium	<0.58		0.58	0.29	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1
<b>Vanadium</b>	<b>17</b>		0.29	0.068	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1
<b>Zinc</b>	<b>58</b>		1.2	0.51	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1
<b>Potassium</b>	<b>1300</b>		29	10	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1
<b>Sodium</b>	<b>290</b>		58	8.5	mg/Kg	☼	11/08/17 16:57	11/10/17 01:55	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 14:43	11/11/17 17:30	1
<b>Barium</b>	<b>0.28</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 14:43	11/11/17 17:30	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 14:43	11/11/17 17:30	1
<b>Cadmium</b>	<b>0.0020</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 14:43	11/11/17 17:30	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-8

**Client Sample ID: 2696V-21-B01 (0-2)**

**Lab Sample ID: 500-136893-11**

Date Collected: 11/07/17 09:32

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 81.6

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>480</b>		5.0	0.50	mg/L		11/10/17 14:43	11/11/17 17:30	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:30	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:30	1
<b>Copper</b>	<b>0.026</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:30	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 14:43	11/11/17 17:30	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 14:43	11/11/17 17:30	1
<b>Magnesium</b>	<b>92</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 17:30	1
<b>Manganese</b>	<b>0.48</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:30	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:30	1
<b>Potassium</b>	<b>1.4 J</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 17:30	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 14:43	11/11/17 17:30	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:30	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:30	1
<b>Zinc</b>	<b>0.058 J ^</b>		0.50	0.020	mg/L		11/10/17 14:43	11/11/17 17:30	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.15</b>		0.025	0.010	mg/L		11/10/17 14:42	11/12/17 00:15	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 14:43	11/13/17 13:38	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 14:43	11/13/17 13:38	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/13/17 16:00	11/14/17 15:19	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.019 J</b>		0.020	0.0066	mg/Kg	☼	11/09/17 16:15	11/10/17 09:48	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cyanide, Total</b>	<b>0.60</b>		0.53	0.18	mg/Kg	☼	11/15/17 13:10	11/15/17 16:43	1
<b>pH</b>	<b>8.6</b>		0.20	0.20	SU			11/14/17 17:36	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-8

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-8

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Report To (optional)  
 Contact: MATT WIGGS  
 Company: TERRALON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-136893  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: 294.0, 5.5

Client		Client Project #		Preservative		Parameter												Preservative Key			
<u>TERRALON</u>		<u>11177029M</u>																1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other			
Project Name		Lab Project #																			
<u>WORK ORDER #037</u>																					
Project Location/State		Lab Project #																			
<u>MARKHAM, IL</u>																					
Sampler		Lab PM																			
<u>ERIK VARLAND</u>		<u>DICK WRIGHT</u>																			
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	VOLUS	SNOLUS	23 TAL METALS	PH	TCUP 23 TAL METALS									Comments	
			Date	Time																	
<u>11</u>		<u>2696V-21-801-(0-2)</u>	<u>11-7-17</u>	<u>0932</u>	<u>S</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>											

Turnaround Time Required (Business Days): 1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other

Sample Disposal:  Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRALON</u> Date: <u>11-7-17</u> Time: <u>1530</u>	Received By: <u>P. Neal</u> Company: <u>TA</u> Date: <u>11/7/17</u> Time: <u>1530</u>	Lab Courier: <u>TA</u>
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/7/17</u> Time: <u>1620</u>	Received By: <u>[Signature]</u> Company: <u>TACME</u> Date: <u>11/07/17</u> Time: <u>1620</u>	Shipped: _____
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Hand Delivered: _____

- Matrix Key
- WW - Wastewater
  - W - Water
  - S - Soil
  - Sl - Sludge
  - MS - Miscellaneous
  - OL - Oil
  - A - Air
  - SE - Sediment
  - SO - Soil
  - L - Leachate
  - WI - Wipe
  - DW - Drinking Water
  - O - Other

Client Comments: NO ALUMINUM

Lab Comments: \_\_\_\_\_

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136893-8

**Login Number: 136893**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9, 4.0, 5.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	







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## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

Kedzie Ave (Southbound) IDOT STA 84+00 to 84+50 (ISGS Site 2696V-24)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located [35 Ill. Adm. Code 1100.610(a)]:

Soil from boring B03 was sampled adjacent to ISGS Site No 2696V-24.  
See Exhibits 6, 6E, and Table 45 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136893-11.  
Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

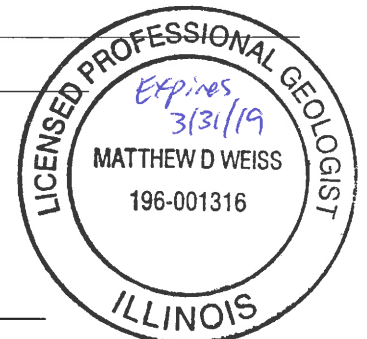
***Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))***

Company Name: Terracon Consultants, Inc  
 Street Address: 135 Ambassador Drive  
 City: Naperville State: IL Zip Code: 60540  
 Phone: 630-717-4263

Matt Weiss  
 Printed Name:

[Signature]  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

7/24/18  
 Date:



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-24)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 1 of 2

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-24-B03 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
				mg/kg pH 6.25-9.0	Date Collected	11/06/2017
Chicago	MSAs					
<b>Semivolatile Organic Analytical Parameters</b>						
Acenaphthylene	mg/kg	0.03	0.07	85		0.028
Anthracene	mg/kg	0.25	0.4	12000		0.046
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.19
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.21
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.35
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.079
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		0.12
Chrysene	mg/kg	1.2	2.7	88		0.2
Dibenzo(a,h)anthracene	mg/kg	0.2	0.42	0.09		0.025
Fluoranthene	mg/kg	2.7	4.1	3100		0.41
Fluorene	mg/kg	0.1	0.18	560		0.007
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.082
Phenanthrene	mg/kg	1.3	2.5	210		0.15
Pyrene	mg/kg	1.9	3.0	2300		0.34
<b>Inorganic Analytical Parameters</b>						
Arsenic	mg/kg	---	13	11.3		9
Barium	mg/kg	---	110	1500		35
Cadmium	mg/kg	---	0.6	5.2		0.27
Chromium, total	mg/kg	---	16.2	21		8.5
Lead	mg/kg	---	36	107		25
Mercury	mg/kg	---	0.06	0.1		0.022
Selenium	mg/kg	---	0.48	1.3		0.51
Silver	mg/kg	---	0.55	4.4		<0.28
Antimony	mg/kg	---	4.0	5		<1.1
Beryllium	mg/kg	---	0.59	22		0.42
Calcium	mg/kg	---	9,300	---		110000
Cobalt	mg/kg	---	8.9	20		8.3
Copper	mg/kg	---	19.6	2900		21
Cyanide	mg/kg	---	0.51	---		0.2
Iron	mg/kg	---	15,900	15000		16000
Magnesium	mg/kg	---	4,820	325000		37000
Manganese	mg/kg	---	636	630		440
Nickel	mg/kg	---	18	100		18
Potassium	mg/kg	---	1,268	---		980
Sodium	mg/kg	---	130	---		200
Thallium	mg/kg	---	0.32	2.6		<0.57
Vanadium	mg/kg	---	25.2	550		12
Zinc	mg/kg	---	95	5100		61
pH			6.25	9		8

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-24-B03 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/06/2017
<b>Inorganic Analytical Parameters (SPLP)</b>						
Antimony,SPLP	mg/L	---	---	---		--
Arsenic,SPLP	mg/L	---	---	---		--
Barium,SPLP	mg/L	---	---	---		--
Beryllium,SPLP	mg/L	---	---	---		--
Cadmium,SPLP	mg/L	---	---	---		--
Calcium,SPLP	mg/L	---	---	---		--
Chromium,SPLP	mg/L	---	---	---		--
Cobalt,SPLP	mg/L	---	---	---		--
Copper,SPLP	mg/L	---	---	---		--
Iron,SPLP	mg/L	---	---	---		--
Lead,SPLP	mg/L	---	---	---		--
Magnesium,SPLP	mg/L	---	---	---		--
Manganese,SPLP	mg/L	---	---	---		0.097
Mercury,SPLP	mg/L	---	---	---		--
Nickel,SPLP	mg/L	---	---	---		--
Potassium,SPLP	mg/L	---	---	---		--
Selenium,SPLP	mg/L	---	---	---		--
Silver,SPLP	mg/L	---	---	---		--
Sodium,SPLP	mg/L	---	---	---		--
Thallium,SPLP	mg/L	---	---	---		--
Vanadium,SPLP	mg/L	---	---	---		--
Zinc,SPLP	mg/L	---	---	---		--
Cyanide,SPLP	mg/L	---	---	---		--
<b>Inorganic Analytical Parameters (TCLP)</b>						
Arsenic,TCLP	mg/L	---	---	---		<0.050
Barium,TCLP	mg/L	---	---	---		0.45
Cadmium,TCLP	mg/L	---	---	---		0.003
Chromium,TCLP	mg/L	---	---	---		<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050
Silver,TCLP	mg/L	---	---	---		<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040
Calcium,TCLP	mg/L	---	---	---		400
Cobalt,TCLP	mg/L	---	---	---		<0.025
Copper,TCLP	mg/L	---	---	---		0.027
Cyanide,TCLP	mg/L	---	---	---		----
Iron,TCLP	mg/L	---	---	---		<0.40
Magnesium,TCLP	mg/L	---	---	---		130
Manganese,TCLP	mg/L	---	---	---		1.6
Nickel,TCLP	mg/L	---	---	---		0.011
Potassium,TCLP	mg/L	---	---	---		2
Sodium,TCLP	mg/L	---	---	---		----
Thallium,TCLP	mg/L	---	---	---		<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025
Zinc,TCLP	mg/L	---	---	---		0.063

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

TestAmerica Job ID: 500-136893-11  
Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:  
Terracon Consulting Eng & Scientists  
135 Ambassador Drive  
Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:  
11/17/2017 5:08:57 PM  
Jodie Bracken, Project Management Assistant II  
[jodie.bracken@testamericainc.com](mailto:jodie.bracken@testamericainc.com)

Designee for  
Richard Wright, Senior Project Manager  
(708)534-5200  
[richard.wright@testamericainc.com](mailto:richard.wright@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-11

**Job ID: 500-136893-11**

**Laboratory: TestAmerica Chicago**

## Narrative

**Job Narrative  
500-136893-11**

### Comments

No additional comments.

### Receipt

The samples were received on 11/7/2017 4:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 2.9° C, 4.0° C and 5.5° C.

### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### Metals

Method(s) 6010B: The following sample was diluted due to the abundance of target and non-target analytes: 2696V-24-B01 (0-5) (500-136893-15). Elevated reporting limits (RLs) are provided.

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-409604 recovered above the upper control limit for Zinc. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: 2696V-24-B01 (0-5) (500-136893-15), 2696V-24-B04 (0-5) (500-136893-16) and 2696V-24-B03 (0-5) (500-136893-17).

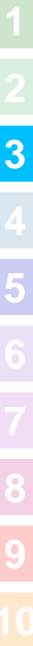
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.





# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-11

**Client Sample ID: 2696V-24-B01 (0-5)**

**Lab Sample ID: 500-136893-15**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Benzo[a]anthracene	0.0068	J	0.040	0.0054	mg/Kg	1	*	*	8270D	Total/NA
Benzo[a]pyrene	0.0084	J	0.040	0.0078	mg/Kg	1	*	*	8270D	Total/NA
Benzo[b]fluoranthene	0.015	J	0.040	0.0087	mg/Kg	1	*	*	8270D	Total/NA
Chrysene	0.014	J	0.040	0.011	mg/Kg	1	*	*	8270D	Total/NA
Fluoranthene	0.012	J	0.040	0.0075	mg/Kg	1	*	*	8270D	Total/NA
Phenanthrene	0.010	J	0.040	0.0056	mg/Kg	1	*	*	8270D	Total/NA
Pyrene	0.017	J	0.040	0.0080	mg/Kg	1	*	*	8270D	Total/NA
Arsenic	13		0.59	0.20	mg/Kg	1	*	*	6010B	Total/NA
Barium	71		0.59	0.067	mg/Kg	1	*	*	6010B	Total/NA
Beryllium	0.65		0.23	0.055	mg/Kg	1	*	*	6010B	Total/NA
Cadmium	0.26	B	0.12	0.021	mg/Kg	1	*	*	6010B	Total/NA
Chromium	13		0.59	0.29	mg/Kg	1	*	*	6010B	Total/NA
Cobalt	15		0.29	0.077	mg/Kg	1	*	*	6010B	Total/NA
Copper	18		0.59	0.16	mg/Kg	1	*	*	6010B	Total/NA
Iron	28000	B	12	6.1	mg/Kg	1	*	*	6010B	Total/NA
Lead	17		0.29	0.14	mg/Kg	1	*	*	6010B	Total/NA
Magnesium	18000		59	29	mg/Kg	10	*	*	6010B	Total/NA
Calcium	21000	B	12	2.0	mg/Kg	1	*	*	6010B	Total/NA
Manganese	2000	B	5.9	0.85	mg/Kg	10	*	*	6010B	Total/NA
Nickel	23		0.59	0.17	mg/Kg	1	*	*	6010B	Total/NA
Selenium	0.79		0.59	0.34	mg/Kg	1	*	*	6010B	Total/NA
Vanadium	19		0.29	0.069	mg/Kg	1	*	*	6010B	Total/NA
Zinc	73		1.2	0.51	mg/Kg	1	*	*	6010B	Total/NA
Potassium	1500		29	10	mg/Kg	1	*	*	6010B	Total/NA
Sodium	740		59	8.7	mg/Kg	1	*	*	6010B	Total/NA
Barium	0.57		0.50	0.050	mg/L	1			6010B	TCLP
Cadmium	0.0030	J	0.0050	0.0020	mg/L	1			6010B	TCLP
Calcium	400		5.0	0.50	mg/L	1			6010B	TCLP
Copper	0.043		0.025	0.010	mg/L	1			6010B	TCLP
Magnesium	110		2.5	0.50	mg/L	1			6010B	TCLP
Manganese	3.5		0.025	0.010	mg/L	1			6010B	TCLP
Potassium	2.4	J	2.5	0.50	mg/L	1			6010B	TCLP
Zinc	0.074	J ^	0.50	0.020	mg/L	1			6010B	TCLP
Manganese	0.75		0.025	0.010	mg/L	1			6010B	SPLP East
Mercury	0.032		0.018	0.0061	mg/Kg	1	*	*	7471B	Total/NA
pH	8.6		0.20	0.20	SU	1			9045D	Total/NA

**Client Sample ID: 2696V-24-B04 (0-5)**

**Lab Sample ID: 500-136893-16**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acenaphthene	0.011	J	0.040	0.0072	mg/Kg	1	*	*	8270D	Total/NA
Acenaphthylene	0.089		0.040	0.0053	mg/Kg	1	*	*	8270D	Total/NA
Anthracene	0.069		0.040	0.0067	mg/Kg	1	*	*	8270D	Total/NA
Benzo[a]anthracene	0.29		0.040	0.0054	mg/Kg	1	*	*	8270D	Total/NA
Benzo[a]pyrene	0.40		0.040	0.0078	mg/Kg	1	*	*	8270D	Total/NA
Benzo[b]fluoranthene	0.64		0.040	0.0087	mg/Kg	1	*	*	8270D	Total/NA
Benzo[g,h,i]perylene	0.16		0.040	0.013	mg/Kg	1	*	*	8270D	Total/NA
Benzo[k]fluoranthene	0.26		0.040	0.012	mg/Kg	1	*	*	8270D	Total/NA
Chrysene	0.32		0.040	0.011	mg/Kg	1	*	*	8270D	Total/NA
Dibenz(a,h)anthracene	0.049		0.040	0.0078	mg/Kg	1	*	*	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-11

**Client Sample ID: 2696V-24-B04 (0-5) (Continued)**

**Lab Sample ID: 500-136893-16**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	0.53		0.040	0.0074	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.014	J	0.040	0.0056	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.16		0.040	0.010	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.011	J	0.081	0.0074	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.011	J	0.040	0.0062	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.18		0.040	0.0056	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.48		0.040	0.0080	mg/Kg	1	☼	8270D	Total/NA
Arsenic	6.6		0.62	0.21	mg/Kg	1	☼	6010B	Total/NA
Barium	66		0.62	0.071	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.54		0.25	0.058	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.57	B	0.12	0.022	mg/Kg	1	☼	6010B	Total/NA
Chromium	12		0.62	0.31	mg/Kg	1	☼	6010B	Total/NA
Cobalt	8.7		0.31	0.081	mg/Kg	1	☼	6010B	Total/NA
Copper	23		0.62	0.17	mg/Kg	1	☼	6010B	Total/NA
Iron	15000	B	12	6.4	mg/Kg	1	☼	6010B	Total/NA
Lead	74		0.31	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	27000		6.2	3.1	mg/Kg	1	☼	6010B	Total/NA
Calcium	87000	B	120	21	mg/Kg	10	☼	6010B	Total/NA
Manganese	390	B	0.62	0.090	mg/Kg	1	☼	6010B	Total/NA
Nickel	17		0.62	0.18	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.80		0.62	0.36	mg/Kg	1	☼	6010B	Total/NA
Vanadium	18		0.31	0.073	mg/Kg	1	☼	6010B	Total/NA
Zinc	120		1.2	0.54	mg/Kg	1	☼	6010B	Total/NA
Potassium	1400		31	11	mg/Kg	1	☼	6010B	Total/NA
Sodium	260		62	9.2	mg/Kg	1	☼	6010B	Total/NA
Barium	0.63		0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0041	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	370		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.055		0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	120		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.18		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	3.1		2.5	0.50	mg/L	1		6010B	TCLP
Selenium	0.020	J	0.050	0.020	mg/L	1		6010B	TCLP
Zinc	0.18	J ^	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.26		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.024		0.020	0.0066	mg/Kg	1	☼	7471B	Total/NA
Cyanide, Total	0.21	J	0.57	0.20	mg/Kg	1	☼	9014	Total/NA
pH	8.3		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-24-B03 (0-5)**

**Lab Sample ID: 500-136893-17**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.028	J	0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.046		0.037	0.0063	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.19		0.037	0.0051	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.21		0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.35		0.037	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.079		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.12		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.20		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-11

**Client Sample ID: 2696V-24-B03 (0-5) (Continued)**

**Lab Sample ID: 500-136893-17**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Dibenz(a,h)anthracene	0.025	J	0.037	0.0073	mg/Kg	1	☼	8270D		Total/NA
Fluoranthene	0.41		0.037	0.0070	mg/Kg	1	☼	8270D		Total/NA
Fluorene	0.0070	J	0.037	0.0053	mg/Kg	1	☼	8270D		Total/NA
Indeno[1,2,3-cd]pyrene	0.082		0.037	0.0098	mg/Kg	1	☼	8270D		Total/NA
Phenanthrene	0.15		0.037	0.0053	mg/Kg	1	☼	8270D		Total/NA
Pyrene	0.34		0.037	0.0075	mg/Kg	1	☼	8270D		Total/NA
Arsenic	9.0		0.57	0.19	mg/Kg	1	☼	6010B		Total/NA
Barium	35		0.57	0.064	mg/Kg	1	☼	6010B		Total/NA
Beryllium	0.42		0.23	0.053	mg/Kg	1	☼	6010B		Total/NA
Cadmium	0.27	B	0.11	0.020	mg/Kg	1	☼	6010B		Total/NA
Chromium	8.5		0.57	0.28	mg/Kg	1	☼	6010B		Total/NA
Cobalt	8.3		0.28	0.074	mg/Kg	1	☼	6010B		Total/NA
Copper	21		0.57	0.16	mg/Kg	1	☼	6010B		Total/NA
Iron	16000	B	11	5.9	mg/Kg	1	☼	6010B		Total/NA
Lead	25		0.28	0.13	mg/Kg	1	☼	6010B		Total/NA
Magnesium	37000		5.7	2.8	mg/Kg	1	☼	6010B		Total/NA
Calcium	110000	B	110	19	mg/Kg	10	☼	6010B		Total/NA
Manganese	440	B	0.57	0.082	mg/Kg	1	☼	6010B		Total/NA
Nickel	18		0.57	0.16	mg/Kg	1	☼	6010B		Total/NA
Selenium	0.51	J	0.57	0.33	mg/Kg	1	☼	6010B		Total/NA
Vanadium	12		0.28	0.067	mg/Kg	1	☼	6010B		Total/NA
Zinc	61		1.1	0.50	mg/Kg	1	☼	6010B		Total/NA
Potassium	980		28	10	mg/Kg	1	☼	6010B		Total/NA
Sodium	200		57	8.4	mg/Kg	1	☼	6010B		Total/NA
Barium	0.45	J	0.50	0.050	mg/L	1		6010B		TCLP
Cadmium	0.0030	J	0.0050	0.0020	mg/L	1		6010B		TCLP
Calcium	400		5.0	0.50	mg/L	1		6010B		TCLP
Copper	0.027		0.025	0.010	mg/L	1		6010B		TCLP
Magnesium	130		2.5	0.50	mg/L	1		6010B		TCLP
Manganese	1.6		0.025	0.010	mg/L	1		6010B		TCLP
Nickel	0.011	J	0.025	0.010	mg/L	1		6010B		TCLP
Potassium	2.0	J	2.5	0.50	mg/L	1		6010B		TCLP
Zinc	0.063	J ^	0.50	0.020	mg/L	1		6010B		TCLP
Manganese	0.097		0.025	0.010	mg/L	1		6010B		SPLP East
Mercury	0.022		0.020	0.0065	mg/Kg	1	☼	7471B		Total/NA
Cyanide, Total	0.20	J	0.51	0.18	mg/Kg	1	☼	9014		Total/NA
pH	8.0		0.20	0.20	SU	1		9045D		Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-11

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136893-15	2696V-24-B01 (0-5)	Solid	11/06/17 12:15	11/07/17 16:20
500-136893-16	2696V-24-B04 (0-5)	Solid	11/07/17 10:55	11/07/17 16:20
500-136893-17	2696V-24-B03 (0-5)	Solid	11/07/17 11:10	11/07/17 16:20

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-11

**Client Sample ID: 2696V-24-B01 (0-5)**

**Lab Sample ID: 500-136893-15**

Date Collected: 11/06/17 12:15

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 81.1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.016		0.016	0.0069	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Benzene	<0.0016		0.0016	0.00040	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Bromodichloromethane	<0.0016		0.0016	0.00032	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Bromoform	<0.0016		0.0016	0.00046	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Bromomethane	<0.0040		0.0040	0.0015	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
2-Butanone (MEK)	<0.0040		0.0040	0.0018	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Carbon disulfide	<0.0040		0.0040	0.00083	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Carbon tetrachloride	<0.0016		0.0016	0.00046	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Chlorobenzene	<0.0016		0.0016	0.00059	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Chloroethane	<0.0040		0.0040	0.0012	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Chloroform	<0.0016		0.0016	0.00055	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Chloromethane	<0.0040		0.0040	0.0016	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
cis-1,2-Dichloroethene	<0.0016		0.0016	0.00044	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
cis-1,3-Dichloropropene	<0.0016		0.0016	0.00048	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Dibromochloromethane	<0.0016		0.0016	0.00052	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
1,1-Dichloroethane	<0.0016		0.0016	0.00054	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
1,2-Dichloroethane	<0.0040		0.0040	0.0012	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
1,1-Dichloroethene	<0.0016		0.0016	0.00055	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
1,2-Dichloropropane	<0.0016		0.0016	0.00041	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
1,3-Dichloropropane, Total	<0.0016		0.0016	0.00056	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Ethylbenzene	<0.0016		0.0016	0.00076	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
2-Hexanone	<0.0040		0.0040	0.0012	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Methylene Chloride	<0.0040		0.0040	0.0016	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
4-Methyl-2-pentanone (MIBK)	<0.0040		0.0040	0.0012	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Methyl tert-butyl ether	<0.0016		0.0016	0.00047	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Styrene	<0.0016		0.0016	0.00048	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
1,1,2,2-Tetrachloroethane	<0.0016		0.0016	0.00051	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Tetrachloroethene	<0.0016		0.0016	0.00054	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Toluene	<0.0016		0.0016	0.00040	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
trans-1,2-Dichloroethene	<0.0016		0.0016	0.00070	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
trans-1,3-Dichloropropene	<0.0016		0.0016	0.00056	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
1,1,1-Trichloroethane	<0.0016		0.0016	0.00053	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
1,1,2-Trichloroethane	<0.0016		0.0016	0.00068	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Trichloroethene	<0.0016		0.0016	0.00054	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Vinyl acetate	<0.0040		0.0040	0.0014	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Vinyl chloride	<0.0016		0.0016	0.00070	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1
Xylenes, Total	<0.0032		0.0032	0.00051	mg/Kg	☼	11/07/17 17:56	11/10/17 19:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		75 - 131	11/07/17 17:56	11/10/17 19:00	1
Dibromofluoromethane	99		75 - 126	11/07/17 17:56	11/10/17 19:00	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 134	11/07/17 17:56	11/10/17 19:00	1
Toluene-d8 (Surr)	97		75 - 124	11/07/17 17:56	11/10/17 19:00	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.040		0.040	0.0072	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Acenaphthylene	<0.040		0.040	0.0053	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Anthracene	<0.040		0.040	0.0067	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
<b>Benzo[a]anthracene</b>	<b>0.0068</b>	<b>J</b>	0.040	0.0054	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-11

**Client Sample ID: 2696V-24-B01 (0-5)**

**Lab Sample ID: 500-136893-15**

**Date Collected: 11/06/17 12:15**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 81.1**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.0084</b>	<b>J</b>	0.040	0.0078	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
<b>Benzo[b]fluoranthene</b>	<b>0.015</b>	<b>J</b>	0.040	0.0087	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Benzo[g,h,i]perylene	<0.040		0.040	0.013	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Benzo[k]fluoranthene	<0.040		0.040	0.012	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.060	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.074	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.053	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Butyl benzyl phthalate	<0.20		0.20	0.077	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Carbazole	<0.20		0.20	0.10	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
4-Chloroaniline	<0.81		0.81	0.19	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
4-Chloro-3-methylphenol	<0.40		0.40	0.14	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
2-Chlorophenol	<0.20		0.20	0.069	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.047	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
<b>Chrysene</b>	<b>0.014</b>	<b>J</b>	0.040	0.011	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Dibenz(a,h)anthracene	<0.040		0.040	0.0078	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
1,2-Dichlorobenzene	<0.20		0.20	0.048	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
1,4-Dichlorobenzene	<0.20		0.20	0.052	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.056	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
2,4-Dichlorophenol	<0.40		0.40	0.096	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Diethyl phthalate	<0.20		0.20	0.068	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
2,4-Dimethylphenol	<0.40		0.40	0.15	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Dimethyl phthalate	<0.20		0.20	0.053	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Di-n-butyl phthalate	<0.20		0.20	0.061	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
4,6-Dinitro-2-methylphenol	<0.81		0.81	0.32	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
2,4-Dinitrophenol	<0.81		0.81	0.71	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
2,4-Dinitrotoluene	<0.20		0.20	0.064	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
2,6-Dinitrotoluene	<0.20		0.20	0.079	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Di-n-octyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
<b>Fluoranthene</b>	<b>0.012</b>	<b>J</b>	0.040	0.0075	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Fluorene	<0.040		0.040	0.0057	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Hexachlorobenzene	<0.081		0.081	0.0093	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Hexachlorobutadiene	<0.20		0.20	0.063	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Hexachlorocyclopentadiene	<0.81		0.81	0.23	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Hexachloroethane	<0.20		0.20	0.061	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Indeno[1,2,3-cd]pyrene	<0.040		0.040	0.010	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Isophorone	<0.20		0.20	0.045	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
2-Methylnaphthalene	<0.081		0.081	0.0074	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
2-Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
3 & 4 Methylphenol	<0.20		0.20	0.067	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Naphthalene	<0.040		0.040	0.0062	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
2-Nitroaniline	<0.20		0.20	0.054	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
3-Nitroaniline	<0.40		0.40	0.12	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Nitrobenzene	<0.040		0.040	0.010	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
2-Nitrophenol	<0.40		0.40	0.095	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-11

**Client Sample ID: 2696V-24-B01 (0-5)**

**Lab Sample ID: 500-136893-15**

Date Collected: 11/06/17 12:15

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 81.1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.81		0.81	0.38	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
N-Nitrosodi-n-propylamine	<0.081		0.081	0.049	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
N-Nitrosodiphenylamine	<0.20		0.20	0.048	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.047	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Pentachlorophenol	<0.81		0.81	0.65	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
<b>Phenanthrene</b>	<b>0.010</b>	<b>J</b>	0.040	0.0056	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
Phenol	<0.20		0.20	0.089	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
<b>Pyrene</b>	<b>0.017</b>	<b>J</b>	0.040	0.0080	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
2,4,5-Trichlorophenol	<0.40		0.40	0.092	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1
2,4,6-Trichlorophenol	<0.40		0.40	0.14	mg/Kg	☼	11/14/17 07:55	11/16/17 01:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	86		44 - 121	11/14/17 07:55	11/16/17 01:15	1
2-Fluorophenol	93		46 - 133	11/14/17 07:55	11/16/17 01:15	1
Nitrobenzene-d5	92		41 - 120	11/14/17 07:55	11/16/17 01:15	1
Phenol-d5	97		46 - 125	11/14/17 07:55	11/16/17 01:15	1
Terphenyl-d14	106		35 - 160	11/14/17 07:55	11/16/17 01:15	1
2,4,6-Tribromophenol	78		25 - 139	11/14/17 07:55	11/16/17 01:15	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.23	mg/Kg	☼	11/08/17 16:57	11/10/17 02:21	1
<b>Arsenic</b>	<b>13</b>		0.59	0.20	mg/Kg	☼	11/08/17 16:57	11/10/17 02:21	1
<b>Barium</b>	<b>71</b>		0.59	0.067	mg/Kg	☼	11/08/17 16:57	11/10/17 02:21	1
<b>Beryllium</b>	<b>0.65</b>		0.23	0.055	mg/Kg	☼	11/08/17 16:57	11/10/17 02:21	1
<b>Cadmium</b>	<b>0.26</b>	<b>B</b>	0.12	0.021	mg/Kg	☼	11/08/17 16:57	11/10/17 02:21	1
<b>Chromium</b>	<b>13</b>		0.59	0.29	mg/Kg	☼	11/08/17 16:57	11/10/17 02:21	1
<b>Cobalt</b>	<b>15</b>		0.29	0.077	mg/Kg	☼	11/08/17 16:57	11/10/17 02:21	1
<b>Copper</b>	<b>18</b>		0.59	0.16	mg/Kg	☼	11/08/17 16:57	11/10/17 02:21	1
<b>Iron</b>	<b>28000</b>	<b>B</b>	12	6.1	mg/Kg	☼	11/08/17 16:57	11/10/17 02:21	1
<b>Lead</b>	<b>17</b>		0.29	0.14	mg/Kg	☼	11/08/17 16:57	11/10/17 02:21	1
<b>Magnesium</b>	<b>18000</b>		59	29	mg/Kg	☼	11/08/17 16:57	11/11/17 01:27	10
<b>Calcium</b>	<b>21000</b>	<b>B</b>	12	2.0	mg/Kg	☼	11/08/17 16:57	11/10/17 02:21	1
<b>Manganese</b>	<b>2000</b>	<b>B</b>	5.9	0.85	mg/Kg	☼	11/08/17 16:57	11/11/17 01:27	10
<b>Nickel</b>	<b>23</b>		0.59	0.17	mg/Kg	☼	11/08/17 16:57	11/10/17 02:21	1
<b>Selenium</b>	<b>0.79</b>		0.59	0.34	mg/Kg	☼	11/08/17 16:57	11/10/17 02:21	1
Silver	<0.29		0.29	0.075	mg/Kg	☼	11/08/17 16:57	11/10/17 02:21	1
Thallium	<0.59		0.59	0.29	mg/Kg	☼	11/08/17 16:57	11/10/17 02:21	1
<b>Vanadium</b>	<b>19</b>		0.29	0.069	mg/Kg	☼	11/08/17 16:57	11/10/17 02:21	1
<b>Zinc</b>	<b>73</b>		1.2	0.51	mg/Kg	☼	11/08/17 16:57	11/10/17 02:21	1
<b>Potassium</b>	<b>1500</b>		29	10	mg/Kg	☼	11/08/17 16:57	11/10/17 02:21	1
<b>Sodium</b>	<b>740</b>		59	8.7	mg/Kg	☼	11/08/17 16:57	11/10/17 02:21	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 14:43	11/11/17 17:54	1
<b>Barium</b>	<b>0.57</b>		0.50	0.050	mg/L		11/10/17 14:43	11/11/17 17:54	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 14:43	11/11/17 17:54	1
<b>Cadmium</b>	<b>0.0030</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 14:43	11/11/17 17:54	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-11

**Client Sample ID: 2696V-24-B01 (0-5)**

**Lab Sample ID: 500-136893-15**

**Date Collected: 11/06/17 12:15**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 81.1**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>400</b>		5.0	0.50	mg/L		11/10/17 14:43	11/11/17 17:54	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:54	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:54	1
<b>Copper</b>	<b>0.043</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:54	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 14:43	11/11/17 17:54	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 14:43	11/11/17 17:54	1
<b>Magnesium</b>	<b>110</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 17:54	1
<b>Manganese</b>	<b>3.5</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:54	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:54	1
<b>Potassium</b>	<b>2.4 J</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 17:54	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 14:43	11/11/17 17:54	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:54	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:54	1
<b>Zinc</b>	<b>0.074 J ^</b>		0.50	0.020	mg/L		11/10/17 14:43	11/11/17 17:54	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.75</b>		0.025	0.010	mg/L		11/10/17 14:42	11/12/17 00:31	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 14:43	11/13/17 13:51	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 14:43	11/13/17 13:51	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/13/17 16:00	11/14/17 15:28	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.032</b>		0.018	0.0061	mg/Kg	☼	11/09/17 16:15	11/10/17 10:02	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.52		0.52	0.18	mg/Kg	☼	11/15/17 13:10	11/15/17 16:45	1
<b>pH</b>	<b>8.6</b>		0.20	0.20	SU			11/14/17 17:36	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-11

**Client Sample ID: 2696V-24-B04 (0-5)**

**Lab Sample ID: 500-136893-16**

**Date Collected: 11/07/17 10:55**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 80.6**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0082	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Benzene	<0.0019		0.0019	0.00048	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Bromodichloromethane	<0.0019		0.0019	0.00039	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Bromoform	<0.0019		0.0019	0.00055	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Bromomethane	<0.0047		0.0047	0.0018	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
2-Butanone (MEK)	<0.0047		0.0047	0.0021	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Carbon disulfide	<0.0047		0.0047	0.00098	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Carbon tetrachloride	<0.0019		0.0019	0.00055	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Chlorobenzene	<0.0019		0.0019	0.00070	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Chloroethane	<0.0047		0.0047	0.0014	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Chloroform	<0.0019		0.0019	0.00066	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Chloromethane	<0.0047		0.0047	0.0019	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
cis-1,2-Dichloroethene	<0.0019		0.0019	0.00053	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
cis-1,3-Dichloropropene	<0.0019		0.0019	0.00057	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Dibromochloromethane	<0.0019		0.0019	0.00062	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
1,1-Dichloroethane	<0.0019		0.0019	0.00065	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
1,2-Dichloroethane	<0.0047		0.0047	0.0015	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
1,1-Dichloroethene	<0.0019		0.0019	0.00065	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
1,2-Dichloropropane	<0.0019		0.0019	0.00049	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
1,3-Dichloropropane, Total	<0.0019		0.0019	0.00066	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Ethylbenzene	<0.0019		0.0019	0.00091	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
2-Hexanone	<0.0047		0.0047	0.0015	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Methylene Chloride	<0.0047		0.0047	0.0019	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
4-Methyl-2-pentanone (MIBK)	<0.0047		0.0047	0.0014	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Methyl tert-butyl ether	<0.0019		0.0019	0.00056	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Styrene	<0.0019		0.0019	0.00057	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
1,1,2,2-Tetrachloroethane	<0.0019		0.0019	0.00061	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Tetrachloroethene	<0.0019		0.0019	0.00064	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Toluene	<0.0019		0.0019	0.00048	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
trans-1,2-Dichloroethene	<0.0019		0.0019	0.00084	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
trans-1,3-Dichloropropene	<0.0019		0.0019	0.00066	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
1,1,1-Trichloroethane	<0.0019		0.0019	0.00064	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
1,1,2-Trichloroethane	<0.0019		0.0019	0.00081	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Trichloroethene	<0.0019		0.0019	0.00064	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Vinyl acetate	<0.0047		0.0047	0.0016	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Vinyl chloride	<0.0019		0.0019	0.00084	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1
Xylenes, Total	<0.0038		0.0038	0.00061	mg/Kg	☼	11/07/17 17:56	11/10/17 19:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		75 - 131	11/07/17 17:56	11/10/17 19:26	1
Dibromofluoromethane	99		75 - 126	11/07/17 17:56	11/10/17 19:26	1
1,2-Dichloroethane-d4 (Surr)	93		70 - 134	11/07/17 17:56	11/10/17 19:26	1
Toluene-d8 (Surr)	99		75 - 124	11/07/17 17:56	11/10/17 19:26	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.011	J	0.040	0.0072	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Acenaphthylene	0.089		0.040	0.0053	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Anthracene	0.069		0.040	0.0067	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Benzo[a]anthracene	0.29		0.040	0.0054	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-11

**Client Sample ID: 2696V-24-B04 (0-5)**

**Lab Sample ID: 500-136893-16**

**Date Collected: 11/07/17 10:55**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 80.6**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.40</b>		0.040	0.0078	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
<b>Benzo[b]fluoranthene</b>	<b>0.64</b>		0.040	0.0087	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
<b>Benzo[g,h,i]perylene</b>	<b>0.16</b>		0.040	0.013	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
<b>Benzo[k]fluoranthene</b>	<b>0.26</b>		0.040	0.012	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.060	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.073	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.053	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Butyl benzyl phthalate	<0.20		0.20	0.076	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Carbazole	<0.20		0.20	0.10	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
4-Chloroaniline	<0.81		0.81	0.19	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
4-Chloro-3-methylphenol	<0.40		0.40	0.14	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
2-Chlorophenol	<0.20		0.20	0.068	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.047	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
<b>Chrysene</b>	<b>0.32</b>		0.040	0.011	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
<b>Dibenz(a,h)anthracene</b>	<b>0.049</b>		0.040	0.0078	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
1,2-Dichlorobenzene	<0.20		0.20	0.048	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.056	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
2,4-Dichlorophenol	<0.40		0.40	0.095	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Diethyl phthalate	<0.20		0.20	0.068	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
2,4-Dimethylphenol	<0.40		0.40	0.15	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Dimethyl phthalate	<0.20		0.20	0.052	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Di-n-butyl phthalate	<0.20		0.20	0.061	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
4,6-Dinitro-2-methylphenol	<0.81		0.81	0.32	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
2,4-Dinitrophenol	<0.81		0.81	0.71	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
2,4-Dinitrotoluene	<0.20		0.20	0.064	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
2,6-Dinitrotoluene	<0.20		0.20	0.079	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Di-n-octyl phthalate	<0.20		0.20	0.065	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
<b>Fluoranthene</b>	<b>0.53</b>		0.040	0.0074	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
<b>Fluorene</b>	<b>0.014 J</b>		0.040	0.0056	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Hexachlorobenzene	<0.081		0.081	0.0093	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Hexachlorobutadiene	<0.20		0.20	0.063	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Hexachlorocyclopentadiene	<0.81		0.81	0.23	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Hexachloroethane	<0.20		0.20	0.061	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.16</b>		0.040	0.010	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Isophorone	<0.20		0.20	0.045	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
<b>2-Methylnaphthalene</b>	<b>0.011 J</b>		0.081	0.0074	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
2-Methylphenol	<0.20		0.20	0.064	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
3 & 4 Methylphenol	<0.20		0.20	0.067	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
<b>Naphthalene</b>	<b>0.011 J</b>		0.040	0.0062	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
2-Nitroaniline	<0.20		0.20	0.054	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
3-Nitroaniline	<0.40		0.40	0.12	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Nitrobenzene	<0.040		0.040	0.010	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
2-Nitrophenol	<0.40		0.40	0.095	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-11

**Client Sample ID: 2696V-24-B04 (0-5)**

**Lab Sample ID: 500-136893-16**

Date Collected: 11/07/17 10:55

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 80.6

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.81		0.81	0.38	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
N-Nitrosodi-n-propylamine	<0.081		0.081	0.049	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Pentachlorophenol	<0.81		0.81	0.64	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
<b>Phenanthrene</b>	<b>0.18</b>		0.040	0.0056	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
Phenol	<0.20		0.20	0.089	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
<b>Pyrene</b>	<b>0.48</b>		0.040	0.0080	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
2,4,5-Trichlorophenol	<0.40		0.40	0.092	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1
2,4,6-Trichlorophenol	<0.40		0.40	0.14	mg/Kg	☼	11/14/17 07:55	11/16/17 01:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	93		44 - 121	11/14/17 07:55	11/16/17 01:39	1
2-Fluorophenol	108		46 - 133	11/14/17 07:55	11/16/17 01:39	1
Nitrobenzene-d5	86		41 - 120	11/14/17 07:55	11/16/17 01:39	1
Phenol-d5	113		46 - 125	11/14/17 07:55	11/16/17 01:39	1
Terphenyl-d14	110		35 - 160	11/14/17 07:55	11/16/17 01:39	1
2,4,6-Tribromophenol	93		25 - 139	11/14/17 07:55	11/16/17 01:39	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.24	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1
<b>Arsenic</b>	<b>6.6</b>		0.62	0.21	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1
<b>Barium</b>	<b>66</b>		0.62	0.071	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1
<b>Beryllium</b>	<b>0.54</b>		0.25	0.058	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1
<b>Cadmium</b>	<b>0.57</b>	<b>B</b>	0.12	0.022	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1
<b>Chromium</b>	<b>12</b>		0.62	0.31	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1
<b>Cobalt</b>	<b>8.7</b>		0.31	0.081	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1
<b>Copper</b>	<b>23</b>		0.62	0.17	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1
<b>Iron</b>	<b>15000</b>	<b>B</b>	12	6.4	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1
<b>Lead</b>	<b>74</b>		0.31	0.14	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1
<b>Magnesium</b>	<b>27000</b>		6.2	3.1	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1
<b>Calcium</b>	<b>87000</b>	<b>B</b>	120	21	mg/Kg	☼	11/08/17 16:57	11/11/17 01:31	10
<b>Manganese</b>	<b>390</b>	<b>B</b>	0.62	0.090	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1
<b>Nickel</b>	<b>17</b>		0.62	0.18	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1
<b>Selenium</b>	<b>0.80</b>		0.62	0.36	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1
Silver	<0.31		0.31	0.080	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1
Thallium	<0.62		0.62	0.31	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1
<b>Vanadium</b>	<b>18</b>		0.31	0.073	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1
<b>Zinc</b>	<b>120</b>		1.2	0.54	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1
<b>Potassium</b>	<b>1400</b>		31	11	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1
<b>Sodium</b>	<b>260</b>		62	9.2	mg/Kg	☼	11/08/17 16:57	11/10/17 02:25	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 14:43	11/11/17 17:58	1
<b>Barium</b>	<b>0.63</b>		0.50	0.050	mg/L		11/10/17 14:43	11/11/17 17:58	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 14:43	11/11/17 17:58	1
<b>Cadmium</b>	<b>0.0041</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 14:43	11/11/17 17:58	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-11

**Client Sample ID: 2696V-24-B04 (0-5)**

**Lab Sample ID: 500-136893-16**

**Date Collected: 11/07/17 10:55**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 80.6**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>370</b>		5.0	0.50	mg/L		11/10/17 14:43	11/11/17 17:58	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:58	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:58	1
<b>Copper</b>	<b>0.055</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:58	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 14:43	11/11/17 17:58	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 14:43	11/11/17 17:58	1
<b>Magnesium</b>	<b>120</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 17:58	1
<b>Manganese</b>	<b>0.18</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:58	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:58	1
<b>Potassium</b>	<b>3.1</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 17:58	1
<b>Selenium</b>	<b>0.020</b>	<b>J</b>	0.050	0.020	mg/L		11/10/17 14:43	11/11/17 17:58	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:58	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 17:58	1
<b>Zinc</b>	<b>0.18</b>	<b>J ^</b>	0.50	0.020	mg/L		11/10/17 14:43	11/11/17 17:58	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.26</b>		0.025	0.010	mg/L		11/10/17 14:42	11/12/17 00:43	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 14:43	11/13/17 13:55	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 14:43	11/13/17 13:55	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/13/17 16:00	11/14/17 15:30	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.024</b>		0.020	0.0066	mg/Kg	☼	11/09/17 16:15	11/10/17 10:04	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cyanide, Total</b>	<b>0.21</b>	<b>J</b>	0.57	0.20	mg/Kg	☼	11/15/17 13:10	11/15/17 16:45	1
<b>pH</b>	<b>8.3</b>		0.20	0.20	SU			11/14/17 17:36	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-11

**Client Sample ID: 2696V-24-B03 (0-5)**

**Lab Sample ID: 500-136893-17**

**Date Collected: 11/07/17 11:10**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 84.7**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.022		0.022	0.0098	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Benzene	<0.0022		0.0022	0.00057	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Bromodichloromethane	<0.0022		0.0022	0.00046	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Bromoform	<0.0022		0.0022	0.00066	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Bromomethane	<0.0056		0.0056	0.0021	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
2-Butanone (MEK)	<0.0056		0.0056	0.0025	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Carbon disulfide	<0.0056		0.0056	0.0012	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Carbon tetrachloride	<0.0022		0.0022	0.00065	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Chlorobenzene	<0.0022		0.0022	0.00083	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Chloroethane	<0.0056		0.0056	0.0017	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Chloroform	<0.0022		0.0022	0.00078	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Chloromethane	<0.0056		0.0056	0.0023	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
cis-1,2-Dichloroethene	<0.0022		0.0022	0.00063	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
cis-1,3-Dichloropropene	<0.0022		0.0022	0.00068	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Dibromochloromethane	<0.0022		0.0022	0.00074	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
1,1-Dichloroethane	<0.0022		0.0022	0.00077	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
1,2-Dichloroethane	<0.0056		0.0056	0.0018	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
1,1-Dichloroethene	<0.0022		0.0022	0.00077	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
1,2-Dichloropropane	<0.0022		0.0022	0.00058	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
1,3-Dichloropropane, Total	<0.0022		0.0022	0.00079	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Ethylbenzene	<0.0022		0.0022	0.0011	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
2-Hexanone	<0.0056		0.0056	0.0018	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Methylene Chloride	<0.0056		0.0056	0.0022	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
4-Methyl-2-pentanone (MIBK)	<0.0056		0.0056	0.0017	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Methyl tert-butyl ether	<0.0022		0.0022	0.00066	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Styrene	<0.0022		0.0022	0.00068	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
1,1,2,2-Tetrachloroethane	<0.0022		0.0022	0.00072	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Tetrachloroethene	<0.0022		0.0022	0.00077	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Toluene	<0.0022		0.0022	0.00057	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
trans-1,2-Dichloroethene	<0.0022		0.0022	0.0010	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
trans-1,3-Dichloropropene	<0.0022		0.0022	0.00079	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
1,1,1-Trichloroethane	<0.0022		0.0022	0.00075	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
1,1,2-Trichloroethane	<0.0022		0.0022	0.00096	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Trichloroethene	<0.0022		0.0022	0.00076	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Vinyl acetate	<0.0056		0.0056	0.0020	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Vinyl chloride	<0.0022		0.0022	0.0010	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1
Xylenes, Total	<0.0045		0.0045	0.00072	mg/Kg	☼	11/07/17 17:56	11/10/17 19:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		75 - 131	11/07/17 17:56	11/10/17 19:51	1
Dibromofluoromethane	100		75 - 126	11/07/17 17:56	11/10/17 19:51	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 134	11/07/17 17:56	11/10/17 19:51	1
Toluene-d8 (Surr)	99		75 - 124	11/07/17 17:56	11/10/17 19:51	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.037		0.037	0.0068	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
<b>Acenaphthylene</b>	<b>0.028</b>	<b>J</b>	0.037	0.0050	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
<b>Anthracene</b>	<b>0.046</b>		0.037	0.0063	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
<b>Benzo[a]anthracene</b>	<b>0.19</b>		0.037	0.0051	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-11

**Client Sample ID: 2696V-24-B03 (0-5)**

**Lab Sample ID: 500-136893-17**

**Date Collected: 11/07/17 11:10**

**Matrix: Solid**

**Date Received: 11/07/17 16:20**

**Percent Solids: 84.7**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.21</b>		0.037	0.0073	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
<b>Benzo[b]fluoranthene</b>	<b>0.35</b>		0.037	0.0081	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
<b>Benzo[g,h,i]perylene</b>	<b>0.079</b>		0.037	0.012	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
<b>Benzo[k]fluoranthene</b>	<b>0.12</b>		0.037	0.011	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.069	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
<b>Chrysene</b>	<b>0.20</b>		0.037	0.010	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
<b>Dibenz(a,h)anthracene</b>	<b>0.025 J</b>		0.037	0.0073	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
2,4-Dichlorophenol	<0.37		0.37	0.090	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
2,4-Dinitrophenol	<0.76		0.76	0.66	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
<b>Fluoranthene</b>	<b>0.41</b>		0.037	0.0070	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
<b>Fluorene</b>	<b>0.0070 J</b>		0.037	0.0053	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
Hexachlorobenzene	<0.076		0.076	0.0087	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.082</b>		0.037	0.0098	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
2-Methylnaphthalene	<0.076		0.076	0.0069	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
Naphthalene	<0.037		0.037	0.0058	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
Nitrobenzene	<0.037		0.037	0.0094	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
2-Nitrophenol	<0.37		0.37	0.089	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1

TestAmerica Chicago



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TestAmerica Job ID: 500-136893-11

**Client Sample ID: 2696V-24-B03 (0-5)**

**Lab Sample ID: 500-136893-17**

Date Collected: 11/07/17 11:10

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 84.7

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
Pentachlorophenol	<0.76		0.76	0.60	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
<b>Phenanthrene</b>	<b>0.15</b>		0.037	0.0053	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
Phenol	<0.19		0.19	0.084	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
<b>Pyrene</b>	<b>0.34</b>		0.037	0.0075	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
2,4,5-Trichlorophenol	<0.37		0.37	0.086	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/14/17 07:55	11/16/17 02:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	82		44 - 121	11/14/17 07:55	11/16/17 02:04	1
2-Fluorophenol	96		46 - 133	11/14/17 07:55	11/16/17 02:04	1
Nitrobenzene-d5	79		41 - 120	11/14/17 07:55	11/16/17 02:04	1
Phenol-d5	103		46 - 125	11/14/17 07:55	11/16/17 02:04	1
Terphenyl-d14	97		35 - 160	11/14/17 07:55	11/16/17 02:04	1
2,4,6-Tribromophenol	74		25 - 139	11/14/17 07:55	11/16/17 02:04	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.22	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1
<b>Arsenic</b>	<b>9.0</b>		0.57	0.19	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1
<b>Barium</b>	<b>35</b>		0.57	0.064	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1
<b>Beryllium</b>	<b>0.42</b>		0.23	0.053	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1
<b>Cadmium</b>	<b>0.27</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1
<b>Chromium</b>	<b>8.5</b>		0.57	0.28	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1
<b>Cobalt</b>	<b>8.3</b>		0.28	0.074	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1
<b>Copper</b>	<b>21</b>		0.57	0.16	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1
<b>Iron</b>	<b>16000</b>	<b>B</b>	11	5.9	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1
<b>Lead</b>	<b>25</b>		0.28	0.13	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1
<b>Magnesium</b>	<b>37000</b>		5.7	2.8	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1
<b>Calcium</b>	<b>110000</b>	<b>B</b>	110	19	mg/Kg	☼	11/08/17 16:57	11/11/17 01:35	10
<b>Manganese</b>	<b>440</b>	<b>B</b>	0.57	0.082	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1
<b>Nickel</b>	<b>18</b>		0.57	0.16	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1
<b>Selenium</b>	<b>0.51</b>	<b>J</b>	0.57	0.33	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1
Silver	<0.28		0.28	0.073	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1
Thallium	<0.57		0.57	0.28	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1
<b>Vanadium</b>	<b>12</b>		0.28	0.067	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1
<b>Zinc</b>	<b>61</b>		1.1	0.50	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1
<b>Potassium</b>	<b>980</b>		28	10	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1
<b>Sodium</b>	<b>200</b>		57	8.4	mg/Kg	☼	11/08/17 16:57	11/10/17 02:29	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 14:43	11/11/17 18:02	1
<b>Barium</b>	<b>0.45</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 14:43	11/11/17 18:02	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 14:43	11/11/17 18:02	1
<b>Cadmium</b>	<b>0.0030</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 14:43	11/11/17 18:02	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-11

**Client Sample ID: 2696V-24-B03 (0-5)**

**Lab Sample ID: 500-136893-17**

Date Collected: 11/07/17 11:10

Matrix: Solid

Date Received: 11/07/17 16:20

Percent Solids: 84.7

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>400</b>		5.0	0.50	mg/L		11/10/17 14:43	11/11/17 18:02	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 18:02	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 18:02	1
<b>Copper</b>	<b>0.027</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 18:02	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 14:43	11/11/17 18:02	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 14:43	11/11/17 18:02	1
<b>Magnesium</b>	<b>130</b>		2.5	0.50	mg/L		11/10/17 14:43	11/11/17 18:02	1
<b>Manganese</b>	<b>1.6</b>		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 18:02	1
<b>Nickel</b>	<b>0.011</b>	J	0.025	0.010	mg/L		11/10/17 14:43	11/11/17 18:02	1
<b>Potassium</b>	<b>2.0</b>	J	2.5	0.50	mg/L		11/10/17 14:43	11/11/17 18:02	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 14:43	11/11/17 18:02	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 18:02	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 14:43	11/11/17 18:02	1
<b>Zinc</b>	<b>0.063</b>	J ^	0.50	0.020	mg/L		11/10/17 14:43	11/11/17 18:02	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.097</b>		0.025	0.010	mg/L		11/10/17 14:42	11/12/17 00:47	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 14:43	11/13/17 14:05	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 14:43	11/13/17 14:05	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/13/17 16:00	11/14/17 15:32	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.022</b>		0.020	0.0065	mg/Kg	☼	11/09/17 16:15	11/10/17 10:06	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cyanide, Total</b>	<b>0.20</b>	J	0.51	0.18	mg/Kg	☼	11/15/17 13:10	11/15/17 16:47	1
<b>pH</b>	<b>8.0</b>		0.20	0.20	SU			11/14/17 17:36	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-11

## Qualifiers

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

### General Chemistry

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

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136893-11

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Report To (optional)  
 Contact: MATT WIGGS  
 Company: TERRACON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference#: \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-1316893  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: 29, 4.0, 5.5

Client		Client Project #		Preservative		Parameter												Preservative Key	
<u>TERRACON</u>		<u>11177029 M</u>																1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name		Project Location/State		Lab Project #		Sampler		Lab PM											
<u>WORK ORDER 037</u>		<u>MARKHAM, IL</u>				<u>CRAIG VARLAND</u>		<u>DICK WRIGHT</u>											
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	VOCs	SVOCs	23 TAL METALS, PH	TCUP 23 TAL METALS									Comments
			Date	Time															
15		2696V-24-B01-(0-5)	11-6-17	1215	5	S	X	X	X	X									
14		2696V-24-B04-(0-5)	11-7-17	1055	5	S	X	X	X	X									
17		2696V-24-B03-(0-5)	11-7-17	1110	5	S	X	X	X	X									

Turnaround Time Required (Business Days)

\_\_\_ 1 Day \_\_\_ 2 Days \_\_\_ 5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRACON</u> Date: <u>11-7-17</u> Time: <u>1550</u>	Received By: <u>P. Neal</u> Company: <u>TA</u> Date: <u>11/7/17</u> Time: <u>1550</u>
Relinquished By: <u>P. Neal</u> Company: <u>TA</u> Date: <u>11/7/17</u> Time: <u>1620</u>	Received By: <u>[Signature]</u> Company: <u>TACME</u> Date: <u>11/7/17</u> Time: <u>1620</u>
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____

Lab Courier: TD  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

Matrix Key

- WW - Wastewater
- W - Water
- S - Soil
- SL - Sludge
- MS - Miscellaneous
- OL - Oil
- A - Air
- SE - Sediment
- SO - Soil
- L - Leachate
- WI - Wipe
- DW - Drinking Water
- O - Other

Client Comments

NO ALUMINUM

Lab Comments:

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136893-11

**Login Number: 136893**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9, 4.0, 5.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-137163-1

Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:

Terracon Consulting Eng & Scientists

135 Ambassador Drive

Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:

11/22/2017 6:39:37 PM

Jodie Bracken, Project Management Assistant II

[jodie.bracken@testamericainc.com](mailto:jodie.bracken@testamericainc.com)

Designee for

Richard Wright, Senior Project Manager

(708)534-5200

[richard.wright@testamericainc.com](mailto:richard.wright@testamericainc.com)

### LINKS

Review your project  
results through

TotalAccess

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-1

**Job ID: 500-137163-1**

**Laboratory: TestAmerica Chicago**

## Narrative

### Job Narrative 500-137163-1

#### Receipt

The samples were received on 11/10/2017 3:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.4° C and 5.0° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270D: The following sample contained one base surrogate outside acceptance limits: 2696V-24-B02 (0-5) Dup (500-137163-2). The laboratory's SOP allows one acid and one base surrogate to be outside acceptance limits; therefore, re-extraction was not performed. These results have been reported and qualified.

Method(s) 8270D: The following matrix spike (MS) recovered at 0% for one analyte. The LCSD was in control for this analyte. Data has been qualified and reported.(500-137163-E-1-G MS)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Metals

Method(s) 6010B: The method blank for preparation batch 500-409937 and analytical batch 500-410092 contained Calcium and Magnesium above the reporting limit (RL). Associated samples 2696V-24-B02 (0-5) (500-137163-1), 2696V-24-B02 (0-5) Dup (500-137163-2) and (500-137163-E-1-D MSD) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-410598 recovered above the upper control limit for Zinc. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: 2696V-24-B02 (0-5) (500-137163-1) and 2696V-24-B02 (0-5) Dup (500-137163-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-1

**Client Sample ID: 2696V-24-B02 (0-5)**

**Lab Sample ID: 500-137163-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.0073	J	0.038	0.0069	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.0090	J	0.038	0.0051	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.014	J	0.038	0.0064	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.043		0.038	0.0052	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.048		0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.068		0.038	0.0083	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.034	J	0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.029	J	0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.051		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.0082	J	0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.081		0.038	0.0071	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.0059	J	0.038	0.0054	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.030	J	0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.022	J	0.078	0.0071	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.0078	J	0.038	0.0059	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.063		0.038	0.0054	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.085		0.038	0.0076	mg/Kg	1	☼	8270D	Total/NA
Arsenic	6.7		0.59	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	30		0.59	0.067	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.48		0.23	0.055	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.19	B	0.12	0.021	mg/Kg	1	☼	6010B	Total/NA
Chromium	11		0.59	0.29	mg/Kg	1	☼	6010B	Total/NA
Cobalt	7.2		0.29	0.077	mg/Kg	1	☼	6010B	Total/NA
Copper	18		0.59	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	16000	B	12	6.1	mg/Kg	1	☼	6010B	Total/NA
Lead	14	F1	0.29	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	23000	B F2	5.9	2.9	mg/Kg	1	☼	6010B	Total/NA
Calcium	58000	B F2	120	20	mg/Kg	10	☼	6010B	Total/NA
Manganese	260	B	0.59	0.085	mg/Kg	1	☼	6010B	Total/NA
Nickel	19		0.59	0.17	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.65	F1	0.59	0.34	mg/Kg	1	☼	6010B	Total/NA
Vanadium	14		0.29	0.069	mg/Kg	1	☼	6010B	Total/NA
Zinc	63	F1	1.2	0.51	mg/Kg	1	☼	6010B	Total/NA
Potassium	1400	F1 F2	29	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	130		59	8.7	mg/Kg	1	☼	6010B	Total/NA
Barium	0.24	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0028	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	400		5.0	0.50	mg/L	1		6010B	TCLP
Magnesium	180		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.98		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	1.8	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.091	J ^ B	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.17		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.031		0.018	0.0061	mg/Kg	1	☼	7471B	Total/NA
pH	8.1		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-24-B02 (0-5) Dup**

**Lab Sample ID: 500-137163-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.093		0.038	0.0068	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-1

**Client Sample ID: 2696V-24-B02 (0-5) Dup (Continued)**

**Lab Sample ID: 500-137163-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acenaphthylene	0.048		0.038	0.0050	mg/Kg	1	☼	8270D	Total/NA	
Anthracene	0.35		0.038	0.0063	mg/Kg	1	☼	8270D	Total/NA	
Benzo[a]anthracene	1.6		0.038	0.0051	mg/Kg	1	☼	8270D	Total/NA	
Bis(2-ethylhexyl) pthalate	0.16	J	0.19	0.069	mg/Kg	1	☼	8270D	Total/NA	
Carbazole	0.29		0.19	0.095	mg/Kg	1	☼	8270D	Total/NA	
Chrysene	1.9		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA	
Dibenzofuran	0.070	J	0.19	0.044	mg/Kg	1	☼	8270D	Total/NA	
Di-n-butyl pthalate	0.18	J	0.19	0.058	mg/Kg	1	☼	8270D	Total/NA	
Fluorene	0.12		0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA	
2-Methylnaphthalene	0.031	J	0.076	0.0070	mg/Kg	1	☼	8270D	Total/NA	
Naphthalene	0.025	J	0.038	0.0058	mg/Kg	1	☼	8270D	Total/NA	
Phenanthrene	2.6		0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA	
Benzo[a]pyrene - DL	2.1		0.15	0.029	mg/Kg	4	☼	8270D	Total/NA	
Benzo[b]fluoranthene - DL	3.5		0.15	0.033	mg/Kg	4	☼	8270D	Total/NA	
Benzo[g,h,i]perylene - DL	0.87		0.15	0.049	mg/Kg	4	☼	8270D	Total/NA	
Benzo[k]fluoranthene - DL	1.4		0.15	0.045	mg/Kg	4	☼	8270D	Total/NA	
Dibenz(a,h)anthracene - DL	0.18		0.15	0.029	mg/Kg	4	☼	8270D	Total/NA	
Fluoranthene - DL	4.7		0.15	0.028	mg/Kg	4	☼	8270D	Total/NA	
Indeno[1,2,3-cd]pyrene - DL	0.90		0.15	0.039	mg/Kg	4	☼	8270D	Total/NA	
Pyrene - DL	4.0		0.15	0.030	mg/Kg	4	☼	8270D	Total/NA	
Antimony	0.22	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA	
Arsenic	7.3		0.57	0.20	mg/Kg	1	☼	6010B	Total/NA	
Barium	63		0.57	0.066	mg/Kg	1	☼	6010B	Total/NA	
Beryllium	0.44		0.23	0.054	mg/Kg	1	☼	6010B	Total/NA	
Cadmium	0.49	B	0.11	0.021	mg/Kg	1	☼	6010B	Total/NA	
Chromium	12		0.57	0.28	mg/Kg	1	☼	6010B	Total/NA	
Cobalt	6.7		0.29	0.075	mg/Kg	1	☼	6010B	Total/NA	
Copper	22		0.57	0.16	mg/Kg	1	☼	6010B	Total/NA	
Iron	14000	B	11	6.0	mg/Kg	1	☼	6010B	Total/NA	
Lead	82		0.29	0.13	mg/Kg	1	☼	6010B	Total/NA	
Magnesium	34000	B	5.7	2.9	mg/Kg	1	☼	6010B	Total/NA	
Calcium	94000	B	110	19	mg/Kg	10	☼	6010B	Total/NA	
Manganese	380	B	0.57	0.083	mg/Kg	1	☼	6010B	Total/NA	
Nickel	16		0.57	0.17	mg/Kg	1	☼	6010B	Total/NA	
Vanadium	13		0.29	0.068	mg/Kg	1	☼	6010B	Total/NA	
Zinc	140		1.1	0.50	mg/Kg	1	☼	6010B	Total/NA	
Potassium	1100		29	10	mg/Kg	1	☼	6010B	Total/NA	
Sodium	120		57	8.5	mg/Kg	1	☼	6010B	Total/NA	
Barium	0.36	J	0.50	0.050	mg/L	1		6010B	TCLP	
Cadmium	0.0043	J	0.0050	0.0020	mg/L	1		6010B	TCLP	
Calcium	380		5.0	0.50	mg/L	1		6010B	TCLP	
Copper	0.021	J B	0.040	0.010	mg/L	1		6010B	TCLP	
Lead	0.0097		0.0075	0.0075	mg/L	1		6010B	TCLP	
Magnesium	180		2.5	0.50	mg/L	1		6010B	TCLP	
Manganese	0.91		0.025	0.010	mg/L	1		6010B	TCLP	
Potassium	4.9		2.5	0.50	mg/L	1		6010B	TCLP	
Zinc	0.34	J ^ B	0.50	0.020	mg/L	1		6010B	TCLP	
Lead	0.11		0.0075	0.0075	mg/L	1		6010B	SPLP East	
Manganese	0.25		0.025	0.010	mg/L	1		6010B	SPLP East	
Mercury	0.033		0.019	0.0063	mg/Kg	1	☼	7471B	Total/NA	

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-1

**Client Sample ID: 2696V-24-B02 (0-5) Dup (Continued)**

**Lab Sample ID: 500-137163-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH	7.6		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

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# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-137163-1	2696V-24-B02 (0-5)	Solid	11/10/17 12:35	11/10/17 15:20
500-137163-2	2696V-24-B02 (0-5) Dup	Solid	11/10/17 12:35	11/10/17 15:20

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-1

**Client Sample ID: 2696V-24-B02 (0-5)**

**Lab Sample ID: 500-137163-1**

**Date Collected: 11/10/17 12:35**

**Matrix: Solid**

**Date Received: 11/10/17 15:20**

**Percent Solids: 81.5**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.015		0.015	0.0065	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Benzene	<0.0015		0.0015	0.00038	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Bromodichloromethane	<0.0015		0.0015	0.00030	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Bromoform	<0.0015		0.0015	0.00044	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Bromomethane	<0.0037		0.0037	0.0014	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
2-Butanone (MEK)	<0.0037		0.0037	0.0017	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Carbon disulfide	<0.0037		0.0037	0.00078	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Carbon tetrachloride	<0.0015		0.0015	0.00043	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Chlorobenzene	<0.0015		0.0015	0.00055	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Chloroethane	<0.0037		0.0037	0.0011	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Chloroform	<0.0015		0.0015	0.00052	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Chloromethane	<0.0037		0.0037	0.0015	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
cis-1,2-Dichloroethene	<0.0015		0.0015	0.00042	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
cis-1,3-Dichloropropene	<0.0015		0.0015	0.00045	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Dibromochloromethane	<0.0015		0.0015	0.00049	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
1,1-Dichloroethane	<0.0015		0.0015	0.00051	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
1,2-Dichloroethane	<0.0037		0.0037	0.0012	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
1,1-Dichloroethene	<0.0015		0.0015	0.00051	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
1,2-Dichloropropane	<0.0015		0.0015	0.00039	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
1,3-Dichloropropane, Total	<0.0015		0.0015	0.00052	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Ethylbenzene	<0.0015		0.0015	0.00072	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
2-Hexanone	<0.0037		0.0037	0.0012	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Methylene Chloride	<0.0037		0.0037	0.0015	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
4-Methyl-2-pentanone (MIBK)	<0.0037		0.0037	0.0011	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Methyl tert-butyl ether	<0.0015		0.0015	0.00044	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Styrene	<0.0015		0.0015	0.00045	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
1,1,2,2-Tetrachloroethane	<0.0015		0.0015	0.00048	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Tetrachloroethene	<0.0015		0.0015	0.00051	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Toluene	<0.0015		0.0015	0.00038	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
trans-1,2-Dichloroethene	<0.0015		0.0015	0.00066	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
trans-1,3-Dichloropropene	<0.0015		0.0015	0.00052	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
1,1,1-Trichloroethane	<0.0015		0.0015	0.00050	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
1,1,2-Trichloroethane	<0.0015		0.0015	0.00064	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Trichloroethene	<0.0015		0.0015	0.00051	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Vinyl acetate	<0.0037		0.0037	0.0013	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Vinyl chloride	<0.0015		0.0015	0.00066	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1
Xylenes, Total	<0.0030		0.0030	0.00048	mg/Kg	☼	11/11/17 14:00	11/16/17 15:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		75 - 131	11/11/17 14:00	11/16/17 15:14	1
Dibromofluoromethane	99		75 - 126	11/11/17 14:00	11/16/17 15:14	1
1,2-Dichloroethane-d4 (Surr)	93		70 - 134	11/11/17 14:00	11/16/17 15:14	1
Toluene-d8 (Surr)	97		75 - 124	11/11/17 14:00	11/16/17 15:14	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.0073	J	0.038	0.0069	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Acenaphthylene	0.0090	J	0.038	0.0051	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Anthracene	0.014	J	0.038	0.0064	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Benzo[a]anthracene	0.043		0.038	0.0052	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-1

**Client Sample ID: 2696V-24-B02 (0-5)**

**Lab Sample ID: 500-137163-1**

**Date Collected: 11/10/17 12:35**

**Matrix: Solid**

**Date Received: 11/10/17 15:20**

**Percent Solids: 81.5**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.048</b>		0.038	0.0074	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
<b>Benzo[b]fluoranthene</b>	<b>0.068</b>		0.038	0.0083	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
<b>Benzo[g,h,i]perylene</b>	<b>0.034</b>	<b>J</b>	0.038	0.012	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
<b>Benzo[k]fluoranthene</b>	<b>0.029</b>	<b>J</b>	0.038	0.011	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.058	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.070	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.051	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Butyl benzyl phthalate	<0.19		0.19	0.073	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Carbazole	<0.19		0.19	0.096	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
4-Chloroaniline	<0.78		0.78	0.18	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
2-Chlorophenol	<0.19		0.19	0.066	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
<b>Chrysene</b>	<b>0.051</b>		0.038	0.010	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
<b>Dibenz(a,h)anthracene</b>	<b>0.0082</b>	<b>J</b>	0.038	0.0074	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
1,2-Dichlorobenzene	<0.19		0.19	0.046	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
3,3'-Dichlorobenzidine	<0.19	F1	0.19	0.054	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
2,4-Dichlorophenol	<0.38		0.38	0.091	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Diethyl phthalate	<0.19		0.19	0.065	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
2,4-Dimethylphenol	<0.38		0.38	0.15	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Di-n-butyl phthalate	<0.19		0.19	0.059	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
4,6-Dinitro-2-methylphenol	<0.78	F2	0.78	0.31	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
2,4-Dinitrophenol	<0.78	F2	0.78	0.68	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
2,4-Dinitrotoluene	<0.19		0.19	0.061	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
2,6-Dinitrotoluene	<0.19		0.19	0.076	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Di-n-octyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
<b>Fluoranthene</b>	<b>0.081</b>		0.038	0.0071	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
<b>Fluorene</b>	<b>0.0059</b>	<b>J</b>	0.038	0.0054	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Hexachlorobenzene	<0.078		0.078	0.0089	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Hexachlorocyclopentadiene	<0.78	F2	0.78	0.22	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.030</b>	<b>J</b>	0.038	0.010	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
<b>2-Methylnaphthalene</b>	<b>0.022</b>	<b>J</b>	0.078	0.0071	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
2-Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
3 & 4 Methylphenol	<0.19		0.19	0.064	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
<b>Naphthalene</b>	<b>0.0078</b>	<b>J</b>	0.038	0.0059	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
2-Nitroaniline	<0.19		0.19	0.052	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Nitrobenzene	<0.038		0.038	0.0096	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
2-Nitrophenol	<0.38		0.38	0.091	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-1

**Client Sample ID: 2696V-24-B02 (0-5)**

**Lab Sample ID: 500-137163-1**

Date Collected: 11/10/17 12:35

Matrix: Solid

Date Received: 11/10/17 15:20

Percent Solids: 81.5

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.78		0.78	0.37	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
N-Nitrosodi-n-propylamine	<0.078		0.078	0.047	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.045	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Pentachlorophenol	<0.78	F1	0.78	0.62	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
<b>Phenanthrene</b>	<b>0.063</b>		0.038	0.0054	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
Phenol	<0.19		0.19	0.085	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
<b>Pyrene</b>	<b>0.085</b>		0.038	0.0076	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
2,4,5-Trichlorophenol	<0.38		0.38	0.088	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	11/17/17 07:31	11/20/17 15:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	93		44 - 121	11/17/17 07:31	11/20/17 15:24	1
2-Fluorophenol	98		46 - 133	11/17/17 07:31	11/20/17 15:24	1
Nitrobenzene-d5	92		41 - 120	11/17/17 07:31	11/20/17 15:24	1
Phenol-d5	101		46 - 125	11/17/17 07:31	11/20/17 15:24	1
Terphenyl-d14	105		35 - 160	11/17/17 07:31	11/20/17 15:24	1
2,4,6-Tribromophenol	51		25 - 139	11/17/17 07:31	11/20/17 15:24	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2	F1 F2	1.2	0.23	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1
<b>Arsenic</b>	<b>6.7</b>		0.59	0.20	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1
<b>Barium</b>	<b>30</b>		0.59	0.067	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1
<b>Beryllium</b>	<b>0.48</b>		0.23	0.055	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1
<b>Cadmium</b>	<b>0.19</b>	<b>B</b>	0.12	0.021	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1
<b>Chromium</b>	<b>11</b>		0.59	0.29	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1
<b>Cobalt</b>	<b>7.2</b>		0.29	0.077	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1
<b>Copper</b>	<b>18</b>		0.59	0.16	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1
<b>Iron</b>	<b>16000</b>	<b>B</b>	12	6.1	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1
<b>Lead</b>	<b>14</b>	<b>F1</b>	0.29	0.14	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1
<b>Magnesium</b>	<b>23000</b>	<b>B F2</b>	5.9	2.9	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1
<b>Calcium</b>	<b>58000</b>	<b>B F2</b>	120	20	mg/Kg	☼	11/14/17 16:15	11/15/17 19:45	10
<b>Manganese</b>	<b>260</b>	<b>B</b>	0.59	0.085	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1
<b>Nickel</b>	<b>19</b>		0.59	0.17	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1
<b>Selenium</b>	<b>0.65</b>	<b>F1</b>	0.59	0.34	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1
Silver	<0.29		0.29	0.076	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1
Thallium	<0.59		0.59	0.29	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1
<b>Vanadium</b>	<b>14</b>		0.29	0.069	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1
<b>Zinc</b>	<b>63</b>	<b>F1</b>	1.2	0.51	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1
<b>Potassium</b>	<b>1400</b>	<b>F1 F2</b>	29	10	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1
<b>Sodium</b>	<b>130</b>		59	8.7	mg/Kg	☼	11/14/17 16:15	11/15/17 12:24	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/17/17 09:02	11/17/17 16:30	1
<b>Barium</b>	<b>0.24</b>	<b>J</b>	0.50	0.050	mg/L		11/17/17 09:02	11/17/17 16:30	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/17/17 09:02	11/17/17 16:30	1
<b>Cadmium</b>	<b>0.0028</b>	<b>J</b>	0.0050	0.0020	mg/L		11/17/17 09:02	11/17/17 16:30	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-1

**Client Sample ID: 2696V-24-B02 (0-5)**

**Lab Sample ID: 500-137163-1**

**Date Collected: 11/10/17 12:35**

**Matrix: Solid**

**Date Received: 11/10/17 15:20**

**Percent Solids: 81.5**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>400</b>		5.0	0.50	mg/L		11/17/17 09:02	11/17/17 16:30	1
Chromium	<0.025		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:30	1
Cobalt	<0.025		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:30	1
Copper	<0.040		0.040	0.010	mg/L		11/17/17 09:02	11/17/17 16:30	1
Iron	<0.40		0.40	0.20	mg/L		11/17/17 09:02	11/17/17 16:30	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/17/17 09:02	11/17/17 16:30	1
<b>Magnesium</b>	<b>180</b>		2.5	0.50	mg/L		11/17/17 09:02	11/17/17 16:30	1
<b>Manganese</b>	<b>0.98</b>		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:30	1
Nickel	<0.025		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:30	1
<b>Potassium</b>	<b>1.8 J</b>		2.5	0.50	mg/L		11/17/17 09:02	11/17/17 16:30	1
Selenium	<0.050		0.050	0.020	mg/L		11/17/17 09:02	11/17/17 16:30	1
Silver	<0.025		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:30	1
Vanadium	<0.025		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:30	1
<b>Zinc</b>	<b>0.091 J ^ B</b>		0.50	0.020	mg/L		11/17/17 09:02	11/17/17 16:30	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.17</b>		0.025	0.010	mg/L		11/20/17 07:21	11/20/17 20:02	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/17/17 09:02	11/18/17 03:40	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/17/17 09:02	11/18/17 03:40	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/18/17 14:00	11/20/17 11:20	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.031</b>		0.018	0.0061	mg/Kg	☼	11/20/17 07:30	11/20/17 12:01	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.60		0.60	0.21	mg/Kg	☼	11/21/17 13:15	11/21/17 16:31	1
<b>pH</b>	<b>8.1</b>		0.20	0.20	SU			11/20/17 10:24	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-1

**Client Sample ID: 2696V-24-B02 (0-5) Dup**

**Lab Sample ID: 500-137163-2**

**Date Collected: 11/10/17 12:35**

**Matrix: Solid**

**Date Received: 11/10/17 15:20**

**Percent Solids: 84.3**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.022		0.022	0.0094	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Benzene	<0.0022		0.0022	0.00055	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Bromodichloromethane	<0.0022		0.0022	0.00044	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Bromoform	<0.0022		0.0022	0.00063	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Bromomethane	<0.0054		0.0054	0.0020	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
2-Butanone (MEK)	<0.0054		0.0054	0.0024	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Carbon disulfide	<0.0054		0.0054	0.0011	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Carbon tetrachloride	<0.0022		0.0022	0.00063	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Chlorobenzene	<0.0022		0.0022	0.00080	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Chloroethane	<0.0054		0.0054	0.0016	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Chloroform	<0.0022		0.0022	0.00075	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Chloromethane	<0.0054		0.0054	0.0022	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
cis-1,2-Dichloroethene	<0.0022		0.0022	0.00060	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
cis-1,3-Dichloropropene	<0.0022		0.0022	0.00065	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Dibromochloromethane	<0.0022		0.0022	0.00071	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
1,1-Dichloroethane	<0.0022		0.0022	0.00074	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
1,2-Dichloroethane	<0.0054		0.0054	0.0017	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
1,1-Dichloroethene	<0.0022		0.0022	0.00074	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
1,2-Dichloropropane	<0.0022		0.0022	0.00056	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
1,3-Dichloropropane, Total	<0.0022		0.0022	0.00076	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Ethylbenzene	<0.0022		0.0022	0.0010	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
2-Hexanone	<0.0054		0.0054	0.0017	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Methylene Chloride	<0.0054		0.0054	0.0021	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
4-Methyl-2-pentanone (MIBK)	<0.0054		0.0054	0.0016	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Methyl tert-butyl ether	<0.0022		0.0022	0.00063	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Styrene	<0.0022		0.0022	0.00065	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
1,1,2,2-Tetrachloroethane	<0.0022		0.0022	0.00069	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Tetrachloroethene	<0.0022		0.0022	0.00074	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Toluene	<0.0022		0.0022	0.00055	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
trans-1,2-Dichloroethene	<0.0022		0.0022	0.00096	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
trans-1,3-Dichloropropene	<0.0022		0.0022	0.00076	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
1,1,1-Trichloroethane	<0.0022		0.0022	0.00073	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
1,1,2-Trichloroethane	<0.0022		0.0022	0.00093	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Trichloroethene	<0.0022		0.0022	0.00073	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Vinyl acetate	<0.0054		0.0054	0.0019	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Vinyl chloride	<0.0022		0.0022	0.00096	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1
Xylenes, Total	<0.0043		0.0043	0.00069	mg/Kg	☼	11/11/17 14:00	11/16/17 15:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		75 - 131	11/11/17 14:00	11/16/17 15:39	1
Dibromofluoromethane	102		75 - 126	11/11/17 14:00	11/16/17 15:39	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 134	11/11/17 14:00	11/16/17 15:39	1
Toluene-d8 (Surr)	96		75 - 124	11/11/17 14:00	11/16/17 15:39	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<b>0.093</b>		0.038	0.0068	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
Acenaphthylene	<b>0.048</b>		0.038	0.0050	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
Anthracene	<b>0.35</b>		0.038	0.0063	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
Benzo[a]anthracene	<b>1.6</b>		0.038	0.0051	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-1

**Client Sample ID: 2696V-24-B02 (0-5) Dup**

**Lab Sample ID: 500-137163-2**

**Date Collected: 11/10/17 12:35**

**Matrix: Solid**

**Date Received: 11/10/17 15:20**

**Percent Solids: 84.3**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
<b>Bis(2-ethylhexyl) phthalate</b>	<b>0.16</b>	<b>J</b>	0.19	0.069	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
<b>Carbazole</b>	<b>0.29</b>		0.19	0.095	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
2-Chlorophenol	<0.19		0.19	0.065	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
<b>Chrysene</b>	<b>1.9</b>		0.038	0.010	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
<b>Dibenzofuran</b>	<b>0.070</b>	<b>J</b>	0.19	0.044	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
2,4-Dichlorophenol	<0.38		0.38	0.090	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
2,4-Dimethylphenol	<0.38		0.38	0.14	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
<b>Di-n-butyl phthalate</b>	<b>0.18</b>	<b>J</b>	0.19	0.058	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
2,4-Dinitrophenol	<0.76		0.76	0.67	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
<b>Fluorene</b>	<b>0.12</b>		0.038	0.0053	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
Hexachlorobenzene	<0.076		0.076	0.0088	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
<b>2-Methylnaphthalene</b>	<b>0.031</b>	<b>J</b>	0.076	0.0070	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
<b>Naphthalene</b>	<b>0.025</b>	<b>J</b>	0.038	0.0058	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
Nitrobenzene	<0.038		0.038	0.0095	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
2-Nitrophenol	<0.38		0.38	0.089	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
Pentachlorophenol	<0.76		0.76	0.61	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
<b>Phenanthrene</b>	<b>2.6</b>		0.038	0.0053	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
Phenol	<0.19		0.19	0.084	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-1

**Client Sample ID: 2696V-24-B02 (0-5) Dup**

**Lab Sample ID: 500-137163-2**

Date Collected: 11/10/17 12:35

Matrix: Solid

Date Received: 11/10/17 15:20

Percent Solids: 84.3

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
2,4,5-Trichlorophenol	<0.38		0.38	0.086	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	11/17/17 07:31	11/20/17 21:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	114		44 - 121				11/17/17 07:31	11/20/17 21:30	1
2-Fluorophenol	113		46 - 133				11/17/17 07:31	11/20/17 21:30	1
Nitrobenzene-d5	114		41 - 120				11/17/17 07:31	11/20/17 21:30	1
Phenol-d5	116		46 - 125				11/17/17 07:31	11/20/17 21:30	1
Terphenyl-d14	118		35 - 160				11/17/17 07:31	11/20/17 21:30	1
2,4,6-Tribromophenol	88		25 - 139				11/17/17 07:31	11/20/17 21:30	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	2.1		0.15	0.029	mg/Kg	☼	11/17/17 07:31	11/21/17 18:36	4
Benzo[b]fluoranthene	3.5		0.15	0.033	mg/Kg	☼	11/17/17 07:31	11/21/17 18:36	4
Benzo[g,h,i]perylene	0.87		0.15	0.049	mg/Kg	☼	11/17/17 07:31	11/21/17 18:36	4
Benzo[k]fluoranthene	1.4		0.15	0.045	mg/Kg	☼	11/17/17 07:31	11/21/17 18:36	4
Dibenz(a,h)anthracene	0.18		0.15	0.029	mg/Kg	☼	11/17/17 07:31	11/21/17 18:36	4
Fluoranthene	4.7		0.15	0.028	mg/Kg	☼	11/17/17 07:31	11/21/17 18:36	4
Indeno[1,2,3-cd]pyrene	0.90		0.15	0.039	mg/Kg	☼	11/17/17 07:31	11/21/17 18:36	4
Pyrene	4.0		0.15	0.030	mg/Kg	☼	11/17/17 07:31	11/21/17 18:36	4

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.22	J	1.1	0.22	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1
Arsenic	7.3		0.57	0.20	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1
Barium	63		0.57	0.066	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1
Beryllium	0.44		0.23	0.054	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1
Cadmium	0.49	B	0.11	0.021	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1
Chromium	12		0.57	0.28	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1
Cobalt	6.7		0.29	0.075	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1
Copper	22		0.57	0.16	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1
Iron	14000	B	11	6.0	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1
Lead	82		0.29	0.13	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1
Magnesium	34000	B	5.7	2.9	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1
Calcium	94000	B	110	19	mg/Kg	☼	11/14/17 16:15	11/15/17 20:13	10
Manganese	380	B	0.57	0.083	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1
Nickel	16		0.57	0.17	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1
Selenium	<0.57		0.57	0.34	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1
Silver	<0.29		0.29	0.074	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1
Thallium	<0.57		0.57	0.29	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1
Vanadium	13		0.29	0.068	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1
Zinc	140		1.1	0.50	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1
Potassium	1100		29	10	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1
Sodium	120		57	8.5	mg/Kg	☼	11/14/17 16:15	11/15/17 12:57	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L	☼	11/17/17 09:02	11/17/17 16:34	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-1

**Client Sample ID: 2696V-24-B02 (0-5) Dup**

**Lab Sample ID: 500-137163-2**

**Date Collected: 11/10/17 12:35**

**Matrix: Solid**

**Date Received: 11/10/17 15:20**

**Percent Solids: 84.3**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.36</b>	<b>J</b>	0.50	0.050	mg/L		11/17/17 09:02	11/17/17 16:34	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/17/17 09:02	11/17/17 16:34	1
<b>Cadmium</b>	<b>0.0043</b>	<b>J</b>	0.0050	0.0020	mg/L		11/17/17 09:02	11/17/17 16:34	1
<b>Calcium</b>	<b>380</b>		5.0	0.50	mg/L		11/17/17 09:02	11/17/17 16:34	1
Chromium	<0.025		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:34	1
Cobalt	<0.025		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:34	1
<b>Copper</b>	<b>0.021</b>	<b>J B</b>	0.040	0.010	mg/L		11/17/17 09:02	11/17/17 16:34	1
Iron	<0.40		0.40	0.20	mg/L		11/17/17 09:02	11/17/17 16:34	1
<b>Lead</b>	<b>0.0097</b>		0.0075	0.0075	mg/L		11/17/17 09:02	11/17/17 16:34	1
<b>Magnesium</b>	<b>180</b>		2.5	0.50	mg/L		11/17/17 09:02	11/17/17 16:34	1
<b>Manganese</b>	<b>0.91</b>		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:34	1
Nickel	<0.025		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:34	1
<b>Potassium</b>	<b>4.9</b>		2.5	0.50	mg/L		11/17/17 09:02	11/17/17 16:34	1
Selenium	<0.050		0.050	0.020	mg/L		11/17/17 09:02	11/17/17 16:34	1
Silver	<0.025		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:34	1
Vanadium	<0.025		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:34	1
<b>Zinc</b>	<b>0.34</b>	<b>J ^ B</b>	0.50	0.020	mg/L		11/17/17 09:02	11/17/17 16:34	1

**Method: 6010B - SPLP Metals - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lead</b>	<b>0.11</b>		0.0075	0.0075	mg/L		11/20/17 07:21	11/20/17 20:06	1
<b>Manganese</b>	<b>0.25</b>		0.025	0.010	mg/L		11/20/17 07:21	11/20/17 20:06	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/17/17 09:02	11/18/17 03:44	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/17/17 09:02	11/18/17 03:44	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/18/17 14:00	11/20/17 09:08	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.033</b>		0.019	0.0063	mg/Kg	☼	11/20/17 07:30	11/20/17 12:03	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.53		0.53	0.18	mg/Kg	☼	11/21/17 13:15	11/21/17 16:31	1
<b>pH</b>	<b>7.6</b>		0.20	0.20	SU			11/20/17 10:26	1



# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-1

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

### Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
F3	Duplicate RPD exceeds the control limit
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-1

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING


2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)  
 Contact: MATT WEISS  
 Company: TERRACON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-137163  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: 5.013.4

Client		Client Project #		Preservative		Parameter		Matrix		500-137163 COC	Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other
Project Name		Lab Project #		Sampling		Matrix		Matrix			
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	Matrix	Matrix	Matrix		
TERRACON		WORK ORDER # 037									Comments
MARKHAM, IL		Lab Project #									
SAMPLER CRAIG VARLAND		Lab PM DICK WRIGHT									
1		2696V-24-B02-(0-5)	11-10-17	1235	5	S	VOCS	X	X		
2		2696V-24-B02-DUP-(0-5)	11-10-17	1235	5	S	VOCS	X	X		

Turnaround Time Required (Business Days)  
 \_\_\_ 1 Day \_\_\_ 2 Days \_\_\_ 5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other  Return to Client  Disposal by Lab  Archive for \_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRACON</u> Date: <u>11-10-17</u> Time: <u>1450</u>	Received By: <u>P. Neal</u> Company: <u>TA</u> Date: <u>11/10/17</u> Time: <u>1420</u>
Relinquished By: <u>P. Neal</u> Company: <u>TA</u> Date: <u>11/10/17</u> Time: <u>1520</u>	Received By: <u>Cheryl Savery</u> Company: <u>TERRACON</u> Date: <u>11/10/17</u> Time: <u>1520</u>

Lab Courier: TA  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

Matrix Key  
 WW - Wastewater SE - Sediment  
 W - Water SO - Soil  
 S - Soil L - Leachate  
 SL - Sludge WI - Wipe  
 MS - Miscellaneous DW - Drinking Water  
 OL - Oil O - Other  
 A - Air

Client Comments:  
NO ALUMINUM

Lab Comments:

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-137163-1

**Login Number: 137163**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.4, 5.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

US Route 6 (Eastbound) 39+80 to 41+70 and Kedzie Ave (Southbound) 81+20 to 82+20 (ISGS Site 2696V-25)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: \_\_\_\_\_ BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

Soil from borings B01, B02, and B04 were sampled adjacent to ISGS Site No 2696V-25. See Exhibits 6, 6E, 6F, 8 and Table 47 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136834-1. Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

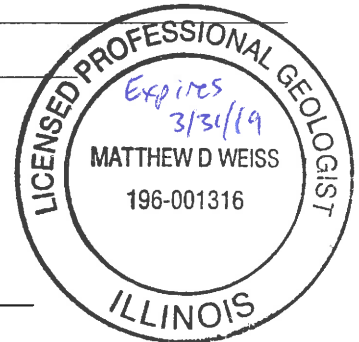
*Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))*

Company Name: Terracon Consultants, Inc  
 Street Address: 135 Ambassador Drive  
 City: Naperville State: IL Zip Code: 60540  
 Phone: 630-717-4263

Matt Weiss  
 Printed Name:

[Signature]  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

7/24/18  
 Date:



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-25)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 1 of 4

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-25-B01 (0-2)	2696V-25-B02 (0-3)
				CCDD	Sample Depth (feet)	(0-2)	(0-3)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/06/2017	11/06/2017
<b>Volatile Organic Analytical Parameters</b>							
Acetone	mg/kg	---	---	25		<0.015	<0.015
<b>Semivolatile Organic Analytical Parameters</b>							
Acenaphthylene	mg/kg	0.03	0.07	85		0.095	0.014
Anthracene	mg/kg	0.25	0.4	12000		0.045	0.013
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.052	0.064
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.13	0.099
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.16	0.12
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.15	0.073
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		0.049	0.03
Chrysene	mg/kg	1.2	2.7	88		0.062	0.07
Dibenzo(a,h)anthracene	mg/kg	0.2	0.42	0.09		0.058	0.043
Fluoranthene	mg/kg	2.7	4.1	3100		0.076	0.11
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.11	0.073
Naphthalene	mg/kg	0.04	0.2	1.8		0.0062	0.013
Phenanthrene	mg/kg	1.3	2.5	210		0.029	0.064
Pyrene	mg/kg	1.9	3.0	2300		0.065	0.086
2-Methylnaphthalene	mg/kg	---	0.14	---		<0.076	0.05
<b>Inorganic Analytical Parameters</b>							
Arsenic	mg/kg	---	13	11.3		1.7	4.4
Barium	mg/kg	---	110	1500		13	34
Cadmium	mg/kg	---	0.6	5.2		0.17	0.23
Chromium, total	mg/kg	---	16.2	21		3.6	7.9
Lead	mg/kg	---	36	107		44	27
Mercury	mg/kg	---	0.06	0.1		<0.018	0.026
Selenium	mg/kg	---	0.48	1.3		<0.55	<0.50
Silver	mg/kg	---	0.55	4.4		<0.28	<0.25
Antimony	mg/kg	---	4.0	5		0.29	<1.0
Beryllium	mg/kg	---	0.59	22		0.22	0.45
Calcium	mg/kg	---	9,300	---		240000	64000
Cobalt	mg/kg	---	8.9	20		2.1	5.8
Copper	mg/kg	---	19.6	2900		6.7	12
Cyanide	mg/kg	---	0.51	---		<0.57	<0.49
Iron	mg/kg	---	15,900	15000		4600	11000
Magnesium	mg/kg	---	4,820	325000		140000	24000
Manganese	mg/kg	---	636	630		150	200
Nickel	mg/kg	---	18	100		6.3	14
Potassium	mg/kg	---	1,268	---		690	1100
Sodium	mg/kg	---	130	---		270	250
Thallium	mg/kg	---	0.32	2.6		<0.55	<0.50
Vanadium	mg/kg	---	25.2	550		4.5	11
Zinc	mg/kg	---	95	5100		23	53
pH			6.25	9		8.2	8.6



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-25)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 2 of 4

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-25-B01 (0-2)	2696V-25-B02 (0-3)
				CCDD	Sample Depth (feet)	(0-2)	(0-3)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/06/2017	11/06/2017
<b>Inorganic Analytical Parameters (SPLP)</b>							
Antimony,SPLP	mg/L	---	---	---		--	--
Arsenic,SPLP	mg/L	---	---	---		--	--
Barium,SPLP	mg/L	---	---	---		--	--
Beryllium,SPLP	mg/L	---	---	---		--	--
Cadmium,SPLP	mg/L	---	---	---		--	--
Calcium,SPLP	mg/L	---	---	---		--	--
Chromium,SPLP	mg/L	---	---	---		--	--
Cobalt,SPLP	mg/L	---	---	---		--	--
Copper,SPLP	mg/L	---	---	---		--	--
Iron,SPLP	mg/L	---	---	---		--	--
Lead,SPLP	mg/L	---	---	---		0.033	--
Magnesium,SPLP	mg/L	---	---	---		--	--
Manganese,SPLP	mg/L	---	---	---		0.051	0.28
Mercury,SPLP	mg/L	---	---	---		--	--
Nickel,SPLP	mg/L	---	---	---		--	--
Potassium,SPLP	mg/L	---	---	---		--	--
Selenium,SPLP	mg/L	---	---	---		--	--
Silver,SPLP	mg/L	---	---	---		--	--
Sodium,SPLP	mg/L	---	---	---		--	--
Thallium,SPLP	mg/L	---	---	---		--	--
Vanadium,SPLP	mg/L	---	---	---		--	--
Zinc,SPLP	mg/L	---	---	---		--	--
Cyanide,SPLP	mg/L	---	---	---		--	--
<b>Inorganic Analytical Parameters (TCLP)</b>							
Arsenic,TCLP	mg/L	---	---	---		<0.050	<0.050
Barium,TCLP	mg/L	---	---	---		0.47	0.39
Cadmium,TCLP	mg/L	---	---	---		0.0045	0.0034
Chromium,TCLP	mg/L	---	---	---		<0.025	<0.025
Lead,TCLP	mg/L	---	---	---		0.019	<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020	<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050	<0.050
Silver,TCLP	mg/L	---	---	---		<0.025	<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060	<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040	<0.0040
Calcium,TCLP	mg/L	---	---	---		490	450
Cobalt,TCLP	mg/L	---	---	---		<0.025	<0.025
Copper,TCLP	mg/L	---	---	---		0.039	0.024
Cyanide,TCLP	mg/L	---	---	---		----	----
Iron,TCLP	mg/L	---	---	---		<0.40	<0.40
Magnesium,TCLP	mg/L	---	---	---		62	86
Manganese,TCLP	mg/L	---	---	---		1.5	0.4
Nickel,TCLP	mg/L	---	---	---		<0.025	<0.025
Potassium,TCLP	mg/L	---	---	---		5	2.5
Sodium,TCLP	mg/L	---	---	---		----	----
Thallium,TCLP	mg/L	---	---	---		<0.0020	<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025	<0.025
Zinc,TCLP	mg/L	---	---	---		0.085	0.068

Detected Constituents to MACs-PTB 174-009;Work Order:037A  
 Preliminary Site Investigation  
 FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-25)  
 Oak Forest/Markham, Cook County, IL  
 Terracon Project No. 11177029M  
 Page 3 of 4

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-25-B04 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/06/2017
<b>Volatile Organic Analytical Parameters</b>						
Acetone	mg/kg	---	---	25		0.016
<b>Semivolatile Organic Analytical Parameters</b>						
Acenaphthylene	mg/kg	0.03	0.07	85		<0.036
Anthracene	mg/kg	0.25	0.4	12000		<0.036
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.007
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.034
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.037
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.034
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		<0.036
Chrysene	mg/kg	1.2	2.7	88		<0.036
Dibenzo(a,h)anthracene	mg/kg	0.2	0.42	0.09		<0.036
Fluoranthene	mg/kg	2.7	4.1	3100		0.011
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.031
Naphthalene	mg/kg	0.04	0.2	1.8		<0.036
Phenanthrene	mg/kg	1.3	2.5	210		0.0054
Pyrene	mg/kg	1.9	3.0	2300		0.0098
2-Methylnaphthalene	mg/kg	---	0.14	---		<0.074
<b>Inorganic Analytical Parameters</b>						
Arsenic	mg/kg	---	13	11.3		9.3
Barium	mg/kg	---	110	1500		58
Cadmium	mg/kg	---	0.6	5.2		0.24
Chromium, total	mg/kg	---	16.2	21		6.9
Lead	mg/kg	---	36	107		12
Mercury	mg/kg	---	0.06	0.1		0.019
Selenium	mg/kg	---	0.48	1.3		<0.57
Silver	mg/kg	---	0.55	4.4		<0.29
Antimony	mg/kg	---	4.0	5		0.36
Beryllium	mg/kg	---	0.59	22		0.3
Calcium	mg/kg	---	9,300	---		33000
Cobalt	mg/kg	---	8.9	20		11
Copper	mg/kg	---	19.6	2900		13
Cyanide	mg/kg	---	0.51	---		<0.53
Iron	mg/kg	---	15,900	15000		15000
Magnesium	mg/kg	---	4,820	325000		21000
Manganese	mg/kg	---	636	630		860
Nickel	mg/kg	---	18	100		19
Potassium	mg/kg	---	1,268	---		720
Sodium	mg/kg	---	130	---		240
Thallium	mg/kg	---	0.32	2.6		<0.57
Vanadium	mg/kg	---	25.2	550		12
Zinc	mg/kg	---	95	5100		62
pH			6.25	9		8.5

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-25-B04 (0-5)
				CCDD	Sample Depth (feet)	(0-5)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/06/2017
<b>Inorganic Analytical Parameters (SPLP)</b>						
Antimony,SPLP	mg/L	---	---	---		--
Arsenic,SPLP	mg/L	---	---	---		--
Barium,SPLP	mg/L	---	---	---		--
Beryllium,SPLP	mg/L	---	---	---		--
Cadmium,SPLP	mg/L	---	---	---		--
Calcium,SPLP	mg/L	---	---	---		--
Chromium,SPLP	mg/L	---	---	---		--
Cobalt,SPLP	mg/L	---	---	---		--
Copper,SPLP	mg/L	---	---	---		--
Iron,SPLP	mg/L	---	---	---		--
Lead,SPLP	mg/L	---	---	---		--
Magnesium,SPLP	mg/L	---	---	---		--
Manganese,SPLP	mg/L	---	---	---		0.042
Mercury,SPLP	mg/L	---	---	---		--
Nickel,SPLP	mg/L	---	---	---		--
Potassium,SPLP	mg/L	---	---	---		--
Selenium,SPLP	mg/L	---	---	---		--
Silver,SPLP	mg/L	---	---	---		--
Sodium,SPLP	mg/L	---	---	---		--
Thallium,SPLP	mg/L	---	---	---		--
Vanadium,SPLP	mg/L	---	---	---		--
Zinc,SPLP	mg/L	---	---	---		--
Cyanide,SPLP	mg/L	---	---	---		--
<b>Inorganic Analytical Parameters (TCLP)</b>						
Arsenic,TCLP	mg/L	---	---	---		<0.050
Barium,TCLP	mg/L	---	---	---		1.2
Cadmium,TCLP	mg/L	---	---	---		0.0042
Chromium,TCLP	mg/L	---	---	---		<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050
Silver,TCLP	mg/L	---	---	---		<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040
Calcium,TCLP	mg/L	---	---	---		310
Cobalt,TCLP	mg/L	---	---	---		<0.025
Copper,TCLP	mg/L	---	---	---		0.044
Cyanide,TCLP	mg/L	---	---	---		---
Iron,TCLP	mg/L	---	---	---		<0.40
Magnesium,TCLP	mg/L	---	---	---		150
Manganese,TCLP	mg/L	---	---	---		3.7
Nickel,TCLP	mg/L	---	---	---		<0.025
Potassium,TCLP	mg/L	---	---	---		1.7
Sodium,TCLP	mg/L	---	---	---		---
Thallium,TCLP	mg/L	---	---	---		<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025
Zinc,TCLP	mg/L	---	---	---		0.16

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-136834-1

Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:

Terracon Consulting Eng & Scientists

135 Ambassador Drive

Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:

11/16/2017 5:46:20 PM

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### LINKS

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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-1

**Job ID: 500-136834-1**

**Laboratory: TestAmerica Chicago**

## Narrative

### Job Narrative 500-136834-1

#### Receipt

The samples were received on 11/6/2017 4:13 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.7° C and 4.0° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270D: The following matrix spike/matrix spike duplicate (MS/MSD) recovered at 0% for one or more analytes. Data has been qualified and reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Metals

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-409604 recovered above the upper control limit for Zinc. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: 2696V-25-B04 (0-5) (500-136834-1), 2696V-25-B02 (0-3) (500-136834-2), and 2696V-25-B01 (0-2) (500-136834-3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-1

**Client Sample ID: 2696V-25-B04 (0-5)**

**Lab Sample ID: 500-136834-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.016		0.015	0.0066	mg/Kg	1	☼	8260B	Total/NA
Benzo[a]anthracene	0.0070	J	0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.034	J	0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.037		0.036	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.034	J	0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.011	J	0.036	0.0068	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.031	J	0.036	0.0095	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.0054	J	0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.0098	J	0.036	0.0073	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.36	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	9.3		0.57	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	58		0.57	0.065	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.30		0.23	0.054	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.24	B	0.11	0.021	mg/Kg	1	☼	6010B	Total/NA
Chromium	6.9		0.57	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	11		0.29	0.075	mg/Kg	1	☼	6010B	Total/NA
Copper	13		0.57	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	15000		11	6.0	mg/Kg	1	☼	6010B	Total/NA
Lead	12		0.29	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	21000		5.7	2.8	mg/Kg	1	☼	6010B	Total/NA
Calcium	33000	B	11	1.9	mg/Kg	1	☼	6010B	Total/NA
Manganese	860		0.57	0.083	mg/Kg	1	☼	6010B	Total/NA
Nickel	19		0.57	0.17	mg/Kg	1	☼	6010B	Total/NA
Vanadium	12		0.29	0.068	mg/Kg	1	☼	6010B	Total/NA
Zinc	62		1.1	0.50	mg/Kg	1	☼	6010B	Total/NA
Potassium	720		29	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	240		57	8.5	mg/Kg	1	☼	6010B	Total/NA
Barium	1.2		0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0042	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	310		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.044		0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	150		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	3.7		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	1.7	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.16	J ^	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.042		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.019		0.018	0.0058	mg/Kg	1	☼	7471B	Total/NA
pH	8.5		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-25-B02 (0-3)**

**Lab Sample ID: 500-136834-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.014	J	0.035	0.0046	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.013	J	0.035	0.0059	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.064		0.035	0.0047	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.099		0.035	0.0068	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.12		0.035	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.073		0.035	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.030	J	0.035	0.010	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.070		0.035	0.0096	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-1

**Client Sample ID: 2696V-25-B02 (0-3) (Continued)**

**Lab Sample ID: 500-136834-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dibenz(a,h)anthracene	0.043		0.035	0.0068	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.11		0.035	0.0065	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.073		0.035	0.0091	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.050	J	0.071	0.0065	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.013	J	0.035	0.0054	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.064		0.035	0.0049	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.086		0.035	0.0070	mg/Kg	1	☼	8270D	Total/NA
Arsenic	4.4		0.50	0.17	mg/Kg	1	☼	6010B	Total/NA
Barium	34		0.50	0.057	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.45		0.20	0.047	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.23	B	0.10	0.018	mg/Kg	1	☼	6010B	Total/NA
Chromium	7.9		0.50	0.25	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.8		0.25	0.066	mg/Kg	1	☼	6010B	Total/NA
Copper	12		0.50	0.14	mg/Kg	1	☼	6010B	Total/NA
Iron	11000		10	5.2	mg/Kg	1	☼	6010B	Total/NA
Lead	27		0.25	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	24000		5.0	2.5	mg/Kg	1	☼	6010B	Total/NA
Calcium	64000	B	100	17	mg/Kg	10	☼	6010B	Total/NA
Manganese	200		0.50	0.073	mg/Kg	1	☼	6010B	Total/NA
Nickel	14		0.50	0.15	mg/Kg	1	☼	6010B	Total/NA
Vanadium	11		0.25	0.059	mg/Kg	1	☼	6010B	Total/NA
Zinc	53		1.0	0.44	mg/Kg	1	☼	6010B	Total/NA
Potassium	1100		25	8.9	mg/Kg	1	☼	6010B	Total/NA
Sodium	250		50	7.4	mg/Kg	1	☼	6010B	Total/NA
Barium	0.39	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0034	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	450		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.024	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	86		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.40		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	2.5		2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.068	J ^	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.28		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.026		0.017	0.0056	mg/Kg	1	☼	7471B	Total/NA
pH	8.6		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-25-B01 (0-2)**

**Lab Sample ID: 500-136834-3**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.095		0.038	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.045		0.038	0.0063	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.052		0.038	0.0051	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.13		0.038	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.16		0.038	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.15		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.049		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.062		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.058		0.038	0.0073	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.076		0.038	0.0070	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.11		0.038	0.0098	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-1

**Client Sample ID: 2696V-25-B01 (0-2) (Continued)**

**Lab Sample ID: 500-136834-3**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.0062	J	0.038	0.0058	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.029	J	0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.065		0.038	0.0075	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.29	J	1.1	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	1.7		0.55	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	13		0.55	0.063	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.22		0.22	0.051	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.17	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	3.6		0.55	0.27	mg/Kg	1	☼	6010B	Total/NA
Cobalt	2.1		0.28	0.072	mg/Kg	1	☼	6010B	Total/NA
Copper	6.7		0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	4600		11	5.7	mg/Kg	1	☼	6010B	Total/NA
Lead	44		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	140000		55	27	mg/Kg	10	☼	6010B	Total/NA
Calcium	240000	B	110	19	mg/Kg	10	☼	6010B	Total/NA
Manganese	150		0.55	0.080	mg/Kg	1	☼	6010B	Total/NA
Nickel	6.3		0.55	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	4.5		0.28	0.065	mg/Kg	1	☼	6010B	Total/NA
Zinc	23		1.1	0.48	mg/Kg	1	☼	6010B	Total/NA
Potassium	690		28	9.8	mg/Kg	1	☼	6010B	Total/NA
Sodium	270		55	8.2	mg/Kg	1	☼	6010B	Total/NA
Barium	0.47	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0045	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	490		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.039		0.025	0.010	mg/L	1		6010B	TCLP
Lead	0.019		0.0075	0.0075	mg/L	1		6010B	TCLP
Magnesium	62		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	1.5		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	5.0		2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.085	J ^	0.50	0.020	mg/L	1		6010B	TCLP
Lead	0.033		0.0075	0.0075	mg/L	1		6010B	SPLP East
Manganese	0.051		0.025	0.010	mg/L	1		6010B	SPLP East
pH	8.2		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136834-1	2696V-25-B04 (0-5)	Solid	11/06/17 08:50	11/06/17 16:13
500-136834-2	2696V-25-B02 (0-3)	Solid	11/06/17 09:15	11/06/17 16:13
500-136834-3	2696V-25-B01 (0-2)	Solid	11/06/17 09:35	11/06/17 16:13

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-1

**Client Sample ID: 2696V-25-B04 (0-5)**

**Lab Sample ID: 500-136834-1**

**Date Collected: 11/06/17 08:50**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 85.9**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.016</b>		0.015	0.0066	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Benzene	<0.0015		0.0015	0.00039	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Bromodichloromethane	<0.0015		0.0015	0.00031	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Bromoform	<0.0015		0.0015	0.00045	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Bromomethane	<0.0038		0.0038	0.0014	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
2-Butanone (MEK)	<0.0038		0.0038	0.0017	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Carbon disulfide	<0.0038		0.0038	0.00079	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Carbon tetrachloride	<0.0015		0.0015	0.00044	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Chlorobenzene	<0.0015		0.0015	0.00056	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Chloroethane	<0.0038		0.0038	0.0011	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Chloroform	<0.0015		0.0015	0.00053	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Chloromethane	<0.0038		0.0038	0.0015	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
cis-1,2-Dichloroethene	<0.0015		0.0015	0.00043	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
cis-1,3-Dichloropropene	<0.0015		0.0015	0.00046	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Dibromochloromethane	<0.0015		0.0015	0.00050	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
1,1-Dichloroethane	<0.0015		0.0015	0.00052	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
1,2-Dichloroethane	<0.0038		0.0038	0.0012	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
1,1-Dichloroethene	<0.0015		0.0015	0.00052	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
1,2-Dichloropropane	<0.0015		0.0015	0.00039	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
1,3-Dichloropropene, Total	<0.0015		0.0015	0.00054	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Ethylbenzene	<0.0015		0.0015	0.00073	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
2-Hexanone	<0.0038		0.0038	0.0012	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Methylene Chloride	<0.0038		0.0038	0.0015	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
4-Methyl-2-pentanone (MIBK)	<0.0038		0.0038	0.0011	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Methyl tert-butyl ether	<0.0015		0.0015	0.00045	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Styrene	<0.0015		0.0015	0.00046	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
1,1,2,2-Tetrachloroethane	<0.0015		0.0015	0.00049	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Tetrachloroethene	<0.0015		0.0015	0.00052	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Toluene	<0.0015		0.0015	0.00038	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
trans-1,2-Dichloroethene	<0.0015		0.0015	0.00068	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
trans-1,3-Dichloropropene	<0.0015		0.0015	0.00054	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
1,1,1-Trichloroethane	<0.0015		0.0015	0.00051	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
1,1,2-Trichloroethane	<0.0015		0.0015	0.00065	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Trichloroethene	<0.0015		0.0015	0.00052	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Vinyl acetate	<0.0038		0.0038	0.0013	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Vinyl chloride	<0.0015		0.0015	0.00067	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1
Xylenes, Total	<0.0030		0.0030	0.00049	mg/Kg	☼	11/07/17 07:20	11/09/17 15:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		75 - 131	11/07/17 07:20	11/09/17 15:57	1
Dibromofluoromethane	81		75 - 126	11/07/17 07:20	11/09/17 15:57	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 134	11/07/17 07:20	11/09/17 15:57	1
Toluene-d8 (Surr)	96		75 - 124	11/07/17 07:20	11/09/17 15:57	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.036		0.036	0.0066	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Acenaphthylene	<0.036		0.036	0.0048	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Anthracene	<0.036		0.036	0.0061	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
<b>Benzo[a]anthracene</b>	<b>0.0070</b>	<b>J</b>	0.036	0.0049	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-1

**Client Sample ID: 2696V-25-B04 (0-5)**

**Lab Sample ID: 500-136834-1**

**Date Collected: 11/06/17 08:50**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 85.9**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.034</b>	<b>J</b>	0.036	0.0071	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
<b>Benzo[b]fluoranthene</b>	<b>0.037</b>		0.036	0.0079	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
<b>Benzo[g,h,i]perylene</b>	<b>0.034</b>	<b>J</b>	0.036	0.012	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Benzo[k]fluoranthene	<0.036		0.036	0.011	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Butyl benzyl phthalate	<0.18		0.18	0.070	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Carbazole	<0.18		0.18	0.092	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
2-Chloronaphthalene	<0.18		0.18	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
2-Chlorophenol	<0.18		0.18	0.063	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Chrysene	<0.036		0.036	0.010	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0071	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
1,2-Dichlorobenzene	<0.18		0.18	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
2,4-Dichlorophenol	<0.36		0.36	0.087	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
4,6-Dinitro-2-methylphenol	<0.74	F2	0.74	0.29	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
2,4-Dinitrophenol	<0.74	F2	0.74	0.65	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Di-n-octyl phthalate	<0.18	F1	0.18	0.060	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
<b>Fluoranthene</b>	<b>0.011</b>	<b>J</b>	0.036	0.0068	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Fluorene	<0.036		0.036	0.0052	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Hexachlorobenzene	<0.074		0.074	0.0085	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Hexachlorobutadiene	<0.18		0.18	0.058	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Hexachlorocyclopentadiene	<0.74	F1	0.74	0.21	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Hexachloroethane	<0.18		0.18	0.056	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.031</b>	<b>J</b>	0.036	0.0095	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
2-Methylnaphthalene	<0.074		0.074	0.0067	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
2-Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Nitrobenzene	<0.036		0.036	0.0091	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
2-Nitrophenol	<0.36		0.36	0.087	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-1

**Client Sample ID: 2696V-25-B04 (0-5)**

**Lab Sample ID: 500-136834-1**

Date Collected: 11/06/17 08:50

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 85.9

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Pentachlorophenol	<0.74	F2	0.74	0.59	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
<b>Phenanthrene</b>	<b>0.0054</b>	<b>J</b>	0.036	0.0051	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
Phenol	<0.18		0.18	0.081	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
<b>Pyrene</b>	<b>0.0098</b>	<b>J</b>	0.036	0.0073	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
2,4,5-Trichlorophenol	<0.36		0.36	0.084	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1
2,4,6-Trichlorophenol	<0.36		0.36	0.13	mg/Kg	☼	11/13/17 07:19	11/15/17 12:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	88		44 - 121	11/13/17 07:19	11/15/17 12:24	1
2-Fluorophenol	105		46 - 133	11/13/17 07:19	11/15/17 12:24	1
Nitrobenzene-d5	92		41 - 120	11/13/17 07:19	11/15/17 12:24	1
Phenol-d5	93		46 - 125	11/13/17 07:19	11/15/17 12:24	1
Terphenyl-d14	92		35 - 160	11/13/17 07:19	11/15/17 12:24	1
2,4,6-Tribromophenol	59		25 - 139	11/13/17 07:19	11/15/17 12:24	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.36</b>	<b>J</b>	1.1	0.22	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
<b>Arsenic</b>	<b>9.3</b>		0.57	0.20	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
<b>Barium</b>	<b>58</b>		0.57	0.065	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
<b>Beryllium</b>	<b>0.30</b>		0.23	0.054	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
<b>Cadmium</b>	<b>0.24</b>	<b>B</b>	0.11	0.021	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
<b>Chromium</b>	<b>6.9</b>		0.57	0.28	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
<b>Cobalt</b>	<b>11</b>		0.29	0.075	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
<b>Copper</b>	<b>13</b>		0.57	0.16	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
<b>Iron</b>	<b>15000</b>		11	6.0	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
<b>Lead</b>	<b>12</b>		0.29	0.13	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
<b>Magnesium</b>	<b>21000</b>		5.7	2.8	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
<b>Calcium</b>	<b>33000</b>	<b>B</b>	11	1.9	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
<b>Manganese</b>	<b>860</b>		0.57	0.083	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
<b>Nickel</b>	<b>19</b>		0.57	0.17	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
Selenium	<0.57		0.57	0.34	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
Silver	<0.29		0.29	0.074	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
Thallium	<0.57		0.57	0.29	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
<b>Vanadium</b>	<b>12</b>		0.29	0.068	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
<b>Zinc</b>	<b>62</b>		1.1	0.50	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
<b>Potassium</b>	<b>720</b>		29	10	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1
<b>Sodium</b>	<b>240</b>		57	8.5	mg/Kg	☼	11/08/17 07:33	11/09/17 03:58	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 16:44	11/11/17 18:50	1
<b>Barium</b>	<b>1.2</b>		0.50	0.050	mg/L		11/10/17 16:44	11/11/17 18:50	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 16:44	11/11/17 18:50	1
<b>Cadmium</b>	<b>0.0042</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 16:44	11/11/17 18:50	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-1

**Client Sample ID: 2696V-25-B04 (0-5)**

**Lab Sample ID: 500-136834-1**

**Date Collected: 11/06/17 08:50**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 85.9**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>310</b>		5.0	0.50	mg/L		11/10/17 16:44	11/11/17 18:50	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:50	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:50	1
<b>Copper</b>	<b>0.044</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:50	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 16:44	11/11/17 18:50	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 16:44	11/11/17 18:50	1
<b>Magnesium</b>	<b>150</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 18:50	1
<b>Manganese</b>	<b>3.7</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:50	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:50	1
<b>Potassium</b>	<b>1.7 J</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 18:50	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 16:44	11/11/17 18:50	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:50	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:50	1
<b>Zinc</b>	<b>0.16 J ^</b>		0.50	0.020	mg/L		11/10/17 16:44	11/11/17 18:50	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.042</b>		0.025	0.010	mg/L		11/09/17 16:43	11/11/17 02:54	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 16:44	11/13/17 11:20	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 16:44	11/13/17 11:20	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/10/17 15:28	11/13/17 10:14	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.019</b>		0.018	0.0058	mg/Kg	☼	11/08/17 16:15	11/09/17 10:18	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.53		0.53	0.18	mg/Kg	☼	11/13/17 11:30	11/13/17 17:17	1
<b>pH</b>	<b>8.5</b>		0.20	0.20	SU			11/14/17 17:36	1



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-1

**Client Sample ID: 2696V-25-B02 (0-3)**

**Lab Sample ID: 500-136834-2**

**Date Collected: 11/06/17 09:15**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 93.4**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.015		0.015	0.0064	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Benzene	<0.0015		0.0015	0.00037	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Bromodichloromethane	<0.0015		0.0015	0.00030	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Bromoform	<0.0015		0.0015	0.00043	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Bromomethane	<0.0037		0.0037	0.0014	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
2-Butanone (MEK)	<0.0037		0.0037	0.0016	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Carbon disulfide	<0.0037		0.0037	0.00076	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Carbon tetrachloride	<0.0015		0.0015	0.00043	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Chlorobenzene	<0.0015		0.0015	0.00054	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Chloroethane	<0.0037		0.0037	0.0011	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Chloroform	<0.0015		0.0015	0.00051	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Chloromethane	<0.0037		0.0037	0.0015	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
cis-1,2-Dichloroethene	<0.0015		0.0015	0.00041	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
cis-1,3-Dichloropropene	<0.0015		0.0015	0.00044	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Dibromochloromethane	<0.0015		0.0015	0.00048	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
1,1-Dichloroethane	<0.0015		0.0015	0.00050	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
1,2-Dichloroethane	<0.0037		0.0037	0.0011	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
1,1-Dichloroethene	<0.0015		0.0015	0.00051	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
1,2-Dichloropropane	<0.0015		0.0015	0.00038	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
1,3-Dichloropropane, Total	<0.0015		0.0015	0.00052	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Ethylbenzene	<0.0015		0.0015	0.00070	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
2-Hexanone	<0.0037		0.0037	0.0011	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Methylene Chloride	<0.0037		0.0037	0.0014	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
4-Methyl-2-pentanone (MIBK)	<0.0037		0.0037	0.0011	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Methyl tert-butyl ether	<0.0015		0.0015	0.00043	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Styrene	<0.0015		0.0015	0.00044	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
1,1,2,2-Tetrachloroethane	<0.0015		0.0015	0.00047	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Tetrachloroethene	<0.0015		0.0015	0.00050	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Toluene	<0.0015		0.0015	0.00037	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
trans-1,2-Dichloroethene	<0.0015		0.0015	0.00065	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
trans-1,3-Dichloropropene	<0.0015		0.0015	0.00052	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
1,1,1-Trichloroethane	<0.0015		0.0015	0.00049	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
1,1,2-Trichloroethane	<0.0015		0.0015	0.00063	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Trichloroethene	<0.0015		0.0015	0.00050	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Vinyl acetate	<0.0037		0.0037	0.0013	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Vinyl chloride	<0.0015		0.0015	0.00065	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1
Xylenes, Total	<0.0029		0.0029	0.00047	mg/Kg	☼	11/07/17 07:20	11/09/17 16:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		75 - 131	11/07/17 07:20	11/09/17 16:22	1
Dibromofluoromethane	82		75 - 126	11/07/17 07:20	11/09/17 16:22	1
1,2-Dichloroethane-d4 (Surr)	97		70 - 134	11/07/17 07:20	11/09/17 16:22	1
Toluene-d8 (Surr)	94		75 - 124	11/07/17 07:20	11/09/17 16:22	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.035		0.035	0.0063	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Acenaphthylene	0.014	J	0.035	0.0046	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Anthracene	0.013	J	0.035	0.0059	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Benzo[a]anthracene	0.064		0.035	0.0047	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-1

**Client Sample ID: 2696V-25-B02 (0-3)**

**Lab Sample ID: 500-136834-2**

**Date Collected: 11/06/17 09:15**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 93.4**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.099		0.035	0.0068	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Benzo[b]fluoranthene	0.12		0.035	0.0076	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Benzo[g,h,i]perylene	0.073		0.035	0.011	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Benzo[k]fluoranthene	0.030	J	0.035	0.010	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.053	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.064	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.046	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Butyl benzyl phthalate	<0.18		0.18	0.067	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Carbazole	<0.18		0.18	0.088	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
4-Chloroaniline	<0.71		0.71	0.17	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
4-Chloro-3-methylphenol	<0.35		0.35	0.12	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
2-Chlorophenol	<0.18		0.18	0.060	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Chrysene	0.070		0.035	0.0096	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Dibenz(a,h)anthracene	0.043		0.035	0.0068	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Dibenzofuran	<0.18		0.18	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
1,2-Dichlorobenzene	<0.18		0.18	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
1,4-Dichlorobenzene	<0.18		0.18	0.045	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.049	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
2,4-Dichlorophenol	<0.35		0.35	0.084	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Diethyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
2,4-Dimethylphenol	<0.35		0.35	0.13	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Dimethyl phthalate	<0.18		0.18	0.046	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Di-n-butyl phthalate	<0.18		0.18	0.054	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
4,6-Dinitro-2-methylphenol	<0.71		0.71	0.28	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
2,4-Dinitrophenol	<0.71		0.71	0.62	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
2,4-Dinitrotoluene	<0.18		0.18	0.056	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
2,6-Dinitrotoluene	<0.18		0.18	0.069	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Di-n-octyl phthalate	<0.18		0.18	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Fluoranthene	0.11		0.035	0.0065	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Fluorene	<0.035		0.035	0.0050	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Hexachlorobenzene	<0.071		0.071	0.0082	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Hexachlorobutadiene	<0.18		0.18	0.055	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Hexachlorocyclopentadiene	<0.71		0.71	0.20	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Hexachloroethane	<0.18		0.18	0.054	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Indeno[1,2,3-cd]pyrene	0.073		0.035	0.0091	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
2-Methylnaphthalene	0.050	J	0.071	0.0065	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
2-Methylphenol	<0.18		0.18	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
3 & 4 Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Naphthalene	0.013	J	0.035	0.0054	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
2-Nitroaniline	<0.18		0.18	0.047	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
3-Nitroaniline	<0.35		0.35	0.11	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
4-Nitroaniline	<0.35		0.35	0.15	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Nitrobenzene	<0.035		0.035	0.0088	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
2-Nitrophenol	<0.35		0.35	0.083	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-1

**Client Sample ID: 2696V-25-B02 (0-3)**

**Lab Sample ID: 500-136834-2**

Date Collected: 11/06/17 09:15

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 93.4

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.71		0.71	0.34	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
N-Nitrosodi-n-propylamine	<0.071		0.071	0.043	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Pentachlorophenol	<0.71		0.71	0.57	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
<b>Phenanthrene</b>	<b>0.064</b>		0.035	0.0049	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
Phenol	<0.18		0.18	0.078	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
<b>Pyrene</b>	<b>0.086</b>		0.035	0.0070	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.038	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
2,4,5-Trichlorophenol	<0.35		0.35	0.080	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1
2,4,6-Trichlorophenol	<0.35		0.35	0.12	mg/Kg	☼	11/13/17 07:19	11/15/17 13:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	84		44 - 121	11/13/17 07:19	11/15/17 13:19	1
2-Fluorophenol	101		46 - 133	11/13/17 07:19	11/15/17 13:19	1
Nitrobenzene-d5	86		41 - 120	11/13/17 07:19	11/15/17 13:19	1
Phenol-d5	90		46 - 125	11/13/17 07:19	11/15/17 13:19	1
Terphenyl-d14	87		35 - 160	11/13/17 07:19	11/15/17 13:19	1
2,4,6-Tribromophenol	64		25 - 139	11/13/17 07:19	11/15/17 13:19	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		1.0	0.20	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1
<b>Arsenic</b>	<b>4.4</b>		0.50	0.17	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1
<b>Barium</b>	<b>34</b>		0.50	0.057	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1
<b>Beryllium</b>	<b>0.45</b>		0.20	0.047	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1
<b>Cadmium</b>	<b>0.23</b>	<b>B</b>	0.10	0.018	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1
<b>Chromium</b>	<b>7.9</b>		0.50	0.25	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1
<b>Cobalt</b>	<b>5.8</b>		0.25	0.066	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1
<b>Copper</b>	<b>12</b>		0.50	0.14	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1
<b>Iron</b>	<b>11000</b>		10	5.2	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1
<b>Lead</b>	<b>27</b>		0.25	0.12	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1
<b>Magnesium</b>	<b>24000</b>		5.0	2.5	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1
<b>Calcium</b>	<b>64000</b>	<b>B</b>	100	17	mg/Kg	☼	11/08/17 07:33	11/09/17 18:05	10
<b>Manganese</b>	<b>200</b>		0.50	0.073	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1
<b>Nickel</b>	<b>14</b>		0.50	0.15	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1
Selenium	<0.50		0.50	0.30	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1
Silver	<0.25		0.25	0.065	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1
Thallium	<0.50		0.50	0.25	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1
<b>Vanadium</b>	<b>11</b>		0.25	0.059	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1
<b>Zinc</b>	<b>53</b>		1.0	0.44	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1
<b>Potassium</b>	<b>1100</b>		25	8.9	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1
<b>Sodium</b>	<b>250</b>		50	7.4	mg/Kg	☼	11/08/17 07:33	11/09/17 04:02	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 16:44	11/11/17 18:54	1
<b>Barium</b>	<b>0.39</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 16:44	11/11/17 18:54	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 16:44	11/11/17 18:54	1
<b>Cadmium</b>	<b>0.0034</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 16:44	11/11/17 18:54	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-1

**Client Sample ID: 2696V-25-B02 (0-3)**

**Lab Sample ID: 500-136834-2**

Date Collected: 11/06/17 09:15

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 93.4

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>450</b>		5.0	0.50	mg/L		11/10/17 16:44	11/11/17 18:54	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:54	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:54	1
<b>Copper</b>	<b>0.024</b>	<b>J</b>	0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:54	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 16:44	11/11/17 18:54	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 16:44	11/11/17 18:54	1
<b>Magnesium</b>	<b>86</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 18:54	1
<b>Manganese</b>	<b>0.40</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:54	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:54	1
<b>Potassium</b>	<b>2.5</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 18:54	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 16:44	11/11/17 18:54	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:54	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:54	1
<b>Zinc</b>	<b>0.068</b>	<b>J ^</b>	0.50	0.020	mg/L		11/10/17 16:44	11/11/17 18:54	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.28</b>		0.025	0.010	mg/L		11/09/17 16:43	11/11/17 03:06	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 16:44	11/13/17 11:38	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 16:44	11/13/17 11:38	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/10/17 15:28	11/13/17 10:21	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.026</b>		0.017	0.0056	mg/Kg	☼	11/08/17 16:15	11/09/17 10:21	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.49		0.49	0.17	mg/Kg	☼	11/13/17 11:30	11/13/17 17:17	1
<b>pH</b>	<b>8.6</b>		0.20	0.20	SU			11/14/17 17:36	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-1

**Client Sample ID: 2696V-25-B01 (0-2)**

**Lab Sample ID: 500-136834-3**

Date Collected: 11/06/17 09:35

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 87.1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.015		0.015	0.0066	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Benzene	<0.0015		0.0015	0.00038	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Bromodichloromethane	<0.0015		0.0015	0.00031	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Bromoform	<0.0015		0.0015	0.00044	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Bromomethane	<0.0038		0.0038	0.0014	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
2-Butanone (MEK)	<0.0038		0.0038	0.0017	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Carbon disulfide	<0.0038		0.0038	0.00078	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Carbon tetrachloride	<0.0015		0.0015	0.00044	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Chlorobenzene	<0.0015		0.0015	0.00056	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Chloroethane	<0.0038		0.0038	0.0011	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Chloroform	<0.0015		0.0015	0.00052	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Chloromethane	<0.0038		0.0038	0.0015	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
cis-1,2-Dichloroethene	<0.0015		0.0015	0.00042	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
cis-1,3-Dichloropropene	<0.0015		0.0015	0.00046	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Dibromochloromethane	<0.0015		0.0015	0.00049	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
1,1-Dichloroethane	<0.0015		0.0015	0.00052	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
1,2-Dichloroethane	<0.0038		0.0038	0.0012	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
1,1-Dichloroethene	<0.0015		0.0015	0.00052	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
1,2-Dichloropropane	<0.0015		0.0015	0.00039	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
1,3-Dichloropropane, Total	<0.0015		0.0015	0.00053	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Ethylbenzene	<0.0015		0.0015	0.00072	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
2-Hexanone	<0.0038		0.0038	0.0012	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Methylene Chloride	<0.0038		0.0038	0.0015	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
4-Methyl-2-pentanone (MIBK)	<0.0038		0.0038	0.0011	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Methyl tert-butyl ether	<0.0015		0.0015	0.00044	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Styrene	<0.0015		0.0015	0.00046	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
1,1,2,2-Tetrachloroethane	<0.0015		0.0015	0.00048	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Tetrachloroethene	<0.0015		0.0015	0.00051	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Toluene	<0.0015		0.0015	0.00038	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
trans-1,2-Dichloroethene	<0.0015		0.0015	0.00067	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
trans-1,3-Dichloropropene	<0.0015		0.0015	0.00053	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
1,1,1-Trichloroethane	<0.0015		0.0015	0.00051	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
1,1,2-Trichloroethane	<0.0015		0.0015	0.00065	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Trichloroethene	<0.0015		0.0015	0.00051	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Vinyl acetate	<0.0038		0.0038	0.0013	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Vinyl chloride	<0.0015		0.0015	0.00067	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1
Xylenes, Total	<0.0030		0.0030	0.00048	mg/Kg	☼	11/07/17 08:50	11/09/17 16:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		75 - 131	11/07/17 08:50	11/09/17 16:48	1
Dibromofluoromethane	87		75 - 126	11/07/17 08:50	11/09/17 16:48	1
1,2-Dichloroethane-d4 (Surr)	103		70 - 134	11/07/17 08:50	11/09/17 16:48	1
Toluene-d8 (Surr)	96		75 - 124	11/07/17 08:50	11/09/17 16:48	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.038		0.038	0.0068	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Acenaphthylene	0.095		0.038	0.0050	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Anthracene	0.045		0.038	0.0063	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Benzo[a]anthracene	0.052		0.038	0.0051	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-1

**Client Sample ID: 2696V-25-B01 (0-2)**

**Lab Sample ID: 500-136834-3**

**Date Collected: 11/06/17 09:35**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 87.1**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.13</b>		0.038	0.0073	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
<b>Benzo[b]fluoranthene</b>	<b>0.16</b>		0.038	0.0081	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
<b>Benzo[g,h,i]perylene</b>	<b>0.15</b>		0.038	0.012	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
<b>Benzo[k]fluoranthene</b>	<b>0.049</b>		0.038	0.011	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.069	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
<b>Chrysene</b>	<b>0.062</b>		0.038	0.010	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
<b>Dibenz(a,h)anthracene</b>	<b>0.058</b>		0.038	0.0073	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
2,4-Dichlorophenol	<0.38		0.38	0.090	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
2,4-Dimethylphenol	<0.38		0.38	0.14	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
2,4-Dinitrophenol	<0.76		0.76	0.66	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
<b>Fluoranthene</b>	<b>0.076</b>		0.038	0.0070	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Fluorene	<0.038		0.038	0.0053	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Hexachlorobenzene	<0.076		0.076	0.0088	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.11</b>		0.038	0.0098	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
2-Methylnaphthalene	<0.076		0.076	0.0069	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
<b>Naphthalene</b>	<b>0.0062 J</b>		0.038	0.0058	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Nitrobenzene	<0.038		0.038	0.0094	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
2-Nitrophenol	<0.38		0.38	0.089	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-1

**Client Sample ID: 2696V-25-B01 (0-2)**

**Lab Sample ID: 500-136834-3**

Date Collected: 11/06/17 09:35

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 87.1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Pentachlorophenol	<0.76		0.76	0.61	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
<b>Phenanthrene</b>	<b>0.029</b>	<b>J</b>	0.038	0.0053	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
Phenol	<0.19		0.19	0.084	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
<b>Pyrene</b>	<b>0.065</b>		0.038	0.0075	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
2,4,5-Trichlorophenol	<0.38		0.38	0.086	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	11/13/17 07:19	11/15/17 16:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	89		44 - 121	11/13/17 07:19	11/15/17 16:05	1
2-Fluorophenol	102		46 - 133	11/13/17 07:19	11/15/17 16:05	1
Nitrobenzene-d5	94		41 - 120	11/13/17 07:19	11/15/17 16:05	1
Phenol-d5	95		46 - 125	11/13/17 07:19	11/15/17 16:05	1
Terphenyl-d14	90		35 - 160	11/13/17 07:19	11/15/17 16:05	1
2,4,6-Tribromophenol	61		25 - 139	11/13/17 07:19	11/15/17 16:05	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.29</b>	<b>J</b>	1.1	0.21	mg/Kg	☼	11/08/17 07:33	11/09/17 04:06	1
<b>Arsenic</b>	<b>1.7</b>		0.55	0.19	mg/Kg	☼	11/08/17 07:33	11/09/17 04:06	1
<b>Barium</b>	<b>13</b>		0.55	0.063	mg/Kg	☼	11/08/17 07:33	11/09/17 04:06	1
<b>Beryllium</b>	<b>0.22</b>		0.22	0.051	mg/Kg	☼	11/08/17 07:33	11/09/17 04:06	1
<b>Cadmium</b>	<b>0.17</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/08/17 07:33	11/09/17 04:06	1
<b>Chromium</b>	<b>3.6</b>		0.55	0.27	mg/Kg	☼	11/08/17 07:33	11/09/17 04:06	1
<b>Cobalt</b>	<b>2.1</b>		0.28	0.072	mg/Kg	☼	11/08/17 07:33	11/09/17 04:06	1
<b>Copper</b>	<b>6.7</b>		0.55	0.15	mg/Kg	☼	11/08/17 07:33	11/09/17 04:06	1
<b>Iron</b>	<b>4600</b>		11	5.7	mg/Kg	☼	11/08/17 07:33	11/09/17 04:06	1
<b>Lead</b>	<b>44</b>		0.28	0.13	mg/Kg	☼	11/08/17 07:33	11/09/17 04:06	1
<b>Magnesium</b>	<b>140000</b>		55	27	mg/Kg	☼	11/08/17 07:33	11/09/17 18:08	10
<b>Calcium</b>	<b>240000</b>	<b>B</b>	110	19	mg/Kg	☼	11/08/17 07:33	11/09/17 18:08	10
<b>Manganese</b>	<b>150</b>		0.55	0.080	mg/Kg	☼	11/08/17 07:33	11/09/17 04:06	1
<b>Nickel</b>	<b>6.3</b>		0.55	0.16	mg/Kg	☼	11/08/17 07:33	11/09/17 04:06	1
Selenium	<0.55		0.55	0.32	mg/Kg	☼	11/08/17 07:33	11/09/17 04:06	1
Silver	<0.28		0.28	0.071	mg/Kg	☼	11/08/17 07:33	11/09/17 04:06	1
Thallium	<0.55		0.55	0.28	mg/Kg	☼	11/08/17 07:33	11/09/17 04:06	1
<b>Vanadium</b>	<b>4.5</b>		0.28	0.065	mg/Kg	☼	11/08/17 07:33	11/09/17 04:06	1
<b>Zinc</b>	<b>23</b>		1.1	0.48	mg/Kg	☼	11/08/17 07:33	11/09/17 04:06	1
<b>Potassium</b>	<b>690</b>		28	9.8	mg/Kg	☼	11/08/17 07:33	11/09/17 04:06	1
<b>Sodium</b>	<b>270</b>		55	8.2	mg/Kg	☼	11/08/17 07:33	11/09/17 04:06	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 16:44	11/11/17 18:58	1
<b>Barium</b>	<b>0.47</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 16:44	11/11/17 18:58	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 16:44	11/11/17 18:58	1
<b>Cadmium</b>	<b>0.0045</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 16:44	11/11/17 18:58	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-1

**Client Sample ID: 2696V-25-B01 (0-2)**

**Lab Sample ID: 500-136834-3**

**Date Collected: 11/06/17 09:35**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 87.1**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>490</b>		5.0	0.50	mg/L		11/10/17 16:44	11/11/17 18:58	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:58	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:58	1
<b>Copper</b>	<b>0.039</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:58	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 16:44	11/11/17 18:58	1
<b>Lead</b>	<b>0.019</b>		0.0075	0.0075	mg/L		11/10/17 16:44	11/11/17 18:58	1
<b>Magnesium</b>	<b>62</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 18:58	1
<b>Manganese</b>	<b>1.5</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:58	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:58	1
<b>Potassium</b>	<b>5.0</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 18:58	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 16:44	11/11/17 18:58	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:58	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 18:58	1
<b>Zinc</b>	<b>0.085</b>	J ^	0.50	0.020	mg/L		11/10/17 16:44	11/11/17 18:58	1

**Method: 6010B - SPLP Metals - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lead</b>	<b>0.033</b>		0.0075	0.0075	mg/L		11/09/17 16:43	11/11/17 03:10	1
<b>Manganese</b>	<b>0.051</b>		0.025	0.010	mg/L		11/09/17 16:43	11/11/17 03:10	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 16:44	11/13/17 11:41	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 16:44	11/13/17 11:41	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/10/17 15:28	11/13/17 10:23	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.018		0.018	0.0060	mg/Kg	☼	11/08/17 16:15	11/09/17 10:23	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.57		0.57	0.20	mg/Kg	☼	11/13/17 11:30	11/13/17 17:17	1
<b>pH</b>	<b>8.2</b>		0.20	0.20	SU			11/14/17 17:36	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-1

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-1

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 61  
Phone: 708.534.5200 Fax: 708.53



500-136834 COC

Report To (optional)  
Contact: MATT WEISS  
Company: TERRALON  
Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
E-Mail: \_\_\_\_\_

Bill To (optional)  
Contact: \_\_\_\_\_  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-136834  
Chain of Custody Number: \_\_\_\_\_  
Page 1 of 1  
Temperature °C of Cooler: 3,7,40

Client		Client Project #		Preservative		Parameter		Matrix		Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other
TERRALON		11177029 M								
Project Name		Lab Project #								
WORK ORDEN 037										
Project Location/State		Lab Project #								Comments
MARIAN IL										
Sampler		Lab PM								
CRAIG VARLAND		DICK WRIGHT								
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	VOCs	SVOCs	23 TAL METALS I	TCUP 23 TAL METALS
			Date	Time						
1		2696V-25-804-(0-5)	11-6-17	0930	5	S	X	X	X	X
2		2696V-25-802-(0-3)	↓	0915	5	S	X	X	X	X
3		2696V-25-801-(0-2)	↓	0935	5	S	X	X	X	X

Turnaround Time Required (Business Days)

Requested Due Date: 11/6/17  
 1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRALON</u> Date: <u>11-6-17</u> Time: _____	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/6/17</u> Time: <u>1545</u>
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/6/17</u> Time: <u>1613</u>	Received By: <u>[Signature]</u> Company: <u>770-CHE</u> Date: <u>11/7/17</u> Time: <u>0705</u>
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____

Lab Courier: TA  
Shipped: \_\_\_\_\_  
Hand Delivered: \_\_\_\_\_

Matrix Key

WW - Wastewater SE - Sediment  
W - Water SO - Soil  
S - Soil L - Leachate  
SL - Sludge WI - Wipe  
MS - Miscellaneous DW - Drinking Water  
OL - Oil O - Other  
A - Air

Client Comments

NO ALUMINIUM

Lab Comments:

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136834-1

**Login Number: 136834**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Scott, Sherri L**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.7,4.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# TestAmerica

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## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-137163-2

Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:

Terracon Consulting Eng & Scientists

135 Ambassador Drive

Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:

11/22/2017 6:41:26 PM

Jodie Bracken, Project Management Assistant II

[jodie.bracken@testamericainc.com](mailto:jodie.bracken@testamericainc.com)

Designee for

Richard Wright, Senior Project Manager

(708)534-5200

[richard.wright@testamericainc.com](mailto:richard.wright@testamericainc.com)

### LINKS

Review your project  
results through

TotalAccess

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-2

**Job ID: 500-137163-2**

**Laboratory: TestAmerica Chicago**

## Narrative

**Job Narrative**  
**500-137163-2**

### Receipt

The samples were received on 11/10/2017 3:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.4° C and 5.0° C.

### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### GC/MS Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### Metals

Method(s) 6010B: The method blank for preparation batch 500-409937 and analytical batch 500-410092 contained Calcium and Magnesium above the reporting limit (RL). Associated samples 2696V-25-B03 (0-3) (500-137163-3) and 2696V-25-B03 (0-3) Dup (500-137163-4) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-410598 recovered above the upper control limit for Zinc. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: 2696V-25-B03 (0-3) (500-137163-3) and 2696V-25-B03 (0-3) Dup (500-137163-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-2

**Client Sample ID: 2696V-25-B03 (0-3)**

**Lab Sample ID: 500-137163-3**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.024		0.016	0.0068	mg/Kg	1	☼	8260B	Total/NA
Acenaphthene	0.0080	J	0.037	0.0067	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.012	J	0.037	0.0049	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.029	J	0.037	0.0062	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.17		0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.21		0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.33		0.037	0.0080	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.10		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.14		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.068	J	0.19	0.068	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.21		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.025	J	0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.33		0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.0086	J	0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.093		0.037	0.0096	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.017	J	0.075	0.0068	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.011	J	0.037	0.0057	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.14		0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.33		0.037	0.0074	mg/Kg	1	☼	8270D	Total/NA
Arsenic	4.8		0.57	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	45		0.57	0.065	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.65		0.23	0.053	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.47	B	0.11	0.021	mg/Kg	1	☼	6010B	Total/NA
Chromium	12		0.57	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	6.4		0.29	0.075	mg/Kg	1	☼	6010B	Total/NA
Copper	25		0.57	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	14000	B	11	5.9	mg/Kg	1	☼	6010B	Total/NA
Lead	110		0.29	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	32000	B	5.7	2.8	mg/Kg	1	☼	6010B	Total/NA
Calcium	90000	B	110	19	mg/Kg	10	☼	6010B	Total/NA
Manganese	320	B	0.57	0.083	mg/Kg	1	☼	6010B	Total/NA
Nickel	17		0.57	0.17	mg/Kg	1	☼	6010B	Total/NA
Vanadium	15		0.29	0.067	mg/Kg	1	☼	6010B	Total/NA
Zinc	110		1.1	0.50	mg/Kg	1	☼	6010B	Total/NA
Potassium	1300		29	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	420		57	8.5	mg/Kg	1	☼	6010B	Total/NA
Barium	0.52		0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0061		0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	470		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.014	J	0.025	0.010	mg/L	1		6010B	TCLP
Copper	0.011	J B	0.040	0.010	mg/L	1		6010B	TCLP
Lead	0.043		0.0075	0.0075	mg/L	1		6010B	TCLP
Magnesium	92		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	4.2		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.016	J	0.025	0.010	mg/L	1		6010B	TCLP
Potassium	5.7		2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.18	J ^ B	0.50	0.020	mg/L	1		6010B	TCLP
Lead	0.14		0.0075	0.0075	mg/L	1		6010B	SPLP East
Manganese	0.18		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.042		0.019	0.0065	mg/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-2

## Client Sample ID: 2696V-25-B03 (0-3) (Continued)

## Lab Sample ID: 500-137163-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH	8.3		0.20	0.20	SU	1		9045D	Total/NA

## Client Sample ID: 2696V-25-B03 (0-3) Dup

## Lab Sample ID: 500-137163-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.031		0.017	0.0075	mg/Kg	1	☼	8260B	Total/NA
Acenaphthene	0.0087	J	0.038	0.0068	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.014	J	0.038	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.035	J	0.038	0.0063	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.20		0.038	0.0051	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.26		0.038	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.45		0.038	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.11		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.15		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.12	J	0.19	0.069	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.27		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.43		0.038	0.0070	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.0096	J	0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.097		0.038	0.0098	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.0094	J	0.076	0.0070	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.0091	J	0.038	0.0058	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.18		0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.45		0.038	0.0075	mg/Kg	1	☼	8270D	Total/NA
Arsenic	5.8		0.58	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	47		0.58	0.066	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.54		0.23	0.054	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.39	B	0.12	0.021	mg/Kg	1	☼	6010B	Total/NA
Chromium	14		0.58	0.29	mg/Kg	1	☼	6010B	Total/NA
Cobalt	7.5		0.29	0.076	mg/Kg	1	☼	6010B	Total/NA
Copper	19		0.58	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	14000	B	12	6.0	mg/Kg	1	☼	6010B	Total/NA
Lead	96		0.29	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	34000	B	5.8	2.9	mg/Kg	1	☼	6010B	Total/NA
Calcium	89000	B	120	20	mg/Kg	10	☼	6010B	Total/NA
Manganese	330	B	0.58	0.084	mg/Kg	1	☼	6010B	Total/NA
Nickel	18		0.58	0.17	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.49	J	0.58	0.34	mg/Kg	1	☼	6010B	Total/NA
Vanadium	14		0.29	0.069	mg/Kg	1	☼	6010B	Total/NA
Zinc	83		1.2	0.51	mg/Kg	1	☼	6010B	Total/NA
Potassium	1400		29	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	310		58	8.6	mg/Kg	1	☼	6010B	Total/NA
Barium	0.63		0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0041	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	570		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.014	J	0.025	0.010	mg/L	1		6010B	TCLP
Copper	0.018	J B	0.040	0.010	mg/L	1		6010B	TCLP
Lead	0.030		0.0075	0.0075	mg/L	1		6010B	TCLP
Magnesium	54		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	5.5		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.015	J	0.025	0.010	mg/L	1		6010B	TCLP

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-2

**Client Sample ID: 2696V-25-B03 (0-3) Dup (Continued)**

**Lab Sample ID: 500-137163-4**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	5.4		2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.081	J ^ B	0.50	0.020	mg/L	1		6010B	TCLP
Lead	0.26		0.0075	0.0075	mg/L	1		6010B	SPLP East
Manganese	0.46		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.035		0.018	0.0059	mg/Kg	1	✳	7471B	Total/NA
pH	8.3		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-2

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-137163-3	2696V-25-B03 (0-3)	Solid	11/10/17 11:40	11/10/17 15:20
500-137163-4	2696V-25-B03 (0-3) Dup	Solid	11/10/17 11:45	11/10/17 15:20

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-2

**Client Sample ID: 2696V-25-B03 (0-3)**

**Lab Sample ID: 500-137163-3**

Date Collected: 11/10/17 11:40

Matrix: Solid

Date Received: 11/10/17 15:20

Percent Solids: 85.2

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.024		0.016	0.0068	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Benzene	<0.0016		0.0016	0.00040	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Bromodichloromethane	<0.0016		0.0016	0.00032	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Bromoform	<0.0016		0.0016	0.00045	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Bromomethane	<0.0039		0.0039	0.0015	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
2-Butanone (MEK)	<0.0039		0.0039	0.0017	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Carbon disulfide	<0.0039		0.0039	0.00081	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Carbon tetrachloride	<0.0016		0.0016	0.00045	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Chlorobenzene	<0.0016		0.0016	0.00057	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Chloroethane	<0.0039		0.0039	0.0012	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Chloroform	<0.0016		0.0016	0.00054	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Chloromethane	<0.0039		0.0039	0.0016	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
cis-1,2-Dichloroethene	<0.0016		0.0016	0.00043	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
cis-1,3-Dichloropropene	<0.0016		0.0016	0.00047	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Dibromochloromethane	<0.0016		0.0016	0.00051	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
1,1-Dichloroethane	<0.0016		0.0016	0.00053	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
1,2-Dichloroethane	<0.0039		0.0039	0.0012	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
1,1-Dichloroethene	<0.0016		0.0016	0.00054	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
1,2-Dichloropropane	<0.0016		0.0016	0.00040	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
1,3-Dichloropropane, Total	<0.0016		0.0016	0.00055	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Ethylbenzene	<0.0016		0.0016	0.00074	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
2-Hexanone	<0.0039		0.0039	0.0012	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Methylene Chloride	<0.0039		0.0039	0.0015	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
4-Methyl-2-pentanone (MIBK)	<0.0039		0.0039	0.0012	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Methyl tert-butyl ether	<0.0016		0.0016	0.00046	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Styrene	<0.0016		0.0016	0.00047	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
1,1,2,2-Tetrachloroethane	<0.0016		0.0016	0.00050	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Tetrachloroethene	<0.0016		0.0016	0.00053	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Toluene	<0.0016		0.0016	0.00039	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
trans-1,2-Dichloroethene	<0.0016		0.0016	0.00069	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
trans-1,3-Dichloropropene	<0.0016		0.0016	0.00055	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
1,1,1-Trichloroethane	<0.0016		0.0016	0.00052	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
1,1,2-Trichloroethane	<0.0016		0.0016	0.00067	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Trichloroethene	<0.0016		0.0016	0.00053	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Vinyl acetate	<0.0039		0.0039	0.0014	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Vinyl chloride	<0.0016		0.0016	0.00069	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1
Xylenes, Total	<0.0031		0.0031	0.00050	mg/Kg	☼	11/11/17 14:00	11/16/17 16:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		75 - 131	11/11/17 14:00	11/16/17 16:04	1
Dibromofluoromethane	100		75 - 126	11/11/17 14:00	11/16/17 16:04	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 134	11/11/17 14:00	11/16/17 16:04	1
Toluene-d8 (Surr)	98		75 - 124	11/11/17 14:00	11/16/17 16:04	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.0080	J	0.037	0.0067	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Acenaphthylene	0.012	J	0.037	0.0049	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Anthracene	0.029	J	0.037	0.0062	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Benzo[a]anthracene	0.17		0.037	0.0050	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-2

**Client Sample ID: 2696V-25-B03 (0-3)**

**Lab Sample ID: 500-137163-3**

Date Collected: 11/10/17 11:40

Matrix: Solid

Date Received: 11/10/17 15:20

Percent Solids: 85.2

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.21		0.037	0.0072	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Benzo[b]fluoranthene	0.33		0.037	0.0080	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Benzo[g,h,i]perylene	0.10		0.037	0.012	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Benzo[k]fluoranthene	0.14		0.037	0.011	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Bis(2-ethylhexyl) phthalate	0.068	J	0.19	0.068	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Butyl benzyl phthalate	<0.19		0.19	0.070	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Carbazole	<0.19		0.19	0.093	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
4-Chloroaniline	<0.75		0.75	0.17	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
2-Chlorophenol	<0.19		0.19	0.063	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.043	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Chrysene	0.21		0.037	0.010	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Dibenz(a,h)anthracene	0.025	J	0.037	0.0072	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Dibenzofuran	<0.19		0.19	0.043	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
1,2-Dichlorobenzene	<0.19		0.19	0.044	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
1,4-Dichlorobenzene	<0.19		0.19	0.047	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
2,4-Dichlorophenol	<0.37		0.37	0.088	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Dimethyl phthalate	<0.19		0.19	0.048	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Di-n-butyl phthalate	<0.19		0.19	0.056	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
2,4-Dinitrophenol	<0.75		0.75	0.65	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
2,6-Dinitrotoluene	<0.19		0.19	0.073	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Di-n-octyl phthalate	<0.19		0.19	0.060	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Fluoranthene	0.33		0.037	0.0069	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Fluorene	0.0086	J	0.037	0.0052	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Hexachlorobenzene	<0.075		0.075	0.0086	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Hexachlorobutadiene	<0.19		0.19	0.058	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Hexachlorocyclopentadiene	<0.75		0.75	0.21	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Hexachloroethane	<0.19		0.19	0.056	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Indeno[1,2,3-cd]pyrene	0.093		0.037	0.0096	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
2-Methylnaphthalene	0.017	J	0.075	0.0068	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
2-Methylphenol	<0.19		0.19	0.059	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Naphthalene	0.011	J	0.037	0.0057	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
3-Nitroaniline	<0.37		0.37	0.11	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
4-Nitroaniline	<0.37		0.37	0.15	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Nitrobenzene	<0.037		0.037	0.0092	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-2

**Client Sample ID: 2696V-25-B03 (0-3)**

**Lab Sample ID: 500-137163-3**

Date Collected: 11/10/17 11:40

Matrix: Solid

Date Received: 11/10/17 15:20

Percent Solids: 85.2

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.75		0.75	0.35	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.045	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Pentachlorophenol	<0.75		0.75	0.59	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
<b>Phenanthrene</b>	<b>0.14</b>		0.037	0.0052	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
Phenol	<0.19		0.19	0.082	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
<b>Pyrene</b>	<b>0.33</b>		0.037	0.0074	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/17/17 07:31	11/20/17 19:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	99		44 - 121	11/17/17 07:31	11/20/17 19:52	1
2-Fluorophenol	100		46 - 133	11/17/17 07:31	11/20/17 19:52	1
Nitrobenzene-d5	97		41 - 120	11/17/17 07:31	11/20/17 19:52	1
Phenol-d5	104		46 - 125	11/17/17 07:31	11/20/17 19:52	1
Terphenyl-d14	111		35 - 160	11/17/17 07:31	11/20/17 19:52	1
2,4,6-Tribromophenol	72		25 - 139	11/17/17 07:31	11/20/17 19:52	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.22	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1
<b>Arsenic</b>	<b>4.8</b>		0.57	0.20	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1
<b>Barium</b>	<b>45</b>		0.57	0.065	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1
<b>Beryllium</b>	<b>0.65</b>		0.23	0.053	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1
<b>Cadmium</b>	<b>0.47</b>	<b>B</b>	0.11	0.021	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1
<b>Chromium</b>	<b>12</b>		0.57	0.28	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1
<b>Cobalt</b>	<b>6.4</b>		0.29	0.075	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1
<b>Copper</b>	<b>25</b>		0.57	0.16	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1
<b>Iron</b>	<b>14000</b>	<b>B</b>	11	5.9	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1
<b>Lead</b>	<b>110</b>		0.29	0.13	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1
<b>Magnesium</b>	<b>32000</b>	<b>B</b>	5.7	2.8	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1
<b>Calcium</b>	<b>90000</b>	<b>B</b>	110	19	mg/Kg	☼	11/14/17 16:15	11/15/17 20:17	10
<b>Manganese</b>	<b>320</b>	<b>B</b>	0.57	0.083	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1
<b>Nickel</b>	<b>17</b>		0.57	0.17	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1
Selenium	<0.57		0.57	0.34	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1
Silver	<0.29		0.29	0.074	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1
Thallium	<0.57		0.57	0.28	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1
<b>Vanadium</b>	<b>15</b>		0.29	0.067	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1
<b>Zinc</b>	<b>110</b>		1.1	0.50	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1
<b>Potassium</b>	<b>1300</b>		29	10	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1
<b>Sodium</b>	<b>420</b>		57	8.5	mg/Kg	☼	11/14/17 16:15	11/15/17 13:01	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/17/17 09:02	11/17/17 16:47	1
<b>Barium</b>	<b>0.52</b>		0.50	0.050	mg/L		11/17/17 09:02	11/17/17 16:47	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/17/17 09:02	11/17/17 16:47	1
<b>Cadmium</b>	<b>0.0061</b>		0.0050	0.0020	mg/L		11/17/17 09:02	11/17/17 16:47	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-2

**Client Sample ID: 2696V-25-B03 (0-3)**

**Lab Sample ID: 500-137163-3**

**Date Collected: 11/10/17 11:40**

**Matrix: Solid**

**Date Received: 11/10/17 15:20**

**Percent Solids: 85.2**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	470		5.0	0.50	mg/L		11/17/17 09:02	11/17/17 16:47	1
Chromium	<0.025		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:47	1
Cobalt	0.014	J	0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:47	1
Copper	0.011	J B	0.040	0.010	mg/L		11/17/17 09:02	11/17/17 16:47	1
Iron	<0.40		0.40	0.20	mg/L		11/17/17 09:02	11/17/17 16:47	1
Lead	0.043		0.0075	0.0075	mg/L		11/17/17 09:02	11/17/17 16:47	1
Magnesium	92		2.5	0.50	mg/L		11/17/17 09:02	11/17/17 16:47	1
Manganese	4.2		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:47	1
Nickel	0.016	J	0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:47	1
Potassium	5.7		2.5	0.50	mg/L		11/17/17 09:02	11/17/17 16:47	1
Selenium	<0.050		0.050	0.020	mg/L		11/17/17 09:02	11/17/17 16:47	1
Silver	<0.025		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:47	1
Vanadium	<0.025		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:47	1
Zinc	0.18	J ^ B	0.50	0.020	mg/L		11/17/17 09:02	11/17/17 16:47	1

**Method: 6010B - SPLP Metals - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/20/17 07:21	11/20/17 20:10	1
Lead	0.14		0.0075	0.0075	mg/L		11/20/17 07:21	11/20/17 20:10	1
Manganese	0.18		0.025	0.010	mg/L		11/20/17 07:21	11/20/17 20:10	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/17/17 09:02	11/18/17 03:48	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/17/17 09:02	11/18/17 03:48	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/18/17 14:00	11/20/17 09:10	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.042		0.019	0.0065	mg/Kg	☼	11/20/17 07:30	11/20/17 14:37	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.58		0.58	0.20	mg/Kg	☼	11/21/17 13:15	11/21/17 16:31	1
pH	8.3		0.20	0.20	SU			11/20/17 10:29	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-2

**Client Sample ID: 2696V-25-B03 (0-3) Dup**

**Lab Sample ID: 500-137163-4**

**Date Collected: 11/10/17 11:45**

**Matrix: Solid**

**Date Received: 11/10/17 15:20**

**Percent Solids: 85.2**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.031</b>		0.017	0.0075	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Benzene	<0.0017		0.0017	0.00044	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Bromodichloromethane	<0.0017		0.0017	0.00035	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Bromoform	<0.0017		0.0017	0.00051	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Bromomethane	<0.0043		0.0043	0.0016	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
2-Butanone (MEK)	<0.0043		0.0043	0.0019	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Carbon disulfide	<0.0043		0.0043	0.00090	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Carbon tetrachloride	<0.0017		0.0017	0.00050	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Chlorobenzene	<0.0017		0.0017	0.00064	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Chloroethane	<0.0043		0.0043	0.0013	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Chloroform	<0.0017		0.0017	0.00060	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Chloromethane	<0.0043		0.0043	0.0017	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
cis-1,2-Dichloroethene	<0.0017		0.0017	0.00048	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
cis-1,3-Dichloropropene	<0.0017		0.0017	0.00052	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Dibromochloromethane	<0.0017		0.0017	0.00057	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
1,1-Dichloroethane	<0.0017		0.0017	0.00059	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
1,2-Dichloroethane	<0.0043		0.0043	0.0013	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
1,1-Dichloroethene	<0.0017		0.0017	0.00060	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
1,2-Dichloropropane	<0.0017		0.0017	0.00045	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
1,3-Dichloropropane, Total	<0.0017		0.0017	0.00061	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Ethylbenzene	<0.0017		0.0017	0.00083	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
2-Hexanone	<0.0043		0.0043	0.0013	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Methylene Chloride	<0.0043		0.0043	0.0017	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
4-Methyl-2-pentanone (MIBK)	<0.0043		0.0043	0.0013	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Methyl tert-butyl ether	<0.0017		0.0017	0.00051	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Styrene	<0.0017		0.0017	0.00052	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
1,1,2,2-Tetrachloroethane	<0.0017		0.0017	0.00055	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Tetrachloroethene	<0.0017		0.0017	0.00059	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Toluene	<0.0017		0.0017	0.00044	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
trans-1,2-Dichloroethene	<0.0017		0.0017	0.00077	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
trans-1,3-Dichloropropene	<0.0017		0.0017	0.00061	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
1,1,1-Trichloroethane	<0.0017		0.0017	0.00058	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
1,1,2-Trichloroethane	<0.0017		0.0017	0.00074	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Trichloroethene	<0.0017		0.0017	0.00058	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Vinyl acetate	<0.0043		0.0043	0.0015	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Vinyl chloride	<0.0017		0.0017	0.00077	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1
Xylenes, Total	<0.0035		0.0035	0.00055	mg/Kg	☼	11/11/17 14:00	11/16/17 16:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		75 - 131	11/11/17 14:00	11/16/17 16:30	1
Dibromofluoromethane	99		75 - 126	11/11/17 14:00	11/16/17 16:30	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 134	11/11/17 14:00	11/16/17 16:30	1
Toluene-d8 (Surr)	99		75 - 124	11/11/17 14:00	11/16/17 16:30	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acenaphthene</b>	<b>0.0087</b>	<b>J</b>	0.038	0.0068	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
<b>Acenaphthylene</b>	<b>0.014</b>	<b>J</b>	0.038	0.0050	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
<b>Anthracene</b>	<b>0.035</b>	<b>J</b>	0.038	0.0063	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
<b>Benzo[a]anthracene</b>	<b>0.20</b>		0.038	0.0051	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-2

**Client Sample ID: 2696V-25-B03 (0-3) Dup**

**Lab Sample ID: 500-137163-4**

**Date Collected: 11/10/17 11:45**

**Matrix: Solid**

**Date Received: 11/10/17 15:20**

**Percent Solids: 85.2**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.26</b>		0.038	0.0073	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
<b>Benzo[b]fluoranthene</b>	<b>0.45</b>		0.038	0.0082	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
<b>Benzo[g,h,i]perylene</b>	<b>0.11</b>		0.038	0.012	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
<b>Benzo[k]fluoranthene</b>	<b>0.15</b>		0.038	0.011	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
<b>Bis(2-ethylhexyl) phthalate</b>	<b>0.12 J</b>		0.19	0.069	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
Carbazole	<0.19		0.19	0.095	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
2-Chlorophenol	<0.19		0.19	0.065	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
<b>Chrysene</b>	<b>0.27</b>		0.038	0.010	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
Dibenz(a,h)anthracene	<0.038		0.038	0.0073	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
2,4-Dichlorophenol	<0.38		0.38	0.090	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
2,4-Dimethylphenol	<0.38		0.38	0.14	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
2,4-Dinitrophenol	<0.76		0.76	0.67	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
<b>Fluoranthene</b>	<b>0.43</b>		0.038	0.0070	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
<b>Fluorene</b>	<b>0.0096 J</b>		0.038	0.0053	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
Hexachlorobenzene	<0.076		0.076	0.0088	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.097</b>		0.038	0.0098	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
<b>2-Methylnaphthalene</b>	<b>0.0094 J</b>		0.076	0.0070	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
<b>Naphthalene</b>	<b>0.0091 J</b>		0.038	0.0058	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
Nitrobenzene	<0.038		0.038	0.0094	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
2-Nitrophenol	<0.38		0.38	0.089	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-2

**Client Sample ID: 2696V-25-B03 (0-3) Dup**

**Lab Sample ID: 500-137163-4**

Date Collected: 11/10/17 11:45

Matrix: Solid

Date Received: 11/10/17 15:20

Percent Solids: 85.2

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
Pentachlorophenol	<0.76		0.76	0.61	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
<b>Phenanthrene</b>	<b>0.18</b>		0.038	0.0053	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
Phenol	<0.19		0.19	0.084	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
<b>Pyrene</b>	<b>0.45</b>		0.038	0.0075	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
2,4,5-Trichlorophenol	<0.38		0.38	0.086	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	11/17/17 07:31	11/20/17 21:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	100		44 - 121	11/17/17 07:31	11/20/17 21:54	1
2-Fluorophenol	97		46 - 133	11/17/17 07:31	11/20/17 21:54	1
Nitrobenzene-d5	97		41 - 120	11/17/17 07:31	11/20/17 21:54	1
Phenol-d5	100		46 - 125	11/17/17 07:31	11/20/17 21:54	1
Terphenyl-d14	118		35 - 160	11/17/17 07:31	11/20/17 21:54	1
2,4,6-Tribromophenol	86		25 - 139	11/17/17 07:31	11/20/17 21:54	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.23	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1
<b>Arsenic</b>	<b>5.8</b>		0.58	0.20	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1
<b>Barium</b>	<b>47</b>		0.58	0.066	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1
<b>Beryllium</b>	<b>0.54</b>		0.23	0.054	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1
<b>Cadmium</b>	<b>0.39</b>	<b>B</b>	0.12	0.021	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1
<b>Chromium</b>	<b>14</b>		0.58	0.29	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1
<b>Cobalt</b>	<b>7.5</b>		0.29	0.076	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1
<b>Copper</b>	<b>19</b>		0.58	0.16	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1
<b>Iron</b>	<b>14000</b>	<b>B</b>	12	6.0	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1
<b>Lead</b>	<b>96</b>		0.29	0.13	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1
<b>Magnesium</b>	<b>34000</b>	<b>B</b>	5.8	2.9	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1
<b>Calcium</b>	<b>89000</b>	<b>B</b>	120	20	mg/Kg	☼	11/14/17 16:15	11/15/17 20:21	10
<b>Manganese</b>	<b>330</b>	<b>B</b>	0.58	0.084	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1
<b>Nickel</b>	<b>18</b>		0.58	0.17	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1
<b>Selenium</b>	<b>0.49</b>	<b>J</b>	0.58	0.34	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1
Silver	<0.29		0.29	0.075	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1
Thallium	<0.58		0.58	0.29	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1
<b>Vanadium</b>	<b>14</b>		0.29	0.069	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1
<b>Zinc</b>	<b>83</b>		1.2	0.51	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1
<b>Potassium</b>	<b>1400</b>		29	10	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1
<b>Sodium</b>	<b>310</b>		58	8.6	mg/Kg	☼	11/14/17 16:15	11/15/17 13:05	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/17/17 09:02	11/17/17 16:51	1
<b>Barium</b>	<b>0.63</b>		0.50	0.050	mg/L		11/17/17 09:02	11/17/17 16:51	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/17/17 09:02	11/17/17 16:51	1
<b>Cadmium</b>	<b>0.0041</b>	<b>J</b>	0.0050	0.0020	mg/L		11/17/17 09:02	11/17/17 16:51	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-2

**Client Sample ID: 2696V-25-B03 (0-3) Dup**

**Lab Sample ID: 500-137163-4**

**Date Collected: 11/10/17 11:45**

**Matrix: Solid**

**Date Received: 11/10/17 15:20**

**Percent Solids: 85.2**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	570		5.0	0.50	mg/L		11/17/17 09:02	11/17/17 16:51	1
Chromium	<0.025		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:51	1
Cobalt	0.014	J	0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:51	1
Copper	0.018	J B	0.040	0.010	mg/L		11/17/17 09:02	11/17/17 16:51	1
Iron	<0.40		0.40	0.20	mg/L		11/17/17 09:02	11/17/17 16:51	1
Lead	0.030		0.0075	0.0075	mg/L		11/17/17 09:02	11/17/17 16:51	1
Magnesium	54		2.5	0.50	mg/L		11/17/17 09:02	11/17/17 16:51	1
Manganese	5.5		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:51	1
Nickel	0.015	J	0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:51	1
Potassium	5.4		2.5	0.50	mg/L		11/17/17 09:02	11/17/17 16:51	1
Selenium	<0.050		0.050	0.020	mg/L		11/17/17 09:02	11/17/17 16:51	1
Silver	<0.025		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:51	1
Vanadium	<0.025		0.025	0.010	mg/L		11/17/17 09:02	11/17/17 16:51	1
Zinc	0.081	J ^ B	0.50	0.020	mg/L		11/17/17 09:02	11/17/17 16:51	1

**Method: 6010B - SPLP Metals - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.26		0.0075	0.0075	mg/L		11/20/17 07:21	11/20/17 20:14	1
Manganese	0.46		0.025	0.010	mg/L		11/20/17 07:21	11/20/17 20:14	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/17/17 09:02	11/18/17 03:51	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/17/17 09:02	11/18/17 03:51	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/18/17 14:00	11/20/17 09:11	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.035		0.018	0.0059	mg/Kg	☼	11/20/17 07:30	11/20/17 14:39	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.57		0.57	0.20	mg/Kg	☼	11/21/17 13:15	11/21/17 16:32	1
pH	8.3		0.20	0.20	SU			11/20/17 10:31	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-2

## Qualifiers

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-137163-2

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional) \_\_\_\_\_  
 Contact: Matt Weiss  
 Company: Terracon  
 Address: 135 Ambassador Dr  
Naperville IL  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: Matt.weiss@terracon.com

Bill To (optional) \_\_\_\_\_  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-137163

Chain of Custody Number: \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_

Temperature °C of Cooler: 5.0, 3.4

Client		Client Project #		Preservative		Parameter		Matrix		Comments		
<u>Terracon</u>		<u>11172029M</u>										
Project Name		Lab Project #										
<u>W037</u>												
Project Location/State		Lab PM										
Sampler												
<u>Matt Weiss</u>												
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	VOCs	SVOCs	23 TAL Inorganics	pH	TCLP 23 Inorganics	Preservative Key
			Date	Time								
<u>3</u>		<u>21696V-25-803(0-3)</u>	<u>11-10</u>	<u>1140</u>	<u>6</u>	<u>S</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>1</u>		
<u>4</u>		<u>21696V-25-803(0-3) RP</u>	<u>11-10</u>	<u>1145</u>	<u>6</u>	<u>S</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>2</u>		

- Preservative Key
1. HCL, Cool to 4°
  2. H2SO4, Cool to 4°
  3. HNO3, Cool to 4°
  4. NaOH, Cool to 4°
  5. NaOH/Zn, Cool to 4°
  6. NaHSO4
  7. Cool to 4°
  8. None
  9. Other

Turnaround Time Required (Business Days)  
 \_\_\_ 1 Day \_\_\_ 2 Days \_\_\_ 5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other

Requested Due Date \_\_\_\_\_

Sample Disposal  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By <u>Justin</u>	Company <u>Terracon</u>	Date <u>11-10</u>	Time <u>1450</u>	Received By <u>P. Neal</u>	Company <u>TA</u>	Date <u>11/10/17</u>	Time <u>1450</u>
Relinquished By <u>P. Neal</u>	Company <u>TA</u>	Date <u>11/10/17</u>	Time <u>1520</u>	Received By <u>Deirdre Sanyal</u>	Company <u>TALHE</u>	Date <u>11/10/17</u>	Time <u>1520</u>
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier: JA

Shipped: \_\_\_\_\_

Hand Delivered: \_\_\_\_\_

- Matrix Key
- WW - Wastewater
  - W - Water
  - S - Soil
  - SL - Sludge
  - MS - Miscellaneous
  - OL - Oil
  - A - Air
  - SE - Sediment
  - SO - Soil
  - L - Leachate
  - WI - Wipe
  - DW - Drinking Water
  - O - Other

Client Comments  
\* NO aluminum

Lab Comments:

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-137163-2

**Login Number: 137163**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.4, 5.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





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## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

Kedzie Ave (Southbound) IDOT STA 79+20 to 81+20 (ISGS Site 2696V-26)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

Soil from borings B01 and B02 were sampled adjacent to ISGS Site No 2696V-26.  
See Exhibits 6, 6F, 8, 8B, and Table 47 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136786-4.  
Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

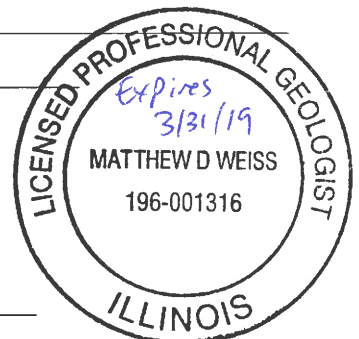
***Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))***

Company Name: Terracon Consultants, Inc  
 Street Address: 135 Ambassador Drive  
 City: Naperville State: IL Zip Code: 60540  
 Phone: 630-717-4263

Matt Weiss  
Printed Name:

[Signature]  
Licensed Professional Engineer or  
Licensed Professional Geologist Signature:

7/24/18  
Date:



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-26)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 1 of 2

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-26-B01 (0-1)	2696V-26-B02 (0-1)
				CCDD	Sample Depth (feet)	(0-1)	(0-1)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/03/2017	11/03/2017
<b>Semivolatile Organic Analytical Parameters</b>							
Acenaphthene	mg/kg	0.09	0.13	570		<0.040	0.013
Acenaphthylene	mg/kg	0.03	0.07	85		0.0067	0.0053
Anthracene	mg/kg	0.25	0.4	12000		0.043	0.034
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.26	0.19
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.36	0.21
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.62	0.35
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.19	0.096
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		0.25	0.15
Chrysene	mg/kg	1.2	2.7	88		0.31	0.21
Dibenzo(a,h)anthracene	mg/kg	0.2	0.42	0.09		0.051	0.022
Fluoranthene	mg/kg	2.7	4.1	3100		0.58	0.44
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.19	0.1
Naphthalene	mg/kg	0.04	0.2	1.8		<0.040	0.011
Phenanthrene	mg/kg	1.3	2.5	210		0.15	0.2
Pyrene	mg/kg	1.9	3.0	2300		0.4	0.4
2-Methylnaphthalene	mg/kg	---	0.14	---		<0.080	0.0077
<b>Inorganic Analytical Parameters</b>							
Arsenic	mg/kg	---	13	11.3		4.8	3.8
Barium	mg/kg	---	110	1500		43	32
Cadmium	mg/kg	---	0.6	5.2		0.43	1.4
Chromium, total	mg/kg	---	16.2	21		10	12
Lead	mg/kg	---	36	107		96	36
Mercury	mg/kg	---	0.06	0.1		0.022	0.058
Selenium	mg/kg	---	0.48	1.3		0.63	<0.56
Silver	mg/kg	---	0.55	4.4		<0.29	0.19
Antimony	mg/kg	---	4.0	5		0.43	0.56
Beryllium	mg/kg	---	0.59	22		0.39	0.26
Calcium	mg/kg	---	9,300	---		16000	5800
Cobalt	mg/kg	---	8.9	20		4	2.8
Copper	mg/kg	---	19.6	2900		16	24
Cyanide	mg/kg	---	0.51	---		<0.60	0.21
Iron	mg/kg	---	15,900	15000		11000	8100
Magnesium	mg/kg	---	4,820	325000		9100	3300
Manganese	mg/kg	---	636	630		140	100
Nickel	mg/kg	---	18	100		11	11
Potassium	mg/kg	---	1,268	---		700	560
Sodium	mg/kg	---	130	---		250	450
Thallium	mg/kg	---	0.32	2.6		<0.57	<0.56
Vanadium	mg/kg	---	25.2	550		14	13
Zinc	mg/kg	---	95	5100		68	49
pH			6.25	9		8.1	8.7

Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-26)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 2 of 2

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-26-B01 (0-1)	2696V-26-B02 (0-1)
				CCDD	Sample Depth (feet)	(0-1)	(0-1)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/03/2017	11/03/2017
<b>Inorganic Analytical Parameters (SPLP)</b>							
Antimony,SPLP	mg/L	---	---	---		--	--
Arsenic,SPLP	mg/L	---	---	---		--	--
Barium,SPLP	mg/L	---	---	---		--	--
Beryllium,SPLP	mg/L	---	---	---		--	--
Cadmium,SPLP	mg/L	---	---	---		--	0.011
Calcium,SPLP	mg/L	---	---	---		--	--
Chromium,SPLP	mg/L	---	---	---		--	--
Cobalt,SPLP	mg/L	---	---	---		--	--
Copper,SPLP	mg/L	---	---	---		--	--
Iron,SPLP	mg/L	---	---	---		--	--
Lead,SPLP	mg/L	---	---	---		--	--
Magnesium,SPLP	mg/L	---	---	---		--	--
Manganese,SPLP	mg/L	---	---	---		0.097	0.3
Mercury,SPLP	mg/L	---	---	---		--	--
Nickel,SPLP	mg/L	---	---	---		--	--
Potassium,SPLP	mg/L	---	---	---		--	--
Selenium,SPLP	mg/L	---	---	---		--	--
Silver,SPLP	mg/L	---	---	---		--	--
Sodium,SPLP	mg/L	---	---	---		--	--
Thallium,SPLP	mg/L	---	---	---		--	--
Vanadium,SPLP	mg/L	---	---	---		--	--
Zinc,SPLP	mg/L	---	---	---		--	--
Cyanide,SPLP	mg/L	---	---	---		--	--
<b>Inorganic Analytical Parameters (TCLP)</b>							
Arsenic,TCLP	mg/L	---	---	---		<0.050	<0.050
Barium,TCLP	mg/L	---	---	---		0.21	0.22
Cadmium,TCLP	mg/L	---	---	---		<0.0050	0.022
Chromium,TCLP	mg/L	---	---	---		<0.025	<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075	<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020	<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050	<0.050
Silver,TCLP	mg/L	---	---	---		<0.025	<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060	<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040	<0.0040
Calcium,TCLP	mg/L	---	---	---		200	200
Cobalt,TCLP	mg/L	---	---	---		<0.025	<0.025
Copper,TCLP	mg/L	---	---	---		0.017	0.016
Cyanide,TCLP	mg/L	---	---	---		----	----
Iron,TCLP	mg/L	---	---	---		<0.40	<0.40
Magnesium,TCLP	mg/L	---	---	---		100	100
Manganese,TCLP	mg/L	---	---	---		0.34	0.37
Nickel,TCLP	mg/L	---	---	---		<0.025	0.016
Potassium,TCLP	mg/L	---	---	---		<2.5	0.55
Sodium,TCLP	mg/L	---	---	---		----	----
Thallium,TCLP	mg/L	---	---	---		<0.0020	<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025	<0.025
Zinc,TCLP	mg/L	---	---	---		0.045	0.12



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

TestAmerica Job ID: 500-136786-4  
Client Project/Site: IDOT - Oak Forest/Markham - WO37  
Revision: 1

For:  
Terracon Consulting Eng & Scientists  
135 Ambassador Drive  
Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:  
11/21/2017 9:58:37 AM  
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Designee for  
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### LINKS

Review your project  
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*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-4

**Job ID: 500-136786-4**

**Laboratory: TestAmerica Chicago**

## Narrative

**Job Narrative**  
**500-136786-4**

### Comments

No additional comments.

### Receipt

The samples were received on 11/3/2017 4:27 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.9° C and 4.6° C.

### Revised Report

Sample IDs for lab sample 14 and 15 modified per communication with Terracon.

### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-4

**Client Sample ID: 2696V-26-B02 (0-1)**

**Lab Sample ID: 500-136786-14**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acenaphthene	0.013	J	0.039	0.0070	mg/Kg	1	☼	☼	8270D	Total/NA
Acenaphthylene	0.0053	J	0.039	0.0051	mg/Kg	1	☼	☼	8270D	Total/NA
Anthracene	0.034	J	0.039	0.0065	mg/Kg	1	☼	☼	8270D	Total/NA
Benzo[a]anthracene	0.19		0.039	0.0052	mg/Kg	1	☼	☼	8270D	Total/NA
Benzo[a]pyrene	0.21		0.039	0.0075	mg/Kg	1	☼	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.35		0.039	0.0084	mg/Kg	1	☼	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.096		0.039	0.013	mg/Kg	1	☼	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.15		0.039	0.011	mg/Kg	1	☼	☼	8270D	Total/NA
Chrysene	0.21		0.039	0.011	mg/Kg	1	☼	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.022	J	0.039	0.0075	mg/Kg	1	☼	☼	8270D	Total/NA
Fluoranthene	0.44		0.039	0.0072	mg/Kg	1	☼	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.10		0.039	0.010	mg/Kg	1	☼	☼	8270D	Total/NA
2-Methylnaphthalene	0.0077	J	0.078	0.0071	mg/Kg	1	☼	☼	8270D	Total/NA
Naphthalene	0.011	J	0.039	0.0060	mg/Kg	1	☼	☼	8270D	Total/NA
Phenanthrene	0.20		0.039	0.0054	mg/Kg	1	☼	☼	8270D	Total/NA
Pyrene	0.40		0.039	0.0077	mg/Kg	1	☼	☼	8270D	Total/NA
Antimony	0.56	J	1.1	0.22	mg/Kg	1	☼	☼	6010B	Total/NA
Arsenic	3.8		0.56	0.19	mg/Kg	1	☼	☼	6010B	Total/NA
Barium	32		0.56	0.064	mg/Kg	1	☼	☼	6010B	Total/NA
Beryllium	0.26		0.22	0.052	mg/Kg	1	☼	☼	6010B	Total/NA
Cadmium	1.4	B	0.11	0.020	mg/Kg	1	☼	☼	6010B	Total/NA
Chromium	12		0.56	0.28	mg/Kg	1	☼	☼	6010B	Total/NA
Cobalt	2.8		0.28	0.073	mg/Kg	1	☼	☼	6010B	Total/NA
Copper	24		0.56	0.16	mg/Kg	1	☼	☼	6010B	Total/NA
Iron	8100		11	5.8	mg/Kg	1	☼	☼	6010B	Total/NA
Lead	36		0.28	0.13	mg/Kg	1	☼	☼	6010B	Total/NA
Magnesium	3300		5.6	2.8	mg/Kg	1	☼	☼	6010B	Total/NA
Calcium	5800	B	11	1.9	mg/Kg	1	☼	☼	6010B	Total/NA
Manganese	100		0.56	0.081	mg/Kg	1	☼	☼	6010B	Total/NA
Nickel	11		0.56	0.16	mg/Kg	1	☼	☼	6010B	Total/NA
Silver	0.19	J	0.28	0.072	mg/Kg	1	☼	☼	6010B	Total/NA
Vanadium	13		0.28	0.066	mg/Kg	1	☼	☼	6010B	Total/NA
Zinc	49		1.1	0.49	mg/Kg	1	☼	☼	6010B	Total/NA
Potassium	560		28	9.9	mg/Kg	1	☼	☼	6010B	Total/NA
Sodium	450		56	8.3	mg/Kg	1	☼	☼	6010B	Total/NA
Barium	0.22	J	0.50	0.050	mg/L	1			6010B	TCLP
Cadmium	0.022		0.0050	0.0020	mg/L	1			6010B	TCLP
Calcium	200		5.0	0.50	mg/L	1			6010B	TCLP
Copper	0.016	J	0.025	0.010	mg/L	1			6010B	TCLP
Magnesium	100		2.5	0.50	mg/L	1			6010B	TCLP
Manganese	0.37		0.025	0.010	mg/L	1			6010B	TCLP
Nickel	0.016	J	0.025	0.010	mg/L	1			6010B	TCLP
Potassium	0.55	J	2.5	0.50	mg/L	1			6010B	TCLP
Zinc	0.12	J	0.50	0.020	mg/L	1			6010B	TCLP
Cadmium	0.011		0.0050	0.0020	mg/L	1			6010B	SPLP East
Manganese	0.30		0.025	0.010	mg/L	1			6010B	SPLP East
Mercury	0.058		0.018	0.0058	mg/Kg	1	☼	☼	7471B	Total/NA
Cyanide, Total	0.21	J	0.53	0.18	mg/Kg	1	☼	☼	9014	Total/NA
pH	8.7		0.20	0.20	SU	1			9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-4

**Client Sample ID: 2696V-26-B01 (0-1)**

**Lab Sample ID: 500-136786-15**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0067	J	0.040	0.0053	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.043		0.040	0.0067	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.26		0.040	0.0054	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.36		0.040	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.62		0.040	0.0086	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.19		0.040	0.013	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.25		0.040	0.012	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.31		0.040	0.011	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.051		0.040	0.0077	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.58		0.040	0.0074	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.19		0.040	0.010	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.15		0.040	0.0056	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.40		0.040	0.0079	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.43	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.8		0.57	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	43		0.57	0.065	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.39		0.23	0.053	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.43	B	0.11	0.021	mg/Kg	1	☼	6010B	Total/NA
Chromium	10		0.57	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.0		0.29	0.075	mg/Kg	1	☼	6010B	Total/NA
Copper	16		0.57	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	11000		11	6.0	mg/Kg	1	☼	6010B	Total/NA
Lead	96		0.29	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	9100		5.7	2.8	mg/Kg	1	☼	6010B	Total/NA
Calcium	16000	B	11	1.9	mg/Kg	1	☼	6010B	Total/NA
Manganese	140		0.57	0.083	mg/Kg	1	☼	6010B	Total/NA
Nickel	11		0.57	0.17	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.63		0.57	0.34	mg/Kg	1	☼	6010B	Total/NA
Vanadium	14		0.29	0.068	mg/Kg	1	☼	6010B	Total/NA
Zinc	68		1.1	0.50	mg/Kg	1	☼	6010B	Total/NA
Potassium	700		29	10	mg/Kg	1	☼	6010B	Total/NA
Sodium	250		57	8.5	mg/Kg	1	☼	6010B	Total/NA
Barium	0.21	J	0.50	0.050	mg/L	1		6010B	TCLP
Calcium	200		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.017	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	100		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.34		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.045	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.097		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.022		0.020	0.0066	mg/Kg	1	☼	7471B	Total/NA
pH	8.1		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136786-14	2696V-26-B02 (0-1)	Solid	11/03/17 09:15	11/03/17 16:27
500-136786-15	2696V-26-B01 (0-1)	Solid	11/03/17 09:30	11/03/17 16:27

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-4

**Client Sample ID: 2696V-26-B02 (0-1)**

**Lab Sample ID: 500-136786-14**

**Date Collected: 11/03/17 09:15**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 85.2**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0079	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Benzene	<0.0018		0.0018	0.00046	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Bromodichloromethane	<0.0018		0.0018	0.00037	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Bromoform	<0.0018		0.0018	0.00053	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Bromomethane	<0.0045		0.0045	0.0017	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
2-Butanone (MEK)	<0.0045		0.0045	0.0020	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Carbon disulfide	<0.0045		0.0045	0.00094	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Carbon tetrachloride	<0.0018		0.0018	0.00053	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Chlorobenzene	<0.0018		0.0018	0.00067	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Chloroethane	<0.0045		0.0045	0.0013	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Chloroform	<0.0018		0.0018	0.00063	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Chloromethane	<0.0045		0.0045	0.0018	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
cis-1,2-Dichloroethene	<0.0018		0.0018	0.00051	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
cis-1,3-Dichloropropene	<0.0018		0.0018	0.00055	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Dibromochloromethane	<0.0018		0.0018	0.00059	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
1,1-Dichloroethane	<0.0018		0.0018	0.00062	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
1,2-Dichloroethane	<0.0045		0.0045	0.0014	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
1,1-Dichloroethene	<0.0018		0.0018	0.00062	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
1,2-Dichloropropane	<0.0018		0.0018	0.00047	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
1,3-Dichloropropane, Total	<0.0018		0.0018	0.00064	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Ethylbenzene	<0.0018		0.0018	0.00087	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
2-Hexanone	<0.0045		0.0045	0.0014	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Methylene Chloride	<0.0045		0.0045	0.0018	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
4-Methyl-2-pentanone (MIBK)	<0.0045		0.0045	0.0013	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Methyl tert-butyl ether	<0.0018		0.0018	0.00053	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Styrene	<0.0018		0.0018	0.00055	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
1,1,2,2-Tetrachloroethane	<0.0018		0.0018	0.00058	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Tetrachloroethene	<0.0018		0.0018	0.00062	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Toluene	<0.0018		0.0018	0.00046	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
trans-1,2-Dichloroethene	<0.0018		0.0018	0.00080	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
trans-1,3-Dichloropropene	<0.0018		0.0018	0.00064	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
1,1,1-Trichloroethane	<0.0018		0.0018	0.00061	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
1,1,2-Trichloroethane	<0.0018		0.0018	0.00078	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Trichloroethene	<0.0018		0.0018	0.00061	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Vinyl acetate	<0.0045		0.0045	0.0016	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Vinyl chloride	<0.0018		0.0018	0.00080	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1
Xylenes, Total	<0.0036		0.0036	0.00058	mg/Kg	☼	11/04/17 08:18	11/09/17 19:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		75 - 131	11/04/17 08:18	11/09/17 19:24	1
Dibromofluoromethane	100		75 - 126	11/04/17 08:18	11/09/17 19:24	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 134	11/04/17 08:18	11/09/17 19:24	1
Toluene-d8 (Surr)	98		75 - 124	11/04/17 08:18	11/09/17 19:24	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.013	J	0.039	0.0070	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Acenaphthylene	0.0053	J	0.039	0.0051	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Anthracene	0.034	J	0.039	0.0065	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Benzo[a]anthracene	0.19		0.039	0.0052	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-4

**Client Sample ID: 2696V-26-B02 (0-1)**

**Lab Sample ID: 500-136786-14**

**Date Collected: 11/03/17 09:15**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 85.2**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.21</b>		0.039	0.0075	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
<b>Benzo[b]fluoranthene</b>	<b>0.35</b>		0.039	0.0084	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
<b>Benzo[g,h,i]perylene</b>	<b>0.096</b>		0.039	0.013	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
<b>Benzo[k]fluoranthene</b>	<b>0.15</b>		0.039	0.011	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.058	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.071	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.051	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Butyl benzyl phthalate	<0.20		0.20	0.074	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Carbazole	<0.20		0.20	0.097	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
4-Chloroaniline	<0.78		0.78	0.18	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
2-Chlorophenol	<0.20		0.20	0.066	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.045	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
<b>Chrysene</b>	<b>0.21</b>		0.039	0.011	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
<b>Dibenz(a,h)anthracene</b>	<b>0.022 J</b>		0.039	0.0075	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
1,2-Dichlorobenzene	<0.20		0.20	0.046	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.054	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
2,4-Dichlorophenol	<0.39		0.39	0.092	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Diethyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Di-n-butyl phthalate	<0.20		0.20	0.059	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
4,6-Dinitro-2-methylphenol	<0.78		0.78	0.31	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
2,4-Dinitrophenol	<0.78		0.78	0.68	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
2,6-Dinitrotoluene	<0.20		0.20	0.076	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Di-n-octyl phthalate	<0.20		0.20	0.063	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
<b>Fluoranthene</b>	<b>0.44</b>		0.039	0.0072	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Fluorene	<0.039		0.039	0.0055	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Hexachlorobenzene	<0.078		0.078	0.0090	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Hexachlorobutadiene	<0.20		0.20	0.061	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Hexachlorocyclopentadiene	<0.78		0.78	0.22	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Hexachloroethane	<0.20		0.20	0.059	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.10</b>		0.039	0.010	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
<b>2-Methylnaphthalene</b>	<b>0.0077 J</b>		0.078	0.0071	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
2-Methylphenol	<0.20		0.20	0.062	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
<b>Naphthalene</b>	<b>0.011 J</b>		0.039	0.0060	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
2-Nitroaniline	<0.20		0.20	0.052	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Nitrobenzene	<0.039		0.039	0.0097	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
2-Nitrophenol	<0.39		0.39	0.092	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-4

**Client Sample ID: 2696V-26-B02 (0-1)**

**Lab Sample ID: 500-136786-14**

Date Collected: 11/03/17 09:15

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 85.2

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.78		0.78	0.37	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
N-Nitrosodi-n-propylamine	<0.078		0.078	0.047	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.045	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Pentachlorophenol	<0.78		0.78	0.62	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
<b>Phenanthrene</b>	<b>0.20</b>		0.039	0.0054	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
Phenol	<0.20		0.20	0.086	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
<b>Pyrene</b>	<b>0.40</b>		0.039	0.0077	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
2,4,5-Trichlorophenol	<0.39		0.39	0.089	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	11/11/17 09:17	11/13/17 21:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	86		44 - 121	11/11/17 09:17	11/13/17 21:19	1
2-Fluorophenol	126		46 - 133	11/11/17 09:17	11/13/17 21:19	1
Nitrobenzene-d5	64		41 - 120	11/11/17 09:17	11/13/17 21:19	1
Phenol-d5	64		46 - 125	11/11/17 09:17	11/13/17 21:19	1
Terphenyl-d14	94		35 - 160	11/11/17 09:17	11/13/17 21:19	1
2,4,6-Tribromophenol	81		25 - 139	11/11/17 09:17	11/13/17 21:19	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.56</b>	<b>J</b>	1.1	0.22	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
<b>Arsenic</b>	<b>3.8</b>		0.56	0.19	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
<b>Barium</b>	<b>32</b>		0.56	0.064	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
<b>Beryllium</b>	<b>0.26</b>		0.22	0.052	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
<b>Cadmium</b>	<b>1.4</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
<b>Chromium</b>	<b>12</b>		0.56	0.28	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
<b>Cobalt</b>	<b>2.8</b>		0.28	0.073	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
<b>Copper</b>	<b>24</b>		0.56	0.16	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
<b>Iron</b>	<b>8100</b>		11	5.8	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
<b>Lead</b>	<b>36</b>		0.28	0.13	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
<b>Magnesium</b>	<b>3300</b>		5.6	2.8	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
<b>Calcium</b>	<b>5800</b>	<b>B</b>	11	1.9	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
<b>Manganese</b>	<b>100</b>		0.56	0.081	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
<b>Nickel</b>	<b>11</b>		0.56	0.16	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
Selenium	<0.56		0.56	0.33	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
<b>Silver</b>	<b>0.19</b>	<b>J</b>	0.28	0.072	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
<b>Vanadium</b>	<b>13</b>		0.28	0.066	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
<b>Zinc</b>	<b>49</b>		1.1	0.49	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
<b>Potassium</b>	<b>560</b>		28	9.9	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1
<b>Sodium</b>	<b>450</b>		56	8.3	mg/Kg	☼	11/07/17 16:57	11/09/17 00:25	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 16:44	11/10/17 17:00	1
<b>Barium</b>	<b>0.22</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 16:44	11/10/17 17:00	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 16:44	11/10/17 17:00	1
<b>Cadmium</b>	<b>0.022</b>		0.0050	0.0020	mg/L		11/09/17 16:44	11/10/17 17:00	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-4

**Client Sample ID: 2696V-26-B02 (0-1)**

**Lab Sample ID: 500-136786-14**

Date Collected: 11/03/17 09:15

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 85.2

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>200</b>		5.0	0.50	mg/L		11/09/17 16:44	11/10/17 17:00	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 17:00	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 17:00	1
<b>Copper</b>	<b>0.016</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 16:44	11/10/17 17:00	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 16:44	11/10/17 17:00	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 16:44	11/10/17 17:00	1
<b>Magnesium</b>	<b>100</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 17:00	1
<b>Manganese</b>	<b>0.37</b>		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 17:00	1
<b>Nickel</b>	<b>0.016</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 16:44	11/10/17 17:00	1
<b>Potassium</b>	<b>0.55</b>	<b>J</b>	2.5	0.50	mg/L		11/09/17 16:44	11/10/17 17:00	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 16:44	11/10/17 17:00	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 17:00	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 17:00	1
<b>Zinc</b>	<b>0.12</b>	<b>J</b>	0.50	0.020	mg/L		11/09/17 16:44	11/10/17 17:00	1

**Method: 6010B - SPLP Metals - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cadmium</b>	<b>0.011</b>		0.0050	0.0020	mg/L		11/09/17 16:42	11/10/17 22:40	1
<b>Manganese</b>	<b>0.30</b>		0.025	0.010	mg/L		11/09/17 16:42	11/10/17 22:40	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 16:44	11/10/17 14:31	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 16:44	11/10/17 14:31	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 16:17	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.058</b>		0.018	0.0058	mg/Kg	☼	11/08/17 16:15	11/09/17 08:42	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cyanide, Total</b>	<b>0.21</b>	<b>J</b>	0.53	0.18	mg/Kg	☼	11/13/17 08:00	11/13/17 16:43	1
<b>pH</b>	<b>8.7</b>		0.20	0.20	SU			11/12/17 03:51	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-4

**Client Sample ID: 2696V-26-B01 (0-1)**

**Lab Sample ID: 500-136786-15**

**Date Collected: 11/03/17 09:30**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 82.0**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.021		0.021	0.0091	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Benzene	<0.0021		0.0021	0.00054	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Bromodichloromethane	<0.0021		0.0021	0.00043	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Bromoform	<0.0021		0.0021	0.00061	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Bromomethane	<0.0053		0.0053	0.0020	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
2-Butanone (MEK)	<0.0053		0.0053	0.0023	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Carbon disulfide	<0.0053		0.0053	0.0011	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Carbon tetrachloride	<0.0021		0.0021	0.00061	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Chlorobenzene	<0.0021		0.0021	0.00078	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Chloroethane	<0.0053		0.0053	0.0016	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Chloroform	<0.0021		0.0021	0.00073	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Chloromethane	<0.0053		0.0053	0.0021	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
cis-1,2-Dichloroethene	<0.0021		0.0021	0.00059	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
cis-1,3-Dichloropropene	<0.0021		0.0021	0.00063	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Dibromochloromethane	<0.0021		0.0021	0.00069	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
1,1-Dichloroethane	<0.0021		0.0021	0.00072	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
1,2-Dichloroethane	<0.0053		0.0053	0.0016	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
1,1-Dichloroethene	<0.0021		0.0021	0.00072	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
1,2-Dichloropropane	<0.0021		0.0021	0.00054	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
1,3-Dichloropropane, Total	<0.0021		0.0021	0.00074	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Ethylbenzene	<0.0021		0.0021	0.0010	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
2-Hexanone	<0.0053		0.0053	0.0016	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Methylene Chloride	<0.0053		0.0053	0.0021	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
4-Methyl-2-pentanone (MIBK)	<0.0053		0.0053	0.0016	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Methyl tert-butyl ether	<0.0021		0.0021	0.00062	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Styrene	<0.0021		0.0021	0.00063	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
1,1,2,2-Tetrachloroethane	<0.0021		0.0021	0.00067	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Tetrachloroethene	<0.0021		0.0021	0.00072	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Toluene	<0.0021		0.0021	0.00053	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
trans-1,2-Dichloroethene	<0.0021		0.0021	0.00093	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
trans-1,3-Dichloropropene	<0.0021		0.0021	0.00074	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
1,1,1-Trichloroethane	<0.0021		0.0021	0.00070	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
1,1,2-Trichloroethane	<0.0021		0.0021	0.00090	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Trichloroethene	<0.0021		0.0021	0.00071	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Vinyl acetate	<0.0053		0.0053	0.0018	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Vinyl chloride	<0.0021		0.0021	0.00093	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1
Xylenes, Total	<0.0042		0.0042	0.00067	mg/Kg	☼	11/04/17 08:18	11/09/17 19:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		75 - 131	11/04/17 08:18	11/09/17 19:49	1
Dibromofluoromethane	101		75 - 126	11/04/17 08:18	11/09/17 19:49	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 134	11/04/17 08:18	11/09/17 19:49	1
Toluene-d8 (Surr)	97		75 - 124	11/04/17 08:18	11/09/17 19:49	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.040		0.040	0.0072	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Acenaphthylene	0.0067	J	0.040	0.0053	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Anthracene	0.043		0.040	0.0067	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Benzo[a]anthracene	0.26		0.040	0.0054	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-4

**Client Sample ID: 2696V-26-B01 (0-1)**

**Lab Sample ID: 500-136786-15**

**Date Collected: 11/03/17 09:30**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 82.0**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.36</b>		0.040	0.0077	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
<b>Benzo[b]fluoranthene</b>	<b>0.62</b>		0.040	0.0086	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
<b>Benzo[g,h,i]perylene</b>	<b>0.19</b>		0.040	0.013	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
<b>Benzo[k]fluoranthene</b>	<b>0.25</b>		0.040	0.012	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.060	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.073	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.053	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Butyl benzyl phthalate	<0.20		0.20	0.076	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Carbazole	<0.20		0.20	0.10	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
4-Chloroaniline	<0.80		0.80	0.19	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
4-Chloro-3-methylphenol	<0.40		0.40	0.14	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
2-Chlorophenol	<0.20		0.20	0.068	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.047	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
<b>Chrysene</b>	<b>0.31</b>		0.040	0.011	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
<b>Dibenz(a,h)anthracene</b>	<b>0.051</b>		0.040	0.0077	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
1,2-Dichlorobenzene	<0.20		0.20	0.048	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.056	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
2,4-Dichlorophenol	<0.40		0.40	0.095	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Diethyl phthalate	<0.20		0.20	0.068	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
2,4-Dimethylphenol	<0.40		0.40	0.15	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Dimethyl phthalate	<0.20		0.20	0.052	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Di-n-butyl phthalate	<0.20		0.20	0.061	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
4,6-Dinitro-2-methylphenol	<0.80		0.80	0.32	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
2,4-Dinitrophenol	<0.80		0.80	0.70	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
2,4-Dinitrotoluene	<0.20		0.20	0.063	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
2,6-Dinitrotoluene	<0.20		0.20	0.078	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Di-n-octyl phthalate	<0.20		0.20	0.065	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
<b>Fluoranthene</b>	<b>0.58</b>		0.040	0.0074	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Fluorene	<0.040		0.040	0.0056	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Hexachlorobenzene	<0.080		0.080	0.0092	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Hexachlorobutadiene	<0.20		0.20	0.063	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Hexachlorocyclopentadiene	<0.80		0.80	0.23	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Hexachloroethane	<0.20		0.20	0.061	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.19</b>		0.040	0.010	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Isophorone	<0.20		0.20	0.045	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
2-Methylnaphthalene	<0.080		0.080	0.0073	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
2-Methylphenol	<0.20		0.20	0.064	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
3 & 4 Methylphenol	<0.20		0.20	0.067	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Naphthalene	<0.040		0.040	0.0061	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
2-Nitroaniline	<0.20		0.20	0.054	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
3-Nitroaniline	<0.40		0.40	0.12	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Nitrobenzene	<0.040		0.040	0.010	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
2-Nitrophenol	<0.40		0.40	0.094	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-4

**Client Sample ID: 2696V-26-B01 (0-1)**

**Lab Sample ID: 500-136786-15**

Date Collected: 11/03/17 09:30

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 82.0

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.80		0.80	0.38	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
N-Nitrosodi-n-propylamine	<0.080		0.080	0.049	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Pentachlorophenol	<0.80		0.80	0.64	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
<b>Phenanthrene</b>	<b>0.15</b>		0.040	0.0056	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
Phenol	<0.20		0.20	0.089	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
<b>Pyrene</b>	<b>0.40</b>		0.040	0.0079	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
2,4,5-Trichlorophenol	<0.40		0.40	0.091	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1
2,4,6-Trichlorophenol	<0.40		0.40	0.14	mg/Kg	☼	11/11/17 09:17	11/13/17 21:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	62		44 - 121	11/11/17 09:17	11/13/17 21:45	1
2-Fluorophenol	130		46 - 133	11/11/17 09:17	11/13/17 21:45	1
Nitrobenzene-d5	62		41 - 120	11/11/17 09:17	11/13/17 21:45	1
Phenol-d5	65		46 - 125	11/11/17 09:17	11/13/17 21:45	1
Terphenyl-d14	80		35 - 160	11/11/17 09:17	11/13/17 21:45	1
2,4,6-Tribromophenol	74		25 - 139	11/11/17 09:17	11/13/17 21:45	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.43</b>	<b>J</b>	1.1	0.22	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
<b>Arsenic</b>	<b>4.8</b>		0.57	0.20	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
<b>Barium</b>	<b>43</b>		0.57	0.065	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
<b>Beryllium</b>	<b>0.39</b>		0.23	0.053	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
<b>Cadmium</b>	<b>0.43</b>	<b>B</b>	0.11	0.021	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
<b>Chromium</b>	<b>10</b>		0.57	0.28	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
<b>Cobalt</b>	<b>4.0</b>		0.29	0.075	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
<b>Copper</b>	<b>16</b>		0.57	0.16	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
<b>Iron</b>	<b>11000</b>		11	6.0	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
<b>Lead</b>	<b>96</b>		0.29	0.13	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
<b>Magnesium</b>	<b>9100</b>		5.7	2.8	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
<b>Calcium</b>	<b>16000</b>	<b>B</b>	11	1.9	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
<b>Manganese</b>	<b>140</b>		0.57	0.083	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
<b>Nickel</b>	<b>11</b>		0.57	0.17	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
<b>Selenium</b>	<b>0.63</b>		0.57	0.34	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
Silver	<0.29		0.29	0.074	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
Thallium	<0.57		0.57	0.29	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
<b>Vanadium</b>	<b>14</b>		0.29	0.068	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
<b>Zinc</b>	<b>68</b>		1.1	0.50	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
<b>Potassium</b>	<b>700</b>		29	10	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1
<b>Sodium</b>	<b>250</b>		57	8.5	mg/Kg	☼	11/07/17 16:57	11/09/17 00:29	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 16:44	11/10/17 17:04	1
<b>Barium</b>	<b>0.21</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 16:44	11/10/17 17:04	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 16:44	11/10/17 17:04	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/09/17 16:44	11/10/17 17:04	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-4

**Client Sample ID: 2696V-26-B01 (0-1)**

**Lab Sample ID: 500-136786-15**

**Date Collected: 11/03/17 09:30**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 82.0**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>200</b>		5.0	0.50	mg/L		11/09/17 16:44	11/10/17 17:04	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 17:04	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 17:04	1
<b>Copper</b>	<b>0.017</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 16:44	11/10/17 17:04	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 16:44	11/10/17 17:04	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 16:44	11/10/17 17:04	1
<b>Magnesium</b>	<b>100</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 17:04	1
<b>Manganese</b>	<b>0.34</b>		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 17:04	1
Nickel	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 17:04	1
Potassium	<2.5		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 17:04	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 16:44	11/10/17 17:04	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 17:04	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 17:04	1
<b>Zinc</b>	<b>0.045</b>	<b>J</b>	0.50	0.020	mg/L		11/09/17 16:44	11/10/17 17:04	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.097</b>		0.025	0.010	mg/L		11/09/17 16:42	11/10/17 22:44	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 16:44	11/10/17 14:36	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 16:44	11/10/17 14:36	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 16:19	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.022</b>		0.020	0.0066	mg/Kg	☼	11/08/17 16:15	11/09/17 08:45	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.60		0.60	0.21	mg/Kg	☼	11/13/17 08:00	11/13/17 16:43	1
<b>pH</b>	<b>8.1</b>		0.20	0.20	SU			11/12/17 04:24	1



# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-4

## Qualifiers

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

### General Chemistry

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

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-4

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
Phone: 708.634.5200 Fax: 708.534.5211

Report To (optional)  
Contact: MATT WEISS  
Company: TERRACON  
Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
E-Mail: \_\_\_\_\_

Bill To (optional)  
Contact: \_\_\_\_\_  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
PO#/Reference#: \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-136786  
Chain of Custody Number: \_\_\_\_\_  
Page 1 of 1  
Temperature °C of Cooler: 4.6, 29

Client		Client Project #		Preservative		Parameter		Matrix		Comments	
TERRACON		1177029M								Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name		Lab Project #		Sampling		# of Containers		Matrix		Comments	
WORK ORDER 037				Date Time		Matrix					
Project Location/State		Lab Project #		Date		Time		# of Containers		Matrix	
MARKHAM, IL				11-3-17		0915		5		5	
Sampler		Lab PM		Date		Time		# of Containers		Matrix	
CRAIG VARLAND		DICK WRIGHT		11-3-17		0930		5		5	
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	VOCs	SVOCs	23 TEL METALS	PH	TCLP 23 TAL METALS
14		2696V-26-802-(0-1)	11-3-17	0915	5	5	X	X	X	X	
15		2696V-26-801-(0-1)	11-3-17	0930	5	5	X	X	X	X	

Turnaround Time Required (Business Days)

Requested Due Date:  1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRACON</u> Date: <u>11-3-17</u> Time: <u>1605</u>	Received By: <u>P. Neal TA</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>1605</u>
Relinquished By: <u>P. Neal TA</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>1627</u>	Received By: <u>Sarah Sanchez TA</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>1627</u>
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____

Lab Courier: TA  
Shipped: \_\_\_\_\_  
Hand Delivered: \_\_\_\_\_

Matrix Key

WW - Wastewater SE - Sediment  
W - Water SO - Soil  
S - Soil L - Leachate  
SL - Sludge WI - Wipe  
MS - Miscellaneous DW - Drinking Water  
OL - Oil O - Other  
A - Air

Client Comments

NO ALUMINUM

Lab Comments:

# Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136786-4

**Login Number: 136786**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9, 4.6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

Kedzie Ave (Southbound) IDOT STA 77+15 to 77+60 (ISGS Site 2696V-28)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & KedzieLatitude: 41.60079 Longitude: -87.69463Uncontaminated Site Certification**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located [35 Ill. Adm. Code 1100.610(a)]:

Soil from boring B01 was sampled adjacent to ISGS Site No 2696V-28.  
See Exhibits 8, 8C, and Table 51 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136786-1.  
Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

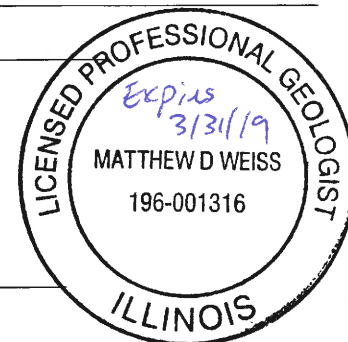
***Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))***

Company Name: Terracon Consultants, IncStreet Address: 135 Ambassador DriveCity: Naperville State: IL Zip Code: 60540Phone: 630-717-4263

Matt Weiss  
Printed Name:

[Signature]  
Licensed Professional Engineer or  
Licensed Professional Geologist Signature:

7/24/18  
Date:



P.E. or L.P.G. Seal:

Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-28)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 1 of 2

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-28-B01 (0-1)
				CCDD	Sample Depth (feet)	(0-1)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/3/2017
<b>Semivolatile Organic Analytical Parameters</b>						
Acenaphthene	mg/kg	0.09	0.13	570		0.021
Acenaphthylene	mg/kg	0.03	0.07	85		0.02
Anthracene	mg/kg	0.25	0.4	12000		0.09
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.64
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.73
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		1.3
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.36
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		0.5
Chrysene	mg/kg	1.2	2.7	88		0.77
Dibenzo(a,h)anthracene	mg/kg	0.2	0.42	0.09		0.085
Fluoranthene	mg/kg	2.7	4.1	3100		1.4
Fluorene	mg/kg	0.1	0.18	560		0.03
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.35
Naphthalene	mg/kg	0.04	0.2	1.8		0.0059
Phenanthrene	mg/kg	1.3	2.5	210		0.56
Pyrene	mg/kg	1.9	3.0	2300		1.3
bis(2-Ethylhexyl)phthalate	mg/kg	---	---	46		0.069
<b>Inorganic Analytical Parameters</b>						
Arsenic	mg/kg	---	13	11.3		3.6
Barium	mg/kg	---	110	1500		45
Cadmium	mg/kg	---	0.6	5.2		0.42
Chromium, total	mg/kg	---	16.2	21		9.6
Lead	mg/kg	---	36	107		84
Mercury	mg/kg	---	0.06	0.1		0.021
Selenium	mg/kg	---	0.48	1.3		0.38
Silver	mg/kg	---	0.55	4.4		<0.27
Antimony	mg/kg	---	4.0	5		0.4
Beryllium	mg/kg	---	0.59	22		0.31
Calcium	mg/kg	---	9,300	---		12000
Cobalt	mg/kg	---	8.9	20		3.2
Copper	mg/kg	---	19.6	2900		16
Cyanide	mg/kg	---	0.51	---		<0.48
Iron	mg/kg	---	15,900	15000		8500
Magnesium	mg/kg	---	4,820	325000		6100
Manganese	mg/kg	---	636	630		150
Nickel	mg/kg	---	18	100		8.3
Potassium	mg/kg	---	1,268	---		660
Sodium	mg/kg	---	130	---		190
Thallium	mg/kg	---	0.32	2.6		<0.53
Vanadium	mg/kg	---	25.2	550		14
Zinc	mg/kg	---	95	5100		65
pH			6.25	9		8



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-28)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 2 of 2

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-28-B01 (0-1)
				CCDD	Sample Depth (feet)	(0-1)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/3/2017
<b>Inorganic Analytical Parameters (SPLP)</b>						
Antimony, SPLP	mg/L	---	---	---		--
Arsenic, SPLP	mg/L	---	---	---		--
Barium, SPLP	mg/L	---	---	---		--
Beryllium, SPLP	mg/L	---	---	---		--
Cadmium, SPLP	mg/L	---	---	---		--
Calcium, SPLP	mg/L	---	---	---		--
Chromium, SPLP	mg/L	---	---	---		--
Cobalt, SPLP	mg/L	---	---	---		--
Copper, SPLP	mg/L	---	---	---		--
Iron, SPLP	mg/L	---	---	---		--
Lead, SPLP	mg/L	---	---	---		--
Magnesium, SPLP	mg/L	---	---	---		--
Manganese, SPLP	mg/L	---	---	---		0.047
Mercury, SPLP	mg/L	---	---	---		--
Nickel, SPLP	mg/L	---	---	---		--
Potassium, SPLP	mg/L	---	---	---		--
Selenium, SPLP	mg/L	---	---	---		--
Silver, SPLP	mg/L	---	---	---		--
Sodium, SPLP	mg/L	---	---	---		--
Thallium, SPLP	mg/L	---	---	---		--
Vanadium, SPLP	mg/L	---	---	---		--
Zinc, SPLP	mg/L	---	---	---		--
Cyanide, SPLP	mg/L	---	---	---		--
<b>Inorganic Analytical Parameters (TCLP)</b>						
Arsenic, TCLP	mg/L	---	---	---		<0.050
Barium, TCLP	mg/L	---	---	---		0.22
Cadmium, TCLP	mg/L	---	---	---		0.002
Chromium, TCLP	mg/L	---	---	---		<0.025
Lead, TCLP	mg/L	---	---	---		<0.0075
Mercury, TCLP	mg/L	---	---	---		<0.00020
Selenium, TCLP	mg/L	---	---	---		<0.050
Silver, TCLP	mg/L	---	---	---		<0.025
Antimony, TCLP	mg/L	---	---	---		<0.0060
Beryllium, TCLP	mg/L	---	---	---		<0.0040
Calcium, TCLP	mg/L	---	---	---		290
Cobalt, TCLP	mg/L	---	---	---		<0.025
Copper, TCLP	mg/L	---	---	---		0.025
Cyanide, TCLP	mg/L	---	---	---		----
Iron, TCLP	mg/L	---	---	---		<0.40
Magnesium, TCLP	mg/L	---	---	---		160
Manganese, TCLP	mg/L	---	---	---		0.44
Nickel, TCLP	mg/L	---	---	---		<0.025
Potassium, TCLP	mg/L	---	---	---		0.94
Sodium, TCLP	mg/L	---	---	---		----
Thallium, TCLP	mg/L	---	---	---		<0.0020
Vanadium, TCLP	mg/L	---	---	---		<0.025
Zinc, TCLP	mg/L	---	---	---		0.096

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-136786-1

Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:

Terracon Consulting Eng & Scientists

135 Ambassador Drive

Naperville, Illinois 60540

Attn: Mr. Matthew Weiss



Authorized for release by:

11/16/2017 12:29:01 PM

Richard Wright, Senior Project Manager

(708)534-5200

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### LINKS

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[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-1

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**Job ID: 500-136786-1**

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**Laboratory: TestAmerica Chicago**

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**Narrative**

**Job Narrative  
500-136786-1**

**Receipt**

The samples were received on 11/3/2017 4:27 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.9° C and 4.6° C.

**GC/MS VOA**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**GC/MS Semi VOA**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Metals**

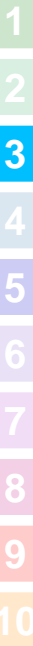
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**General Chemistry**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Organic Prep**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-1

**Client Sample ID: 2696V-28-B02 (0-1)**

**Lab Sample ID: 500-136786-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.069		0.037	0.0068	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.074		0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.32		0.037	0.0063	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.99	F1	0.037	0.0051	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.91	F1	0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	1.4	F2 F1	0.037	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.30	F1	0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.59	F1	0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.99	F1	0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.11	F1	0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	1.7	F1	0.037	0.0070	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.098		0.037	0.0053	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.34	F1	0.037	0.0097	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.015	J	0.076	0.0069	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.012	J	0.037	0.0058	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.90	F1 F2	0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Pyrene	1.9	F1	0.037	0.0075	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.41	J F1	1.1	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.8		0.53	0.18	mg/Kg	1	☼	6010B	Total/NA
Barium	47		0.53	0.061	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.32		0.21	0.050	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.31	B	0.11	0.019	mg/Kg	1	☼	6010B	Total/NA
Chromium	8.9		0.53	0.26	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.6		0.27	0.070	mg/Kg	1	☼	6010B	Total/NA
Copper	15		0.53	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	9400		11	5.5	mg/Kg	1	☼	6010B	Total/NA
Lead	48		0.27	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	7100	F2	5.3	2.6	mg/Kg	1	☼	6010B	Total/NA
Calcium	13000	B	11	1.8	mg/Kg	1	☼	6010B	Total/NA
Manganese	150		0.53	0.077	mg/Kg	1	☼	6010B	Total/NA
Nickel	8.3		0.53	0.16	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.39	J F1	0.53	0.31	mg/Kg	1	☼	6010B	Total/NA
Vanadium	14		0.27	0.063	mg/Kg	1	☼	6010B	Total/NA
Zinc	55		1.1	0.47	mg/Kg	1	☼	6010B	Total/NA
Potassium	640	F1	27	9.4	mg/Kg	1	☼	6010B	Total/NA
Sodium	220		53	7.9	mg/Kg	1	☼	6010B	Total/NA
Barium	0.35	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0023	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	260		5.0	0.50	mg/L	1		6010B	TCLP
Magnesium	97		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.53		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	0.79	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.042	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.26		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.016	J F1 F2	0.018	0.0061	mg/Kg	1	☼	7471B	Total/NA
pH	8.1		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-28-B02 (0-1) Dup**

**Lab Sample ID: 500-136786-2**

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-1

**Client Sample ID: 2696V-28-B02 (0-1) Dup (Continued)**

**Lab Sample ID: 500-136786-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acenaphthene	0.015	J	0.037	0.0066	mg/Kg	1	☼	☼	8270D	Total/NA
Acenaphthylene	0.055		0.037	0.0048	mg/Kg	1	☼	☼	8270D	Total/NA
Anthracene	0.094		0.037	0.0061	mg/Kg	1	☼	☼	8270D	Total/NA
Benzo[a]anthracene	0.44		0.037	0.0049	mg/Kg	1	☼	☼	8270D	Total/NA
Benzo[a]pyrene	0.53		0.037	0.0071	mg/Kg	1	☼	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.89		0.037	0.0079	mg/Kg	1	☼	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.26		0.037	0.012	mg/Kg	1	☼	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.34		0.037	0.011	mg/Kg	1	☼	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.13	J	0.18	0.067	mg/Kg	1	☼	☼	8270D	Total/NA
Chrysene	0.53		0.037	0.010	mg/Kg	1	☼	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.063		0.037	0.0071	mg/Kg	1	☼	☼	8270D	Total/NA
Fluoranthene	0.87		0.037	0.0068	mg/Kg	1	☼	☼	8270D	Total/NA
Fluorene	0.027	J	0.037	0.0052	mg/Kg	1	☼	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.26		0.037	0.0095	mg/Kg	1	☼	☼	8270D	Total/NA
2-Methylnaphthalene	0.0091	J	0.074	0.0068	mg/Kg	1	☼	☼	8270D	Total/NA
Naphthalene	0.0071	J	0.037	0.0057	mg/Kg	1	☼	☼	8270D	Total/NA
Phenanthrene	0.35		0.037	0.0051	mg/Kg	1	☼	☼	8270D	Total/NA
Pyrene	0.78		0.037	0.0073	mg/Kg	1	☼	☼	8270D	Total/NA
Antimony	0.64	J	1.1	0.22	mg/Kg	1	☼	☼	6010B	Total/NA
Arsenic	3.5		0.56	0.19	mg/Kg	1	☼	☼	6010B	Total/NA
Barium	33		0.56	0.064	mg/Kg	1	☼	☼	6010B	Total/NA
Beryllium	0.24		0.22	0.052	mg/Kg	1	☼	☼	6010B	Total/NA
Cadmium	0.46	B	0.11	0.020	mg/Kg	1	☼	☼	6010B	Total/NA
Chromium	8.3		0.56	0.28	mg/Kg	1	☼	☼	6010B	Total/NA
Cobalt	2.8		0.28	0.073	mg/Kg	1	☼	☼	6010B	Total/NA
Copper	15		0.56	0.16	mg/Kg	1	☼	☼	6010B	Total/NA
Iron	7300		11	5.8	mg/Kg	1	☼	☼	6010B	Total/NA
Lead	120		0.28	0.13	mg/Kg	1	☼	☼	6010B	Total/NA
Magnesium	47000		5.6	2.8	mg/Kg	1	☼	☼	6010B	Total/NA
Calcium	120000	B	110	19	mg/Kg	10	☼	☼	6010B	Total/NA
Manganese	160		0.56	0.081	mg/Kg	1	☼	☼	6010B	Total/NA
Nickel	7.4		0.56	0.16	mg/Kg	1	☼	☼	6010B	Total/NA
Vanadium	11		0.28	0.066	mg/Kg	1	☼	☼	6010B	Total/NA
Zinc	90		1.1	0.49	mg/Kg	1	☼	☼	6010B	Total/NA
Potassium	600		28	9.9	mg/Kg	1	☼	☼	6010B	Total/NA
Sodium	220		56	8.3	mg/Kg	1	☼	☼	6010B	Total/NA
Barium	0.34	J	0.50	0.050	mg/L	1			6010B	TCLP
Cadmium	0.0023	J	0.0050	0.0020	mg/L	1			6010B	TCLP
Calcium	260		5.0	0.50	mg/L	1			6010B	TCLP
Copper	0.011	J	0.025	0.010	mg/L	1			6010B	TCLP
Lead	0.0081		0.0075	0.0075	mg/L	1			6010B	TCLP
Magnesium	87		2.5	0.50	mg/L	1			6010B	TCLP
Manganese	0.42		0.025	0.010	mg/L	1			6010B	TCLP
Potassium	1.5	J	2.5	0.50	mg/L	1			6010B	TCLP
Zinc	0.071	J	0.50	0.020	mg/L	1			6010B	TCLP
Lead	0.078		0.0075	0.0075	mg/L	1			6010B	SPLP East
Manganese	0.16		0.025	0.010	mg/L	1			6010B	SPLP East
Mercury	0.029		0.019	0.0065	mg/Kg	1	☼	☼	7471B	Total/NA
pH	8.0		0.20	0.20	SU	1			9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-1

**Client Sample ID: 2696V-28-B01 (0-1)**

**Lab Sample ID: 500-136786-3**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.021	J	0.036	0.0065	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.020	J	0.036	0.0048	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.090		0.036	0.0060	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.64		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.73		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	1.3		0.036	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.36		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.50		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.069	J	0.18	0.066	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.77		0.036	0.0099	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.085		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	1.4		0.036	0.0067	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.030	J	0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.35		0.036	0.0094	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.0059	J	0.036	0.0056	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.56		0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Pyrene	1.3		0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.40	J	1.1	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.6		0.53	0.18	mg/Kg	1	☼	6010B	Total/NA
Barium	45		0.53	0.061	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.31		0.21	0.050	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.42	B	0.11	0.019	mg/Kg	1	☼	6010B	Total/NA
Chromium	9.6		0.53	0.26	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.2		0.27	0.070	mg/Kg	1	☼	6010B	Total/NA
Copper	16		0.53	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	8500		11	5.5	mg/Kg	1	☼	6010B	Total/NA
Lead	84		0.27	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	6100		5.3	2.6	mg/Kg	1	☼	6010B	Total/NA
Calcium	12000	B	11	1.8	mg/Kg	1	☼	6010B	Total/NA
Manganese	150		0.53	0.077	mg/Kg	1	☼	6010B	Total/NA
Nickel	8.3		0.53	0.15	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.38	J	0.53	0.31	mg/Kg	1	☼	6010B	Total/NA
Vanadium	14		0.27	0.063	mg/Kg	1	☼	6010B	Total/NA
Zinc	65		1.1	0.47	mg/Kg	1	☼	6010B	Total/NA
Potassium	660		27	9.4	mg/Kg	1	☼	6010B	Total/NA
Sodium	190		53	7.9	mg/Kg	1	☼	6010B	Total/NA
Barium	0.22	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0020	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	290		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.025		0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	160		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.44		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	0.94	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.096	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.047		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.021		0.018	0.0059	mg/Kg	1	☼	7471B	Total/NA
pH	8.0		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago



# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136786-1	2696V-28-B02 (0-1)	Solid	11/03/17 08:45	11/03/17 16:27
500-136786-2	2696V-28-B02 (0-1) Dup	Solid	11/03/17 00:00	11/03/17 16:27
500-136786-3	2696V-28-B01 (0-1)	Solid	11/03/17 09:00	11/03/17 16:27

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-1

**Client Sample ID: 2696V-28-B02 (0-1)**

**Lab Sample ID: 500-136786-1**

**Date Collected: 11/03/17 08:45**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 86.5**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.022		0.022	0.0098	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Benzene	<0.0022		0.0022	0.00057	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Bromodichloromethane	<0.0022		0.0022	0.00046	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Bromoform	<0.0022		0.0022	0.00066	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Bromomethane	<0.0056		0.0056	0.0021	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
2-Butanone (MEK)	<0.0056		0.0056	0.0025	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Carbon disulfide	<0.0056		0.0056	0.0012	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Carbon tetrachloride	<0.0022		0.0022	0.00065	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Chlorobenzene	<0.0022		0.0022	0.00083	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Chloroethane	<0.0056		0.0056	0.0017	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Chloroform	<0.0022		0.0022	0.00078	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Chloromethane	<0.0056		0.0056	0.0023	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
cis-1,2-Dichloroethene	<0.0022		0.0022	0.00063	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
cis-1,3-Dichloropropene	<0.0022		0.0022	0.00068	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Dibromochloromethane	<0.0022		0.0022	0.00073	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
1,1-Dichloroethane	<0.0022		0.0022	0.00077	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
1,2-Dichloroethane	<0.0056		0.0056	0.0018	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
1,1-Dichloroethene	<0.0022		0.0022	0.00077	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
1,2-Dichloropropane	<0.0022		0.0022	0.00058	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
1,3-Dichloropropane, Total	<0.0022		0.0022	0.00079	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Ethylbenzene	<0.0022		0.0022	0.0011	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
2-Hexanone	<0.0056		0.0056	0.0018	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Methylene Chloride	<0.0056		0.0056	0.0022	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
4-Methyl-2-pentanone (MIBK)	<0.0056		0.0056	0.0017	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Methyl tert-butyl ether	<0.0022		0.0022	0.00066	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Styrene	<0.0022		0.0022	0.00068	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
1,1,1,2-Tetrachloroethane	<0.0022		0.0022	0.00072	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Tetrachloroethene	<0.0022		0.0022	0.00076	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Toluene	<0.0022		0.0022	0.00057	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
trans-1,2-Dichloroethene	<0.0022		0.0022	0.0010	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
trans-1,3-Dichloropropene	<0.0022		0.0022	0.00079	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
1,1,1-Trichloroethane	<0.0022		0.0022	0.00075	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
1,1,2-Trichloroethane	<0.0022		0.0022	0.00096	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Trichloroethene	<0.0022		0.0022	0.00076	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Vinyl acetate	<0.0056		0.0056	0.0020	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Vinyl chloride	<0.0022		0.0022	0.00099	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1
Xylenes, Total	<0.0045		0.0045	0.00072	mg/Kg	☼	11/04/17 08:18	11/09/17 15:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		75 - 131	11/04/17 08:18	11/09/17 15:11	1
Dibromofluoromethane	97		75 - 126	11/04/17 08:18	11/09/17 15:11	1
1,2-Dichloroethane-d4 (Surr)	90		70 - 134	11/04/17 08:18	11/09/17 15:11	1
Toluene-d8 (Surr)	98		75 - 124	11/04/17 08:18	11/09/17 15:11	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.069		0.037	0.0068	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Acenaphthylene	0.074		0.037	0.0050	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Anthracene	0.32		0.037	0.0063	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Benzo[a]anthracene	0.99	F1	0.037	0.0051	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-1

**Client Sample ID: 2696V-28-B02 (0-1)**

**Lab Sample ID: 500-136786-1**

**Date Collected: 11/03/17 08:45**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 86.5**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.91	F1	0.037	0.0073	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Benzo[b]fluoranthene	1.4	F2 F1	0.037	0.0081	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Benzo[g,h,i]perylene	0.30	F1	0.037	0.012	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Benzo[k]fluoranthene	0.59	F1	0.037	0.011	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Bis(2-ethylhexyl) phthalate	<0.19	F1	0.19	0.069	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Chrysene	0.99	F1	0.037	0.010	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Dibenz(a,h)anthracene	0.11	F1	0.037	0.0073	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
1,3-Dichlorobenzene	<0.19	F2	0.19	0.042	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
3,3'-Dichlorobenzidine	<0.19	F1	0.19	0.053	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
4,6-Dinitro-2-methylphenol	<0.76	F1	0.76	0.30	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
2,4-Dinitrophenol	<0.76	F1	0.76	0.66	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Fluoranthene	1.7	F1	0.037	0.0070	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Fluorene	0.098		0.037	0.0053	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Hexachlorobenzene	<0.076		0.076	0.0087	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Hexachlorocyclopentadiene	<0.76	F1	0.76	0.22	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Hexachloroethane	<0.19	F1	0.19	0.057	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Indeno[1,2,3-cd]pyrene	0.34	F1	0.037	0.0097	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
2-Methylnaphthalene	0.015	J	0.076	0.0069	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Naphthalene	0.012	J	0.037	0.0058	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Nitrobenzene	<0.037		0.037	0.0094	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
2-Nitrophenol	<0.37		0.37	0.089	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-1

**Client Sample ID: 2696V-28-B02 (0-1)**

**Lab Sample ID: 500-136786-1**

Date Collected: 11/03/17 08:45

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 86.5

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Pentachlorophenol	<0.76		0.76	0.60	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
<b>Phenanthrene</b>	<b>0.90</b>	<b>F1 F2</b>	0.037	0.0052	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
Phenol	<0.19		0.19	0.084	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
<b>Pyrene</b>	<b>1.9</b>	<b>F1</b>	0.037	0.0075	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
2,4,5-Trichlorophenol	<0.37		0.37	0.086	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/11/17 09:17	11/13/17 22:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	84		44 - 121	11/11/17 09:17	11/13/17 22:10	1
2-Fluorophenol	89		46 - 133	11/11/17 09:17	11/13/17 22:10	1
Nitrobenzene-d5	74		41 - 120	11/11/17 09:17	11/13/17 22:10	1
Phenol-d5	90		46 - 125	11/11/17 09:17	11/13/17 22:10	1
Terphenyl-d14	110		35 - 160	11/11/17 09:17	11/13/17 22:10	1
2,4,6-Tribromophenol	78		25 - 139	11/11/17 09:17	11/13/17 22:10	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.41</b>	<b>J F1</b>	1.1	0.21	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
<b>Arsenic</b>	<b>3.8</b>		0.53	0.18	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
<b>Barium</b>	<b>47</b>		0.53	0.061	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
<b>Beryllium</b>	<b>0.32</b>		0.21	0.050	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
<b>Cadmium</b>	<b>0.31</b>	<b>B</b>	0.11	0.019	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
<b>Chromium</b>	<b>8.9</b>		0.53	0.26	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
<b>Cobalt</b>	<b>3.6</b>		0.27	0.070	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
<b>Copper</b>	<b>15</b>		0.53	0.15	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
<b>Iron</b>	<b>9400</b>		11	5.5	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
<b>Lead</b>	<b>48</b>		0.27	0.12	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
<b>Magnesium</b>	<b>7100</b>	<b>F2</b>	5.3	2.6	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
<b>Calcium</b>	<b>13000</b>	<b>B</b>	11	1.8	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
<b>Manganese</b>	<b>150</b>		0.53	0.077	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
<b>Nickel</b>	<b>8.3</b>		0.53	0.16	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
<b>Selenium</b>	<b>0.39</b>	<b>J F1</b>	0.53	0.31	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
Silver	<0.27		0.27	0.069	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
Thallium	<0.53		0.53	0.27	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
<b>Vanadium</b>	<b>14</b>		0.27	0.063	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
<b>Zinc</b>	<b>55</b>		1.1	0.47	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
<b>Potassium</b>	<b>640</b>	<b>F1</b>	27	9.4	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1
<b>Sodium</b>	<b>220</b>		53	7.9	mg/Kg	☼	11/07/17 16:57	11/08/17 23:13	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 16:44	11/10/17 16:03	1
<b>Barium</b>	<b>0.35</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 16:44	11/10/17 16:03	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 16:44	11/10/17 16:03	1
<b>Cadmium</b>	<b>0.0023</b>	<b>J</b>	0.0050	0.0020	mg/L		11/09/17 16:44	11/10/17 16:03	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-1

**Client Sample ID: 2696V-28-B02 (0-1)**

**Lab Sample ID: 500-136786-1**

Date Collected: 11/03/17 08:45

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 86.5

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>260</b>		5.0	0.50	mg/L		11/09/17 16:44	11/10/17 16:03	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:03	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:03	1
Copper	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:03	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 16:44	11/10/17 16:03	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 16:44	11/10/17 16:03	1
<b>Magnesium</b>	<b>97</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:03	1
<b>Manganese</b>	<b>0.53</b>		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:03	1
Nickel	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:03	1
<b>Potassium</b>	<b>0.79 J</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:03	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 16:44	11/10/17 16:03	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:03	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:03	1
<b>Zinc</b>	<b>0.042 J</b>		0.50	0.020	mg/L		11/09/17 16:44	11/10/17 16:03	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.26</b>		0.025	0.010	mg/L		11/09/17 16:42	11/10/17 21:43	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 16:44	11/10/17 13:34	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 16:44	11/10/17 13:34	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 15:40	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.016</b>	<b>J F1 F2</b>	0.018	0.0061	mg/Kg	☼	11/08/17 16:15	11/09/17 07:59	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.54		0.54	0.19	mg/Kg	☼	11/13/17 08:00	11/13/17 16:34	1
<b>pH</b>	<b>8.1</b>		0.20	0.20	SU			11/11/17 20:36	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-1

**Client Sample ID: 2696V-28-B02 (0-1) Dup**

**Lab Sample ID: 500-136786-2**

**Date Collected: 11/03/17 00:00**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 85.1**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.020		0.020	0.0088	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Benzene	<0.0020		0.0020	0.00052	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Bromodichloromethane	<0.0020		0.0020	0.00041	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Bromoform	<0.0020		0.0020	0.00059	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Bromomethane	<0.0051		0.0051	0.0019	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
2-Butanone (MEK)	<0.0051		0.0051	0.0022	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Carbon disulfide	<0.0051		0.0051	0.0011	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Carbon tetrachloride	<0.0020		0.0020	0.00059	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Chlorobenzene	<0.0020		0.0020	0.00075	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Chloroethane	<0.0051		0.0051	0.0015	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Chloroform	<0.0020		0.0020	0.00070	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Chloromethane	<0.0051		0.0051	0.0020	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
cis-1,2-Dichloroethene	<0.0020		0.0020	0.00056	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
cis-1,3-Dichloropropene	<0.0020		0.0020	0.00061	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Dibromochloromethane	<0.0020		0.0020	0.00066	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
1,1-Dichloroethane	<0.0020		0.0020	0.00069	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
1,2-Dichloroethane	<0.0051		0.0051	0.0016	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
1,1-Dichloroethene	<0.0020		0.0020	0.00069	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
1,2-Dichloropropane	<0.0020		0.0020	0.00052	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
1,3-Dichloropropane, Total	<0.0020		0.0020	0.00071	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Ethylbenzene	<0.0020		0.0020	0.00097	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
2-Hexanone	<0.0051		0.0051	0.0016	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Methylene Chloride	<0.0051		0.0051	0.0020	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
4-Methyl-2-pentanone (MIBK)	<0.0051		0.0051	0.0015	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Methyl tert-butyl ether	<0.0020		0.0020	0.00059	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Styrene	<0.0020		0.0020	0.00061	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
1,1,2,2-Tetrachloroethane	<0.0020		0.0020	0.00065	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Tetrachloroethene	<0.0020		0.0020	0.00069	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Toluene	<0.0020		0.0020	0.00051	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
trans-1,2-Dichloroethene	<0.0020		0.0020	0.00089	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
trans-1,3-Dichloropropene	<0.0020		0.0020	0.00071	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
1,1,1-Trichloroethane	<0.0020		0.0020	0.00068	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
1,1,2-Trichloroethane	<0.0020		0.0020	0.00087	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Trichloroethene	<0.0020		0.0020	0.00068	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Vinyl acetate	<0.0051		0.0051	0.0018	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Vinyl chloride	<0.0020		0.0020	0.00089	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1
Xylenes, Total	<0.0040		0.0040	0.00065	mg/Kg	☼	11/04/17 08:18	11/09/17 15:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		75 - 131	11/04/17 08:18	11/09/17 15:37	1
Dibromofluoromethane	97		75 - 126	11/04/17 08:18	11/09/17 15:37	1
1,2-Dichloroethane-d4 (Surr)	92		70 - 134	11/04/17 08:18	11/09/17 15:37	1
Toluene-d8 (Surr)	99		75 - 124	11/04/17 08:18	11/09/17 15:37	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.015	J	0.037	0.0066	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Acenaphthylene	0.055		0.037	0.0048	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Anthracene	0.094		0.037	0.0061	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Benzo[a]anthracene	0.44		0.037	0.0049	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-1

**Client Sample ID: 2696V-28-B02 (0-1) Dup**

**Lab Sample ID: 500-136786-2**

**Date Collected: 11/03/17 00:00**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 85.1**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.53		0.037	0.0071	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Benzo[b]fluoranthene	0.89		0.037	0.0079	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Benzo[g,h,i]perylene	0.26		0.037	0.012	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Benzo[k]fluoranthene	0.34		0.037	0.011	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Bis(2-ethylhexyl) phthalate	0.13	J	0.18	0.067	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Butyl benzyl phthalate	<0.18		0.18	0.070	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Carbazole	<0.18		0.18	0.092	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
4-Chloro-3-methylphenol	<0.37		0.37	0.12	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
2-Chloronaphthalene	<0.18		0.18	0.041	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
2-Chlorophenol	<0.18		0.18	0.063	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Chrysene	0.53		0.037	0.010	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Dibenz(a,h)anthracene	0.063		0.037	0.0071	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
1,2-Dichlorobenzene	<0.18		0.18	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
2,4-Dichlorophenol	<0.37		0.37	0.087	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.30	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
2,4-Dinitrophenol	<0.74		0.74	0.65	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Di-n-octyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Fluoranthene	0.87		0.037	0.0068	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Fluorene	0.027	J	0.037	0.0052	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Hexachlorobenzene	<0.074		0.074	0.0085	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Hexachlorobutadiene	<0.18		0.18	0.058	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Hexachloroethane	<0.18		0.18	0.056	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Indeno[1,2,3-cd]pyrene	0.26		0.037	0.0095	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
2-Methylnaphthalene	0.0091	J	0.074	0.0068	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
2-Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Naphthalene	0.0071	J	0.037	0.0057	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
3-Nitroaniline	<0.37		0.37	0.11	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
4-Nitroaniline	<0.37		0.37	0.15	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Nitrobenzene	<0.037		0.037	0.0092	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
2-Nitrophenol	<0.37		0.37	0.087	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-1

**Client Sample ID: 2696V-28-B02 (0-1) Dup**

**Lab Sample ID: 500-136786-2**

Date Collected: 11/03/17 00:00

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 85.1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.043	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
<b>Phenanthrene</b>	<b>0.35</b>		0.037	0.0051	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
Phenol	<0.18		0.18	0.082	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
<b>Pyrene</b>	<b>0.78</b>		0.037	0.0073	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
2,4,5-Trichlorophenol	<0.37		0.37	0.084	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/11/17 09:17	11/13/17 16:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	83		44 - 121	11/11/17 09:17	11/13/17 16:43	1
2-Fluorophenol	102		46 - 133	11/11/17 09:17	11/13/17 16:43	1
Nitrobenzene-d5	72		41 - 120	11/11/17 09:17	11/13/17 16:43	1
Phenol-d5	108		46 - 125	11/11/17 09:17	11/13/17 16:43	1
Terphenyl-d14	89		35 - 160	11/11/17 09:17	11/13/17 16:43	1
2,4,6-Tribromophenol	95		25 - 139	11/11/17 09:17	11/13/17 16:43	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.64</b>	<b>J</b>	1.1	0.22	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1
<b>Arsenic</b>	<b>3.5</b>		0.56	0.19	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1
<b>Barium</b>	<b>33</b>		0.56	0.064	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1
<b>Beryllium</b>	<b>0.24</b>		0.22	0.052	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1
<b>Cadmium</b>	<b>0.46</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1
<b>Chromium</b>	<b>8.3</b>		0.56	0.28	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1
<b>Cobalt</b>	<b>2.8</b>		0.28	0.073	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1
<b>Copper</b>	<b>15</b>		0.56	0.16	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1
<b>Iron</b>	<b>7300</b>		11	5.8	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1
<b>Lead</b>	<b>120</b>		0.28	0.13	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1
<b>Magnesium</b>	<b>47000</b>		5.6	2.8	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1
<b>Calcium</b>	<b>120000</b>	<b>B</b>	110	19	mg/Kg	☼	11/07/17 16:57	11/09/17 19:31	10
<b>Manganese</b>	<b>160</b>		0.56	0.081	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1
<b>Nickel</b>	<b>7.4</b>		0.56	0.16	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1
Selenium	<0.56		0.56	0.33	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1
Silver	<0.28		0.28	0.072	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1
<b>Vanadium</b>	<b>11</b>		0.28	0.066	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1
<b>Zinc</b>	<b>90</b>		1.1	0.49	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1
<b>Potassium</b>	<b>600</b>		28	9.9	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1
<b>Sodium</b>	<b>220</b>		56	8.3	mg/Kg	☼	11/07/17 16:57	11/08/17 23:33	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 16:44	11/10/17 16:07	1
<b>Barium</b>	<b>0.34</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 16:44	11/10/17 16:07	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 16:44	11/10/17 16:07	1
<b>Cadmium</b>	<b>0.0023</b>	<b>J</b>	0.0050	0.0020	mg/L		11/09/17 16:44	11/10/17 16:07	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-1

**Client Sample ID: 2696V-28-B02 (0-1) Dup**

**Lab Sample ID: 500-136786-2**

**Date Collected: 11/03/17 00:00**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 85.1**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>260</b>		5.0	0.50	mg/L		11/09/17 16:44	11/10/17 16:07	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:07	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:07	1
<b>Copper</b>	<b>0.011</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:07	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 16:44	11/10/17 16:07	1
<b>Lead</b>	<b>0.0081</b>		0.0075	0.0075	mg/L		11/09/17 16:44	11/10/17 16:07	1
<b>Magnesium</b>	<b>87</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:07	1
<b>Manganese</b>	<b>0.42</b>		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:07	1
Nickel	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:07	1
<b>Potassium</b>	<b>1.5</b>	<b>J</b>	2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:07	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 16:44	11/10/17 16:07	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:07	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:07	1
<b>Zinc</b>	<b>0.071</b>	<b>J</b>	0.50	0.020	mg/L		11/09/17 16:44	11/10/17 16:07	1

**Method: 6010B - SPLP Metals - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lead</b>	<b>0.078</b>		0.0075	0.0075	mg/L		11/09/17 16:42	11/10/17 21:47	1
<b>Manganese</b>	<b>0.16</b>		0.025	0.010	mg/L		11/09/17 16:42	11/10/17 21:47	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 16:44	11/10/17 13:38	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 16:44	11/10/17 13:38	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 15:46	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.029</b>		0.019	0.0065	mg/Kg	☼	11/08/17 16:15	11/09/17 08:13	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.56		0.56	0.19	mg/Kg	☼	11/13/17 08:00	11/13/17 16:35	1
<b>pH</b>	<b>8.0</b>		0.20	0.20	SU			11/11/17 21:10	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-1

**Client Sample ID: 2696V-28-B01 (0-1)**

**Lab Sample ID: 500-136786-3**

Date Collected: 11/03/17 09:00

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 90.8

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.017		0.017	0.0075	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Benzene	<0.0017		0.0017	0.00044	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Bromodichloromethane	<0.0017		0.0017	0.00035	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Bromoform	<0.0017		0.0017	0.00050	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Bromomethane	<0.0043		0.0043	0.0016	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
2-Butanone (MEK)	<0.0043		0.0043	0.0019	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Carbon disulfide	<0.0043		0.0043	0.00089	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Carbon tetrachloride	<0.0017		0.0017	0.00050	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Chlorobenzene	<0.0017		0.0017	0.00063	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Chloroethane	<0.0043		0.0043	0.0013	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Chloroform	<0.0017		0.0017	0.00060	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Chloromethane	<0.0043		0.0043	0.0017	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
cis-1,2-Dichloroethene	<0.0017		0.0017	0.00048	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
cis-1,3-Dichloropropene	<0.0017		0.0017	0.00052	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Dibromochloromethane	<0.0017		0.0017	0.00056	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
1,1-Dichloroethane	<0.0017		0.0017	0.00059	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
1,2-Dichloroethane	<0.0043		0.0043	0.0013	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
1,1-Dichloroethene	<0.0017		0.0017	0.00059	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
1,2-Dichloropropane	<0.0017		0.0017	0.00044	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
1,3-Dichloropropane, Total	<0.0017		0.0017	0.00060	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Ethylbenzene	<0.0017		0.0017	0.00082	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
2-Hexanone	<0.0043		0.0043	0.0013	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Methylene Chloride	<0.0043		0.0043	0.0017	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
4-Methyl-2-pentanone (MIBK)	<0.0043		0.0043	0.0013	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Methyl tert-butyl ether	<0.0017		0.0017	0.00050	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Styrene	<0.0017		0.0017	0.00052	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
1,1,2,2-Tetrachloroethane	<0.0017		0.0017	0.00055	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Tetrachloroethene	<0.0017		0.0017	0.00058	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Toluene	<0.0017		0.0017	0.00043	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
trans-1,2-Dichloroethene	<0.0017		0.0017	0.00076	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
trans-1,3-Dichloropropene	<0.0017		0.0017	0.00060	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
1,1,1-Trichloroethane	<0.0017		0.0017	0.00058	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
1,1,2-Trichloroethane	<0.0017		0.0017	0.00074	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Trichloroethene	<0.0017		0.0017	0.00058	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Vinyl acetate	<0.0043		0.0043	0.0015	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Vinyl chloride	<0.0017		0.0017	0.00076	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1
Xylenes, Total	<0.0034		0.0034	0.00055	mg/Kg	☼	11/04/17 08:18	11/09/17 16:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		75 - 131	11/04/17 08:18	11/09/17 16:02	1
Dibromofluoromethane	101		75 - 126	11/04/17 08:18	11/09/17 16:02	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 134	11/04/17 08:18	11/09/17 16:02	1
Toluene-d8 (Surr)	99		75 - 124	11/04/17 08:18	11/09/17 16:02	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.021	J	0.036	0.0065	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Acenaphthylene	0.020	J	0.036	0.0048	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Anthracene	0.090		0.036	0.0060	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Benzo[a]anthracene	0.64		0.036	0.0049	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-1

**Client Sample ID: 2696V-28-B01 (0-1)**

**Lab Sample ID: 500-136786-3**

**Date Collected: 11/03/17 09:00**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 90.8**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.73		0.036	0.0070	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Benzo[b]fluoranthene	1.3		0.036	0.0078	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Benzo[g,h,i]perylene	0.36		0.036	0.012	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Benzo[k]fluoranthene	0.50		0.036	0.011	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Bis(2-ethylhexyl) phthalate	0.069	J	0.18	0.066	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Butyl benzyl phthalate	<0.18		0.18	0.069	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Carbazole	<0.18		0.18	0.090	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
4-Chloroaniline	<0.73		0.73	0.17	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Chrysene	0.77		0.036	0.0099	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Dibenz(a,h)anthracene	0.085		0.036	0.0070	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
1,2-Dichlorobenzene	<0.18		0.18	0.043	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
2,4-Dichlorophenol	<0.36		0.36	0.086	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Di-n-butyl phthalate	<0.18		0.18	0.055	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
4,6-Dinitro-2-methylphenol	<0.73		0.73	0.29	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
2,4-Dinitrophenol	<0.73		0.73	0.64	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
2,6-Dinitrotoluene	<0.18		0.18	0.071	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Fluoranthene	1.4		0.036	0.0067	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Fluorene	0.030	J	0.036	0.0051	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Hexachlorobenzene	<0.073		0.073	0.0084	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Hexachlorocyclopentadiene	<0.73		0.73	0.21	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Indeno[1,2,3-cd]pyrene	0.35		0.036	0.0094	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
2-Methylnaphthalene	<0.073		0.073	0.0067	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Naphthalene	0.0059	J	0.036	0.0056	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Nitrobenzene	<0.036		0.036	0.0090	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
2-Nitrophenol	<0.36		0.36	0.086	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-1

**Client Sample ID: 2696V-28-B01 (0-1)**

**Lab Sample ID: 500-136786-3**

Date Collected: 11/03/17 09:00

Matrix: Solid

Date Received: 11/03/17 16:27

Percent Solids: 90.8

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.73		0.73	0.34	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
N-Nitrosodi-n-propylamine	<0.073		0.073	0.044	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Pentachlorophenol	<0.73		0.73	0.58	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
<b>Phenanthrene</b>	<b>0.56</b>		0.036	0.0050	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
Phenol	<0.18		0.18	0.080	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
<b>Pyrene</b>	<b>1.3</b>		0.036	0.0072	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
2,4,5-Trichlorophenol	<0.36		0.36	0.083	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	11/11/17 09:17	11/13/17 17:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	84		44 - 121	11/11/17 09:17	11/13/17 17:08	1
2-Fluorophenol	81		46 - 133	11/11/17 09:17	11/13/17 17:08	1
Nitrobenzene-d5	76		41 - 120	11/11/17 09:17	11/13/17 17:08	1
Phenol-d5	87		46 - 125	11/11/17 09:17	11/13/17 17:08	1
Terphenyl-d14	100		35 - 160	11/11/17 09:17	11/13/17 17:08	1
2,4,6-Tribromophenol	86		25 - 139	11/11/17 09:17	11/13/17 17:08	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.40</b>	<b>J</b>	1.1	0.21	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
<b>Arsenic</b>	<b>3.6</b>		0.53	0.18	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
<b>Barium</b>	<b>45</b>		0.53	0.061	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
<b>Beryllium</b>	<b>0.31</b>		0.21	0.050	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
<b>Cadmium</b>	<b>0.42</b>	<b>B</b>	0.11	0.019	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
<b>Chromium</b>	<b>9.6</b>		0.53	0.26	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
<b>Cobalt</b>	<b>3.2</b>		0.27	0.070	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
<b>Copper</b>	<b>16</b>		0.53	0.15	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
<b>Iron</b>	<b>8500</b>		11	5.5	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
<b>Lead</b>	<b>84</b>		0.27	0.12	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
<b>Magnesium</b>	<b>6100</b>		5.3	2.6	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
<b>Calcium</b>	<b>12000</b>	<b>B</b>	11	1.8	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
<b>Manganese</b>	<b>150</b>		0.53	0.077	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
<b>Nickel</b>	<b>8.3</b>		0.53	0.15	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
<b>Selenium</b>	<b>0.38</b>	<b>J</b>	0.53	0.31	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
Silver	<0.27		0.27	0.069	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
Thallium	<0.53		0.53	0.27	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
<b>Vanadium</b>	<b>14</b>		0.27	0.063	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
<b>Zinc</b>	<b>65</b>		1.1	0.47	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
<b>Potassium</b>	<b>660</b>		27	9.4	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1
<b>Sodium</b>	<b>190</b>		53	7.9	mg/Kg	☼	11/07/17 16:57	11/08/17 23:37	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 16:44	11/10/17 16:11	1
<b>Barium</b>	<b>0.22</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 16:44	11/10/17 16:11	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 16:44	11/10/17 16:11	1
<b>Cadmium</b>	<b>0.0020</b>	<b>J</b>	0.0050	0.0020	mg/L		11/09/17 16:44	11/10/17 16:11	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-1

**Client Sample ID: 2696V-28-B01 (0-1)**

**Lab Sample ID: 500-136786-3**

**Date Collected: 11/03/17 09:00**

**Matrix: Solid**

**Date Received: 11/03/17 16:27**

**Percent Solids: 90.8**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>290</b>		5.0	0.50	mg/L		11/09/17 16:44	11/10/17 16:11	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:11	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:11	1
<b>Copper</b>	<b>0.025</b>		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:11	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 16:44	11/10/17 16:11	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 16:44	11/10/17 16:11	1
<b>Magnesium</b>	<b>160</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:11	1
<b>Manganese</b>	<b>0.44</b>		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:11	1
Nickel	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:11	1
<b>Potassium</b>	<b>0.94 J</b>		2.5	0.50	mg/L		11/09/17 16:44	11/10/17 16:11	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 16:44	11/10/17 16:11	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:11	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 16:44	11/10/17 16:11	1
<b>Zinc</b>	<b>0.096 J</b>		0.50	0.020	mg/L		11/09/17 16:44	11/10/17 16:11	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.047</b>		0.025	0.010	mg/L		11/09/17 16:42	11/10/17 21:51	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 16:44	11/10/17 13:42	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 16:44	11/10/17 13:42	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 15:49	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.021</b>		0.018	0.0059	mg/Kg	☼	11/08/17 16:15	11/09/17 08:15	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.48		0.48	0.17	mg/Kg	☼	11/13/17 08:00	11/13/17 16:36	1
<b>pH</b>	<b>8.0</b>		0.20	0.20	SU			11/11/17 21:43	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-1

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

### Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
F2	MS/MSD RPD exceeds control limits
F3	Duplicate RPD exceeds the control limit
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)



# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136786-1

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)  
Contact: MATT WEISS  
Company: TERRALCON  
Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
E-Mail: \_\_\_\_\_

Bill To (optional)  
Contact: \_\_\_\_\_  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
PO#/Reference#: \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-136786  
Chain of Custody Number: \_\_\_\_\_  
Page 1 of 1  
Temperature °C of Cooler: 29, 4.6

Client		Client Project #		Preservative		Parameter		Matrix		Comments	
<u>TERRALCON</u>		<u>11177029 M</u>								Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name		Lab Project #		Date		Time		# of Containers		Matrix	
<u>WORK ORDER 037</u>											
Project Location/State		Lab Project #		Date		Time		# of Containers		Matrix	
<u>MARKHAM, IL</u>											
Sampler		Lab PM		Date		Time		# of Containers		Matrix	
<u>CRAIG VARLAND</u>		<u>DICK WRIGHT</u>									
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix
<u>1</u>		<u>2696V-28-B02-(0-1)</u>	<u>11-3-17</u>	<u>0845</u>	<u>5</u>	<u>S</u>	<u>VOGS</u>	<u>SVOGS</u>	<u>23 TAL METALS</u>	<u>PH</u>	<u>TCLP 23 TAL METALS</u>
<u>2</u>		<u>2696V-28-B02-DUP-(0-1)</u>	<u>11-3-17</u>	<u>-</u>	<u>5</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>3</u>		<u>2696V-28-B01-(0-1)</u>	<u>11-3-17</u>	<u>0900</u>	<u>5</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	



500-136786 COC

Turnaround Time Required (Business Days) 1 Day 2 Days 5 Days 7 Days 10 Days 15 Days Other  
 Sample Disposal:  Return to Client  Disposal by Lab  Archive for    Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRALCON</u> Date: <u>11-3-17</u> Time: <u>1605</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>1605</u>	Lab Courier: <u>TA</u>
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>1627</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>1627</u>	Shipped: <input type="checkbox"/>
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Hand Delivered: <input type="checkbox"/>

- Matrix Key
- WW - Wastewater
  - W - Water
  - S - Soil
  - SL - Sludge
  - MS - Miscellaneous
  - OL - Oil
  - A - Air
  - SE - Sediment
  - SO - Soil
  - L - Leachate
  - WI - Wipe
  - DW - Drinking Water
  - O - Other

Client Comments:  
NO ALUMINUM

Lab Comments:

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136786-1

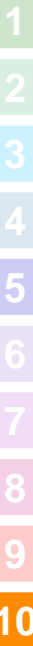
**Login Number: 136786**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9, 4.6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

Kedzie Ave (Southbound) IDOT STA 73+32 to 76+30 (ISGS Site 2696V-29)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

Soil from borings B01 and B02 were sampled adjacent to ISGS Site No 2696V-29. See Exhibits 8, 8C, and Table 53 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136785-6. Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

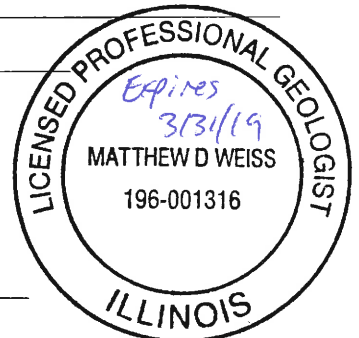
***Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))***

Company Name: Terracon Consultants, Inc  
 Street Address: 135 Ambassador Drive  
 City: Naperville State: IL Zip Code: 60540  
 Phone: 630-717-4263

Matt Weiss  
 Printed Name:

[Signature]  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

7/24/18  
 Date:



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-29)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 1 of 2

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-29-B01 (0-1)	2696V-29-B02 (0-1)
				CCDD	Sample Depth (feet)	(0-1)	(0-1)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/02/2017	11/02/2017
<b>Volatile Organic Analytical Parameters</b>							
Acetone	mg/kg	---	---	25		<0.016	0.043
<b>Semivolatile Organic Analytical Parameters</b>							
Acenaphthylene	mg/kg	0.03	0.07	85		0.011	<0.037
Anthracene	mg/kg	0.25	0.4	12000		0.2	<0.037
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.094	0.03
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.26	0.041
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.12	0.06
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.2	0.03
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		0.053	0.021
Chrysene	mg/kg	1.2	2.7	88		0.074	0.041
Fluoranthene	mg/kg	2.7	4.1	3100		0.42	0.061
Fluorene	mg/kg	0.1	0.18	560		0.012	<0.037
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.073	0.027
Phenanthrene	mg/kg	1.3	2.5	210		0.4	0.017
Pyrene	mg/kg	1.9	3.0	2300		1.1	0.055
<b>Inorganic Analytical Parameters</b>							
Arsenic	mg/kg	---	13	11.3		6.3	2.9
Barium	mg/kg	---	110	1500		110	20
Cadmium	mg/kg	---	0.6	5.2		0.16	0.076
Chromium, total	mg/kg	---	16.2	21		8.3	6.5
Lead	mg/kg	---	36	107		12	11
Mercury	mg/kg	---	0.06	0.1		0.017	0.019
Selenium	mg/kg	---	0.48	1.3		<0.55	<0.54
Silver	mg/kg	---	0.55	4.4		<0.27	<0.27
Antimony	mg/kg	---	4.0	5		0.37	0.28
Beryllium	mg/kg	---	0.59	22		0.35	0.23
Calcium	mg/kg	---	9,300	---		17000	4200
Cobalt	mg/kg	---	8.9	20		5.6	2.4
Copper	mg/kg	---	19.6	2900		12	5.4
Cyanide	mg/kg	---	0.51	---		<0.50	<0.51
Iron	mg/kg	---	15,900	15000		11000	6200
Magnesium	mg/kg	---	4,820	325000		9400	2400
Manganese	mg/kg	---	636	630		190	91
Nickel	mg/kg	---	18	100		13	4.6
Potassium	mg/kg	---	1,268	---		1100	250
Sodium	mg/kg	---	130	---		160	210
Thallium	mg/kg	---	0.32	2.6		<0.55	<0.54
Vanadium	mg/kg	---	25.2	550		14	15
Zinc	mg/kg	---	95	5100		47	22
pH			6.25	9		8.9	8.5

**Detected Constituents to MACs-PTB 174-009;Work Order:037A**  
**Preliminary Site Investigation**  
**FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-29)**  
**Oak Forest/Markham, Cook County, IL**  
**Terracon Project No. 11177029M**  
**Page 2 of 2**

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-29-B01 (0-1)	2696V-29-B02 (0-1)
				CCDD	Sample Depth (feet)	(0-1)	(0-1)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/02/2017	11/02/2017
<b>Inorganic Analytical Parameters (SPLP)</b>							
Antimony,SPLP	mg/L	---	---	---		--	--
Arsenic,SPLP	mg/L	---	---	---		--	--
Barium,SPLP	mg/L	---	---	---		--	--
Beryllium,SPLP	mg/L	---	---	---		--	--
Cadmium,SPLP	mg/L	---	---	---		--	--
Calcium,SPLP	mg/L	---	---	---		--	--
Chromium,SPLP	mg/L	---	---	---		--	--
Cobalt,SPLP	mg/L	---	---	---		--	--
Copper,SPLP	mg/L	---	---	---		--	--
Iron,SPLP	mg/L	---	---	---		--	--
Lead,SPLP	mg/L	---	---	---		--	--
Magnesium,SPLP	mg/L	---	---	---		--	--
Manganese,SPLP	mg/L	---	---	---		0.65	0.15
Mercury,SPLP	mg/L	---	---	---		--	--
Nickel,SPLP	mg/L	---	---	---		--	--
Potassium,SPLP	mg/L	---	---	---		--	--
Selenium,SPLP	mg/L	---	---	---		--	--
Silver,SPLP	mg/L	---	---	---		--	--
Sodium,SPLP	mg/L	---	---	---		--	--
Thallium,SPLP	mg/L	---	---	---		--	--
Vanadium,SPLP	mg/L	---	---	---		--	--
Zinc,SPLP	mg/L	---	---	---		--	--
Cyanide,SPLP	mg/L	---	---	---		--	--
<b>Inorganic Analytical Parameters (TCLP)</b>							
Arsenic,TCLP	mg/L	---	---	---		<0.050	<0.050
Barium,TCLP	mg/L	---	---	---		0.53	0.17
Cadmium,TCLP	mg/L	---	---	---		<0.0050	<0.0050
Chromium,TCLP	mg/L	---	---	---		<0.025	<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075	<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020	<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050	<0.050
Silver,TCLP	mg/L	---	---	---		<0.025	<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060	<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040	<0.0040
Calcium,TCLP	mg/L	---	---	---		550	100
Cobalt,TCLP	mg/L	---	---	---		<0.025	<0.025
Copper,TCLP	mg/L	---	---	---		0.023	0.013
Cyanide,TCLP	mg/L	---	---	---		----	----
Iron,TCLP	mg/L	---	---	---		<0.40	<0.40
Magnesium,TCLP	mg/L	---	---	---		51	50
Manganese,TCLP	mg/L	---	---	---		1.3	0.18
Nickel,TCLP	mg/L	---	---	---		<0.025	<0.025
Potassium,TCLP	mg/L	---	---	---		2.3	0.69
Sodium,TCLP	mg/L	---	---	---		----	----
Thallium,TCLP	mg/L	---	---	---		<0.0020	<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025	<0.025
Zinc,TCLP	mg/L	---	---	---		<0.50	<0.50



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

TestAmerica Job ID: 500-136785-6  
Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:  
Terracon Consulting Eng & Scientists  
135 Ambassador Drive  
Naperville, Illinois 60540

Attn: Mr. Matthew Weiss



Authorized for release by:  
11/15/2017 5:34:50 PM

Richard Wright, Senior Project Manager  
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### LINKS

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-6

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**Job ID: 500-136785-6**

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**Laboratory: TestAmerica Chicago**

## Narrative

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### Job Narrative 500-136785-6

#### Receipt

The samples were received on 11/3/2017 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.6° C and 3.8° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

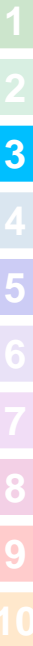
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-6

**Client Sample ID: 2696V-29-B01 (0-1)**

**Lab Sample ID: 500-136785-14**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.011	J	0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.20		0.037	0.0063	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.094		0.037	0.0051	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.26		0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.12		0.037	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.20		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.053		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.074		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.42		0.037	0.0070	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.012	J	0.037	0.0053	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.073		0.037	0.0098	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.40		0.037	0.0053	mg/Kg	1	☼	8270D	Total/NA
Pyrene	1.1		0.037	0.0075	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.37	J	1.1	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	6.3		0.55	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	110		0.55	0.062	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.35		0.22	0.051	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.16	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	8.3		0.55	0.27	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.6		0.27	0.072	mg/Kg	1	☼	6010B	Total/NA
Copper	12		0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	11000		11	5.7	mg/Kg	1	☼	6010B	Total/NA
Lead	12		0.27	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	9400		5.5	2.7	mg/Kg	1	☼	6010B	Total/NA
Calcium	17000	B	11	1.9	mg/Kg	1	☼	6010B	Total/NA
Manganese	190		0.55	0.079	mg/Kg	1	☼	6010B	Total/NA
Nickel	13		0.55	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	14		0.27	0.065	mg/Kg	1	☼	6010B	Total/NA
Zinc	47		1.1	0.48	mg/Kg	1	☼	6010B	Total/NA
Potassium	1100		27	9.7	mg/Kg	1	☼	6010B	Total/NA
Sodium	160		55	8.1	mg/Kg	1	☼	6010B	Total/NA
Barium	0.53		0.50	0.050	mg/L	1		6010B	TCLP
Calcium	550		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.023	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	51		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	1.3		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	2.3	J	2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.65		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.017	J	0.018	0.0060	mg/Kg	1	☼	7471B	Total/NA
pH	8.9		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-29-B02 (0-1)**

**Lab Sample ID: 500-136785-15**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.043		0.019	0.0081	mg/Kg	1	☼	8260B	Total/NA
Benzo[a]anthracene	0.030	J	0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.041		0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.060		0.037	0.0080	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.030	J	0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.021	J	0.037	0.011	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-6

**Client Sample ID: 2696V-29-B02 (0-1) (Continued)**

**Lab Sample ID: 500-136785-15**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chrysene	0.041		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.061		0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.027	J	0.037	0.0096	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.017	J	0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.055		0.037	0.0074	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.28	J	1.1	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	2.9		0.54	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	20		0.54	0.062	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.23		0.22	0.051	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.076	J B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	6.5		0.54	0.27	mg/Kg	1	☼	6010B	Total/NA
Cobalt	2.4		0.27	0.071	mg/Kg	1	☼	6010B	Total/NA
Copper	5.4		0.54	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	6200		11	5.7	mg/Kg	1	☼	6010B	Total/NA
Lead	11		0.27	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	2400		5.4	2.7	mg/Kg	1	☼	6010B	Total/NA
Calcium	4200	B	11	1.8	mg/Kg	1	☼	6010B	Total/NA
Manganese	91		0.54	0.079	mg/Kg	1	☼	6010B	Total/NA
Nickel	4.6		0.54	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	15		0.27	0.064	mg/Kg	1	☼	6010B	Total/NA
Zinc	22		1.1	0.48	mg/Kg	1	☼	6010B	Total/NA
Potassium	250		27	9.6	mg/Kg	1	☼	6010B	Total/NA
Sodium	210		54	8.1	mg/Kg	1	☼	6010B	Total/NA
Barium	0.17	J	0.50	0.050	mg/L	1		6010B	TCLP
Calcium	100		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.013	J	0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	50		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.18		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	0.69	J	2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.15		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.019		0.017	0.0058	mg/Kg	1	☼	7471B	Total/NA
pH	8.5		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-6

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136785-14	2696V-29-B01 (0-1)	Solid	11/02/17 15:30	11/03/17 09:45
500-136785-15	2696V-29-B02 (0-1)	Solid	11/02/17 15:45	11/03/17 09:45

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-6

**Client Sample ID: 2696V-29-B01 (0-1)**

**Lab Sample ID: 500-136785-14**

**Date Collected: 11/02/17 15:30**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 87.5**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.016		0.016	0.0071	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Benzene	<0.0016		0.0016	0.00042	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Bromodichloromethane	<0.0016		0.0016	0.00033	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Bromoform	<0.0016		0.0016	0.00048	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Bromomethane	<0.0041		0.0041	0.0015	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
2-Butanone (MEK)	<0.0041		0.0041	0.0018	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Carbon disulfide	<0.0041		0.0041	0.00085	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Carbon tetrachloride	<0.0016		0.0016	0.00047	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Chlorobenzene	<0.0016		0.0016	0.00060	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Chloroethane	<0.0041		0.0041	0.0012	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Chloroform	<0.0016		0.0016	0.00057	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Chloromethane	<0.0041		0.0041	0.0016	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
cis-1,2-Dichloroethene	<0.0016		0.0016	0.00046	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
cis-1,3-Dichloropropene	<0.0016		0.0016	0.00049	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Dibromochloromethane	<0.0016		0.0016	0.00054	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
1,1-Dichloroethane	<0.0016		0.0016	0.00056	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
1,2-Dichloroethane	<0.0041		0.0041	0.0013	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
1,1-Dichloroethene	<0.0016		0.0016	0.00056	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
1,2-Dichloropropane	<0.0016		0.0016	0.00042	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
1,3-Dichloropropene, Total	<0.0016		0.0016	0.00057	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Ethylbenzene	<0.0016		0.0016	0.00078	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
2-Hexanone	<0.0041		0.0041	0.0013	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Methylene Chloride	<0.0041		0.0041	0.0016	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
4-Methyl-2-pentanone (MIBK)	<0.0041		0.0041	0.0012	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Methyl tert-butyl ether	<0.0016		0.0016	0.00048	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Styrene	<0.0016		0.0016	0.00049	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
1,1,2,2-Tetrachloroethane	<0.0016		0.0016	0.00052	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Tetrachloroethene	<0.0016		0.0016	0.00056	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Toluene	<0.0016		0.0016	0.00041	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
trans-1,2-Dichloroethene	<0.0016		0.0016	0.00073	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
trans-1,3-Dichloropropene	<0.0016		0.0016	0.00057	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
1,1,1-Trichloroethane	<0.0016		0.0016	0.00055	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
1,1,2-Trichloroethane	<0.0016		0.0016	0.00070	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Trichloroethene	<0.0016		0.0016	0.00055	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Vinyl acetate	<0.0041		0.0041	0.0014	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Vinyl chloride	<0.0016		0.0016	0.00072	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1
Xylenes, Total	<0.0033		0.0033	0.00052	mg/Kg	☼	11/04/17 08:18	11/08/17 20:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		75 - 131	11/04/17 08:18	11/08/17 20:24	1
Dibromofluoromethane	110		75 - 126	11/04/17 08:18	11/08/17 20:24	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 134	11/04/17 08:18	11/08/17 20:24	1
Toluene-d8 (Surr)	93		75 - 124	11/04/17 08:18	11/08/17 20:24	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.037		0.037	0.0068	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Acenaphthylene	0.011	J	0.037	0.0050	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Anthracene	0.20		0.037	0.0063	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Benzo[a]anthracene	0.094		0.037	0.0051	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-6

**Client Sample ID: 2696V-29-B01 (0-1)**

**Lab Sample ID: 500-136785-14**

**Date Collected: 11/02/17 15:30**

**Matrix: Solid**

**Date Received: 11/03/17 09:45**

**Percent Solids: 87.5**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.26		0.037	0.0073	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Benzo[b]fluoranthene	0.12		0.037	0.0081	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Benzo[g,h,i]perylene	0.20		0.037	0.012	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Benzo[k]fluoranthene	0.053		0.037	0.011	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.069	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Chrysene	0.074		0.037	0.010	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0073	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
2,4-Dichlorophenol	<0.37		0.37	0.090	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
2,4-Dinitrophenol	<0.76		0.76	0.66	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Fluoranthene	0.42		0.037	0.0070	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Fluorene	0.012 J		0.037	0.0053	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Hexachlorobenzene	<0.076		0.076	0.0087	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Indeno[1,2,3-cd]pyrene	0.073		0.037	0.0098	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
2-Methylnaphthalene	<0.076		0.076	0.0069	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Naphthalene	<0.037		0.037	0.0058	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Nitrobenzene	<0.037		0.037	0.0094	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
2-Nitrophenol	<0.37		0.37	0.089	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-6

**Client Sample ID: 2696V-29-B01 (0-1)**

**Lab Sample ID: 500-136785-14**

Date Collected: 11/02/17 15:30

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 87.5

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Pentachlorophenol	<0.76		0.76	0.60	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
<b>Phenanthrene</b>	<b>0.40</b>		0.037	0.0053	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
Phenol	<0.19		0.19	0.084	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
<b>Pyrene</b>	<b>1.1</b>		0.037	0.0075	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
2,4,5-Trichlorophenol	<0.37		0.37	0.086	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/14/17 12:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	82		44 - 121	11/10/17 17:29	11/14/17 12:49	1
2-Fluorophenol	89		46 - 133	11/10/17 17:29	11/14/17 12:49	1
Nitrobenzene-d5	76		41 - 120	11/10/17 17:29	11/14/17 12:49	1
Phenol-d5	89		46 - 125	11/10/17 17:29	11/14/17 12:49	1
Terphenyl-d14	80		35 - 160	11/10/17 17:29	11/14/17 12:49	1
2,4,6-Tribromophenol	82		25 - 139	11/10/17 17:29	11/14/17 12:49	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.37</b>	<b>J</b>	1.1	0.21	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
<b>Arsenic</b>	<b>6.3</b>		0.55	0.19	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
<b>Barium</b>	<b>110</b>		0.55	0.062	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
<b>Beryllium</b>	<b>0.35</b>		0.22	0.051	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
<b>Cadmium</b>	<b>0.16</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
<b>Chromium</b>	<b>8.3</b>		0.55	0.27	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
<b>Cobalt</b>	<b>5.6</b>		0.27	0.072	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
<b>Copper</b>	<b>12</b>		0.55	0.15	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
<b>Iron</b>	<b>11000</b>		11	5.7	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
<b>Lead</b>	<b>12</b>		0.27	0.13	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
<b>Magnesium</b>	<b>9400</b>		5.5	2.7	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
<b>Calcium</b>	<b>17000</b>	<b>B</b>	11	1.9	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
<b>Manganese</b>	<b>190</b>		0.55	0.079	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
<b>Nickel</b>	<b>13</b>		0.55	0.16	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
Selenium	<0.55		0.55	0.32	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
Silver	<0.27		0.27	0.071	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
<b>Vanadium</b>	<b>14</b>		0.27	0.065	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
<b>Zinc</b>	<b>47</b>		1.1	0.48	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
<b>Potassium</b>	<b>1100</b>		27	9.7	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1
<b>Sodium</b>	<b>160</b>		55	8.1	mg/Kg	☼	11/07/17 16:54	11/09/17 02:28	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 08:42	11/09/17 16:29	1
<b>Barium</b>	<b>0.53</b>		0.50	0.050	mg/L		11/09/17 08:42	11/09/17 16:29	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 08:42	11/09/17 16:29	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/09/17 08:42	11/09/17 16:29	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-6

**Client Sample ID: 2696V-29-B01 (0-1)**

**Lab Sample ID: 500-136785-14**

Date Collected: 11/02/17 15:30

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 87.5

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>550</b>		5.0	0.50	mg/L		11/09/17 08:42	11/09/17 16:29	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:29	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:29	1
<b>Copper</b>	<b>0.023</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:29	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 08:42	11/09/17 16:29	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 08:42	11/09/17 16:29	1
<b>Magnesium</b>	<b>51</b>		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 16:29	1
<b>Manganese</b>	<b>1.3</b>		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:29	1
Nickel	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:29	1
<b>Potassium</b>	<b>2.3</b>	<b>J</b>	2.5	0.50	mg/L		11/09/17 08:42	11/09/17 16:29	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 08:42	11/09/17 16:29	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:29	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:29	1
Zinc	<0.50		0.50	0.020	mg/L		11/09/17 08:42	11/09/17 16:29	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.65</b>		0.025	0.010	mg/L		11/09/17 16:40	11/10/17 21:05	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 08:42	11/10/17 12:53	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 08:42	11/10/17 12:53	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 15:25	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.017</b>	<b>J</b>	0.018	0.0060	mg/Kg	☼	11/07/17 13:20	11/08/17 10:09	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.50		0.50	0.17	mg/Kg	☼	11/13/17 08:00	11/13/17 16:31	1
<b>pH</b>	<b>8.9</b>		0.20	0.20	SU			11/11/17 19:29	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-6

**Client Sample ID: 2696V-29-B02 (0-1)**

**Lab Sample ID: 500-136785-15**

Date Collected: 11/02/17 15:45

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 88.5

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.043</b>		0.019	0.0081	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Benzene	<0.0019		0.0019	0.00047	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Bromodichloromethane	<0.0019		0.0019	0.00038	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Bromoform	<0.0019		0.0019	0.00054	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Bromomethane	<0.0047		0.0047	0.0018	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
2-Butanone (MEK)	<0.0047		0.0047	0.0021	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Carbon disulfide	<0.0047		0.0047	0.00097	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Carbon tetrachloride	<0.0019		0.0019	0.00054	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Chlorobenzene	<0.0019		0.0019	0.00069	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Chloroethane	<0.0047		0.0047	0.0014	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Chloroform	<0.0019		0.0019	0.00065	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Chloromethane	<0.0047		0.0047	0.0019	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
cis-1,2-Dichloroethene	<0.0019		0.0019	0.00052	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
cis-1,3-Dichloropropene	<0.0019		0.0019	0.00056	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Dibromochloromethane	<0.0019		0.0019	0.00061	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
1,1-Dichloroethane	<0.0019		0.0019	0.00064	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
1,2-Dichloroethane	<0.0047		0.0047	0.0015	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
1,1,1-Dichloroethene	<0.0019		0.0019	0.00064	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
1,2-Dichloropropane	<0.0019		0.0019	0.00048	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
1,3-Dichloropropane, Total	<0.0019		0.0019	0.00065	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Ethylbenzene	<0.0019		0.0019	0.00089	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
2-Hexanone	<0.0047		0.0047	0.0015	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Methylene Chloride	<0.0047		0.0047	0.0018	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
4-Methyl-2-pentanone (MIBK)	<0.0047		0.0047	0.0014	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Methyl tert-butyl ether	<0.0019		0.0019	0.00055	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Styrene	<0.0019		0.0019	0.00056	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
1,1,1,2-Tetrachloroethane	<0.0019		0.0019	0.00059	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Tetrachloroethene	<0.0019		0.0019	0.00063	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Toluene	<0.0019		0.0019	0.00047	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
trans-1,2-Dichloroethene	<0.0019		0.0019	0.00082	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
trans-1,3-Dichloropropene	<0.0019		0.0019	0.00065	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
1,1,1-Trichloroethane	<0.0019		0.0019	0.00062	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
1,1,2-Trichloroethane	<0.0019		0.0019	0.00080	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Trichloroethene	<0.0019		0.0019	0.00063	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Vinyl acetate	<0.0047		0.0047	0.0016	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Vinyl chloride	<0.0019		0.0019	0.00082	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1
Xylenes, Total	<0.0037		0.0037	0.00060	mg/Kg	☼	11/04/17 08:18	11/09/17 12:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		75 - 131	11/04/17 08:18	11/09/17 12:11	1
Dibromofluoromethane	104		75 - 126	11/04/17 08:18	11/09/17 12:11	1
1,2-Dichloroethane-d4 (Surr)	110		70 - 134	11/04/17 08:18	11/09/17 12:11	1
Toluene-d8 (Surr)	95		75 - 124	11/04/17 08:18	11/09/17 12:11	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Anthracene	<0.037		0.037	0.0062	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
<b>Benzo[a]anthracene</b>	<b>0.030</b>	<b>J</b>	0.037	0.0050	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-6

**Client Sample ID: 2696V-29-B02 (0-1)**

**Lab Sample ID: 500-136785-15**

Date Collected: 11/02/17 15:45

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 88.5

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.041</b>		0.037	0.0072	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
<b>Benzo[b]fluoranthene</b>	<b>0.060</b>		0.037	0.0080	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
<b>Benzo[g,h,i]perylene</b>	<b>0.030</b>	<b>J</b>	0.037	0.012	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
<b>Benzo[k]fluoranthene</b>	<b>0.021</b>	<b>J</b>	0.037	0.011	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Carbazole	<0.19		0.19	0.093	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
4-Chloroaniline	<0.75		0.75	0.17	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
2-Chlorophenol	<0.19		0.19	0.063	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.043	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
<b>Chrysene</b>	<b>0.041</b>		0.037	0.010	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Dibenzofuran	<0.19		0.19	0.043	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
1,2-Dichlorobenzene	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
2,4-Dichlorophenol	<0.37		0.37	0.088	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
2,4-Dinitrophenol	<0.75		0.75	0.65	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
2,6-Dinitrotoluene	<0.19		0.19	0.073	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
<b>Fluoranthene</b>	<b>0.061</b>		0.037	0.0069	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Fluorene	<0.037		0.037	0.0052	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Hexachlorobenzene	<0.075		0.075	0.0086	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Hexachlorobutadiene	<0.19		0.19	0.058	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Hexachlorocyclopentadiene	<0.75		0.75	0.21	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Hexachloroethane	<0.19		0.19	0.056	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.027</b>	<b>J</b>	0.037	0.0096	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
2-Methylnaphthalene	<0.075		0.075	0.0068	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Naphthalene	<0.037		0.037	0.0057	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-6

**Client Sample ID: 2696V-29-B02 (0-1)**

**Lab Sample ID: 500-136785-15**

Date Collected: 11/02/17 15:45

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 88.5

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.75		0.75	0.35	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.045	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Pentachlorophenol	<0.75		0.75	0.60	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
<b>Phenanthrene</b>	<b>0.017</b>	<b>J</b>	0.037	0.0052	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
Phenol	<0.19		0.19	0.082	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
<b>Pyrene</b>	<b>0.055</b>		0.037	0.0074	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/10/17 17:29	11/13/17 20:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	80		44 - 121	11/10/17 17:29	11/13/17 20:04	1
2-Fluorophenol	93		46 - 133	11/10/17 17:29	11/13/17 20:04	1
Nitrobenzene-d5	83		41 - 120	11/10/17 17:29	11/13/17 20:04	1
Phenol-d5	92		46 - 125	11/10/17 17:29	11/13/17 20:04	1
Terphenyl-d14	99		35 - 160	11/10/17 17:29	11/13/17 20:04	1
2,4,6-Tribromophenol	70		25 - 139	11/10/17 17:29	11/13/17 20:04	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.28</b>	<b>J</b>	1.1	0.21	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
<b>Arsenic</b>	<b>2.9</b>		0.54	0.19	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
<b>Barium</b>	<b>20</b>		0.54	0.062	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
<b>Beryllium</b>	<b>0.23</b>		0.22	0.051	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
<b>Cadmium</b>	<b>0.076</b>	<b>J B</b>	0.11	0.020	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
<b>Chromium</b>	<b>6.5</b>		0.54	0.27	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
<b>Cobalt</b>	<b>2.4</b>		0.27	0.071	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
<b>Copper</b>	<b>5.4</b>		0.54	0.15	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
<b>Iron</b>	<b>6200</b>		11	5.7	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
<b>Lead</b>	<b>11</b>		0.27	0.13	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
<b>Magnesium</b>	<b>2400</b>		5.4	2.7	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
<b>Calcium</b>	<b>4200</b>	<b>B</b>	11	1.8	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
<b>Manganese</b>	<b>91</b>		0.54	0.079	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
<b>Nickel</b>	<b>4.6</b>		0.54	0.16	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
Selenium	<0.54		0.54	0.32	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
Silver	<0.27		0.27	0.070	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
Thallium	<0.54		0.54	0.27	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
<b>Vanadium</b>	<b>15</b>		0.27	0.064	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
<b>Zinc</b>	<b>22</b>		1.1	0.48	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
<b>Potassium</b>	<b>250</b>		27	9.6	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1
<b>Sodium</b>	<b>210</b>		54	8.1	mg/Kg	☼	11/07/17 16:54	11/09/17 02:32	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/09/17 08:42	11/09/17 16:33	1
<b>Barium</b>	<b>0.17</b>	<b>J</b>	0.50	0.050	mg/L		11/09/17 08:42	11/09/17 16:33	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/09/17 08:42	11/09/17 16:33	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/09/17 08:42	11/09/17 16:33	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-6

**Client Sample ID: 2696V-29-B02 (0-1)**

**Lab Sample ID: 500-136785-15**

Date Collected: 11/02/17 15:45

Matrix: Solid

Date Received: 11/03/17 09:45

Percent Solids: 88.5

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>100</b>		5.0	0.50	mg/L		11/09/17 08:42	11/09/17 16:33	1
Chromium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:33	1
Cobalt	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:33	1
<b>Copper</b>	<b>0.013</b>	<b>J</b>	0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:33	1
Iron	<0.40		0.40	0.20	mg/L		11/09/17 08:42	11/09/17 16:33	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/09/17 08:42	11/09/17 16:33	1
<b>Magnesium</b>	<b>50</b>		2.5	0.50	mg/L		11/09/17 08:42	11/09/17 16:33	1
<b>Manganese</b>	<b>0.18</b>		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:33	1
Nickel	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:33	1
<b>Potassium</b>	<b>0.69</b>	<b>J</b>	2.5	0.50	mg/L		11/09/17 08:42	11/09/17 16:33	1
Selenium	<0.050		0.050	0.020	mg/L		11/09/17 08:42	11/09/17 16:33	1
Silver	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:33	1
Vanadium	<0.025		0.025	0.010	mg/L		11/09/17 08:42	11/09/17 16:33	1
Zinc	<0.50		0.50	0.020	mg/L		11/09/17 08:42	11/09/17 16:33	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.15</b>		0.025	0.010	mg/L		11/09/17 16:40	11/10/17 21:09	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/09/17 08:42	11/10/17 12:57	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/09/17 08:42	11/10/17 12:57	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/09/17 12:50	11/10/17 15:31	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.019</b>		0.017	0.0058	mg/Kg	☼	11/07/17 13:20	11/08/17 10:15	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.51		0.51	0.18	mg/Kg	☼	11/13/17 08:00	11/13/17 16:32	1
<b>pH</b>	<b>8.5</b>		0.20	0.20	SU			11/11/17 20:03	1



# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-6

## Qualifiers

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136785-6

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To \_\_\_\_\_ (optional)  
 Contact: MATT WEISS  
 Company: TERRACON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To \_\_\_\_\_ (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: SDU-36785  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: 3.8, 2.6

Client		Client Project #		Preservative		Parameter												Preservative Key								
<u>TERRACON</u>		<u>11177029 M</u>																1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other								
Project Name				Project Location/State				Lab Project #																		
<u>WORK ORDER 038A</u>				<u>MARKHAM, IL</u>																						
Sampler				Lab PM																						
<u>CRAG VARLAND</u>				<u>DICK WRIGHT</u>																						
Lab ID	MS/MSD	Sample ID		Sampling		# of Containers	Matrix	NOCS	SUOCS	23 TAL METALS	PH	TCLP 23 TAL METALS														
		Date	Time	Date	Time								Comments													
<u>14</u>		<u>2696V-29-B01-(0-1)</u>		<u>11-2-17</u>	<u>1530</u>	<u>5</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>		<u>X</u>														
<u>15</u>		<u>2696V-29-B02-(0-1)</u>		<u>11-2-17</u>	<u>1545</u>	<u>5</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>		<u>X</u>														

Turnaround Time Required (Business Days)

1 Day
  2 Days
  5 Days
  7 Days
  10 Days
  15 Days
  Other

Sample Disposal

Return to Client
  Disposal by Lab
  Archive for \_\_\_\_\_ Months
 (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRACON</u> Date: <u>11-3-17</u> Time: <u>0832</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>0902</u>
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/3/17</u> Time: <u>0945</u>	Received By: <u>[Signature]</u> Company: <u>TALM</u> Date: <u>11/3/17</u> Time: <u>0945</u>

Lab Courier: TA  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

Matrix Key

- WW - Wastewater
- W - Water
- S - Soil
- SL - Sludge
- MS - Miscellaneous
- OL - Oil
- A - Air
- SE - Sediment
- SO - Soil
- L - Leachate
- WJ - Wipe
- DW - Drinking Water
- O - Other

Client Comments

NO ALUMINUM

Lab Comments:

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136785-6

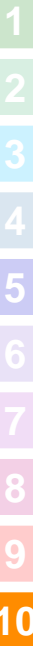
**Login Number: 136785**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.6, 3.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

US Route 6 (Westbound) IDOT STA 36+45 to 37+30 and 38+10 to 39+00 (ISGS Site 2696V-31)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a):

Soil from borings B01 and B03 were sampled adjacent to ISGS Site No 2696V-31. See Exhibits 6, 6F, 6G, and Table 57 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136834-2. Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

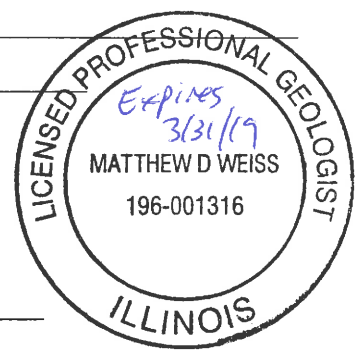
**Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))**

Company Name: Terracon Consultants, Inc  
 Street Address: 135 Ambassador Drive  
 City: Naperville State: IL Zip Code: 60540  
 Phone: 630-717-4263

Matt Weiss  
Printed Name:

[Signature]  
Licensed Professional Engineer or  
Licensed Professional Geologist Signature:

7/24/18  
Date:



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-31)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 1 of 2

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-31-B01 (0-2)	2696V-31-B03 (0-2)
				CCDD	Sample Depth (feet)	(0-2)	(0-2)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/06/2017	11/06/2017
<b>Volatile Organic Analytical Parameters</b>							
Acetone	mg/kg	---	---	25		<0.020	0.11
<b>Semivolatile Organic Analytical Parameters</b>							
Acenaphthylene	mg/kg	0.03	0.07	85		0.0096	0.013
Anthracene	mg/kg	0.25	0.4	12000		0.019	0.025
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.12	0.086
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.19	0.13
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.28	0.19
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.11	0.076
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		0.098	0.057
Chrysene	mg/kg	1.2	2.7	88		0.16	0.12
Dibenzo(a,h)anthracene	mg/kg	0.2	0.42	0.09		0.054	0.05
Fluoranthene	mg/kg	2.7	4.1	3100		0.34	0.19
Fluorene	mg/kg	0.1	0.18	560		0.0055	0.0083
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.11	0.076
Naphthalene	mg/kg	0.04	0.2	1.8		<0.036	0.026
Phenanthrene	mg/kg	1.3	2.5	210		0.11	0.094
Pyrene	mg/kg	1.9	3.0	2300		0.23	0.14
2-Methylnaphthalene	mg/kg	---	0.14	---		<0.073	0.034
<b>Inorganic Analytical Parameters</b>							
Arsenic	mg/kg	---	13	11.3		4.5	4.9
Barium	mg/kg	---	110	1500		28	52
Cadmium	mg/kg	---	0.6	5.2		0.41	0.43
Chromium, total	mg/kg	---	16.2	21		7.5	10
Lead	mg/kg	---	36	107		60	83
Mercury	mg/kg	---	0.06	0.1		0.021	0.034
Selenium	mg/kg	---	0.48	1.3		<0.54	0.52
Silver	mg/kg	---	0.55	4.4		<0.27	<0.27
Antimony	mg/kg	---	4.0	5		0.29	0.31
Beryllium	mg/kg	---	0.59	22		0.28	0.58
Calcium	mg/kg	---	9,300	---		13000	30000
Cobalt	mg/kg	---	8.9	20		2.6	5.3
Copper	mg/kg	---	19.6	2900		9.4	16
Cyanide	mg/kg	---	0.51	---		<0.50	0.2
Iron	mg/kg	---	15,900	15000		7500	12000
Magnesium	mg/kg	---	4,820	325000		7700	16000
Manganese	mg/kg	---	636	630		90	220
Nickel	mg/kg	---	18	100		7	14
Potassium	mg/kg	---	1,268	---		620	1300
Sodium	mg/kg	---	130	---		140	310
Thallium	mg/kg	---	0.32	2.6		<0.54	<0.55
Vanadium	mg/kg	---	25.2	550		11	14
Zinc	mg/kg	---	95	5100		44	74
pH			6.25	9		8.2	8



**Detected Constituents to MACs-PTB 174-009;Work Order:037A**  
**Preliminary Site Investigation**  
**FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-31)**  
**Oak Forest/Markham, Cook County, IL**  
**Terracon Project No. 11177029M**  
**Page 2 of 2**

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-31-B01 (0-2)	2696V-31-B03 (0-2)
				CCDD	Sample Depth (feet)	(0-2)	(0-2)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/06/2017	11/06/2017
<b>Inorganic Analytical Parameters (SPLP)</b>							
Antimony,SPLP	mg/L	---	---	---		--	--
Arsenic,SPLP	mg/L	---	---	---		--	--
Barium,SPLP	mg/L	---	---	---		--	--
Beryllium,SPLP	mg/L	---	---	---		--	--
Cadmium,SPLP	mg/L	---	---	---		--	--
Calcium,SPLP	mg/L	---	---	---		--	--
Chromium,SPLP	mg/L	---	---	---		--	--
Cobalt,SPLP	mg/L	---	---	---		--	--
Copper,SPLP	mg/L	---	---	---		--	--
Iron,SPLP	mg/L	---	---	---		--	--
Lead,SPLP	mg/L	---	---	---		0.079	0.071
Magnesium,SPLP	mg/L	---	---	---		--	--
Manganese,SPLP	mg/L	---	---	---		0.14	0.18
Mercury,SPLP	mg/L	---	---	---		--	--
Nickel,SPLP	mg/L	---	---	---		--	--
Potassium,SPLP	mg/L	---	---	---		--	--
Selenium,SPLP	mg/L	---	---	---		--	--
Silver,SPLP	mg/L	---	---	---		--	--
Sodium,SPLP	mg/L	---	---	---		--	--
Thallium,SPLP	mg/L	---	---	---		--	--
Vanadium,SPLP	mg/L	---	---	---		--	--
Zinc,SPLP	mg/L	---	---	---		--	--
Cyanide,SPLP	mg/L	---	---	---		--	--
<b>Inorganic Analytical Parameters (TCLP)</b>							
Arsenic,TCLP	mg/L	---	---	---		<0.050	<0.050
Barium,TCLP	mg/L	---	---	---		0.27	0.55
Cadmium,TCLP	mg/L	---	---	---		0.0047	0.0027
Chromium,TCLP	mg/L	---	---	---		<0.025	<0.025
Lead,TCLP	mg/L	---	---	---		0.011	0.029
Mercury,TCLP	mg/L	---	---	---		<0.00020	<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050	<0.050
Silver,TCLP	mg/L	---	---	---		<0.025	<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060	<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040	<0.0040
Calcium,TCLP	mg/L	---	---	---		180	400
Cobalt,TCLP	mg/L	---	---	---		<0.025	0.012
Copper,TCLP	mg/L	---	---	---		0.024	0.028
Cyanide,TCLP	mg/L	---	---	---		----	----
Iron,TCLP	mg/L	---	---	---		<0.40	<0.40
Magnesium,TCLP	mg/L	---	---	---		89	60
Manganese,TCLP	mg/L	---	---	---		0.33	3.4
Nickel,TCLP	mg/L	---	---	---		<0.025	0.015
Potassium,TCLP	mg/L	---	---	---		1.2	5
Sodium,TCLP	mg/L	---	---	---		----	----
Thallium,TCLP	mg/L	---	---	---		<0.0020	<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025	<0.025
Zinc,TCLP	mg/L	---	---	---		0.093	0.19

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-136834-2

Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:

Terracon Consulting Eng & Scientists

135 Ambassador Drive

Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:

11/16/2017 5:48:00 PM

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*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Job ID: 500-136834-2**

**Laboratory: TestAmerica Chicago**

## Narrative

### Job Narrative 500-136834-2

#### Receipt

The samples were received on 11/6/2017 4:13 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.7° C and 4.0° C.

#### GC/MS VOA

Method(s) 8260B: The following analyte recovered outside control limits for the LCS/LCSD associated with 409863: Chloroethane. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Metals

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-409604 recovered above the upper control limit for Zinc. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: 2696V-31-B01 (0-2) (500-136834-4), 2696V-31-B02 (0-2) (500-136834-5), 2696V-31-B03 (0-2) (500-136834-6), and 2696V-31-B04 (0-2) (500-136834-7).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Client Sample ID: 2696V-31-B01 (0-2)**

**Lab Sample ID: 500-136834-4**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0096	J	0.036	0.0048	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.019	J	0.036	0.0060	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.12		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.19		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.28		0.036	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.11		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.098		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.16		0.036	0.0099	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.054		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.34		0.036	0.0067	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.0055	J	0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.11		0.036	0.0094	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.11		0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.23		0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.29	J	1.1	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.5		0.54	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	28		0.54	0.062	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.28		0.22	0.051	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.41	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	7.5		0.54	0.27	mg/Kg	1	☼	6010B	Total/NA
Cobalt	2.6		0.27	0.071	mg/Kg	1	☼	6010B	Total/NA
Copper	9.4		0.54	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	7500		11	5.6	mg/Kg	1	☼	6010B	Total/NA
Lead	60		0.27	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	7700		5.4	2.7	mg/Kg	1	☼	6010B	Total/NA
Calcium	13000	B	11	1.8	mg/Kg	1	☼	6010B	Total/NA
Manganese	90		0.54	0.079	mg/Kg	1	☼	6010B	Total/NA
Nickel	7.0		0.54	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	11		0.27	0.064	mg/Kg	1	☼	6010B	Total/NA
Zinc	44		1.1	0.48	mg/Kg	1	☼	6010B	Total/NA
Potassium	620		27	9.6	mg/Kg	1	☼	6010B	Total/NA
Sodium	140		54	8.0	mg/Kg	1	☼	6010B	Total/NA
Barium	0.27	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0047	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	180		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.024	J	0.025	0.010	mg/L	1		6010B	TCLP
Lead	0.011		0.0075	0.0075	mg/L	1		6010B	TCLP
Magnesium	89		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.33		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	1.2	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.093	J ^	0.50	0.020	mg/L	1		6010B	TCLP
Lead	0.079		0.0075	0.0075	mg/L	1		6010B	SPLP East
Manganese	0.14		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.021		0.019	0.0063	mg/Kg	1	☼	7471B	Total/NA
pH	8.2		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-31-B02 (0-2)**

**Lab Sample ID: 500-136834-5**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.013	J	0.037	0.0067	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Client Sample ID: 2696V-31-B02 (0-2) (Continued)**

**Lab Sample ID: 500-136834-5**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acenaphthylene	0.039		0.037	0.0049	mg/Kg	1		☼	8270D	Total/NA
Anthracene	0.039		0.037	0.0062	mg/Kg	1		☼	8270D	Total/NA
Benzo[a]anthracene	0.15		0.037	0.0050	mg/Kg	1		☼	8270D	Total/NA
Benzo[a]pyrene	0.25		0.037	0.0072	mg/Kg	1		☼	8270D	Total/NA
Benzo[b]fluoranthene	0.35		0.037	0.0081	mg/Kg	1		☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.13		0.037	0.012	mg/Kg	1		☼	8270D	Total/NA
Benzo[k]fluoranthene	0.097		0.037	0.011	mg/Kg	1		☼	8270D	Total/NA
Chrysene	0.19		0.037	0.010	mg/Kg	1		☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.065		0.037	0.0072	mg/Kg	1		☼	8270D	Total/NA
Fluoranthene	0.30		0.037	0.0069	mg/Kg	1		☼	8270D	Total/NA
Fluorene	0.0083	J	0.037	0.0053	mg/Kg	1		☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.13		0.037	0.0097	mg/Kg	1		☼	8270D	Total/NA
2-Methylnaphthalene	0.014	J	0.075	0.0069	mg/Kg	1		☼	8270D	Total/NA
Naphthalene	0.0094	J	0.037	0.0058	mg/Kg	1		☼	8270D	Total/NA
Phenanthrene	0.11		0.037	0.0052	mg/Kg	1		☼	8270D	Total/NA
Pyrene	0.23		0.037	0.0074	mg/Kg	1		☼	8270D	Total/NA
Antimony	0.22	J	1.1	0.22	mg/Kg	1		☼	6010B	Total/NA
Arsenic	5.9		0.55	0.19	mg/Kg	1		☼	6010B	Total/NA
Barium	46		0.55	0.063	mg/Kg	1		☼	6010B	Total/NA
Beryllium	0.41		0.22	0.052	mg/Kg	1		☼	6010B	Total/NA
Cadmium	0.44	B	0.11	0.020	mg/Kg	1		☼	6010B	Total/NA
Chromium	8.3		0.55	0.27	mg/Kg	1		☼	6010B	Total/NA
Cobalt	3.5		0.28	0.073	mg/Kg	1		☼	6010B	Total/NA
Copper	18		0.55	0.16	mg/Kg	1		☼	6010B	Total/NA
Iron	9500		11	5.8	mg/Kg	1		☼	6010B	Total/NA
Lead	130		0.28	0.13	mg/Kg	1		☼	6010B	Total/NA
Magnesium	24000		5.5	2.7	mg/Kg	1		☼	6010B	Total/NA
Calcium	63000	B	110	19	mg/Kg	10		☼	6010B	Total/NA
Manganese	170		0.55	0.080	mg/Kg	1		☼	6010B	Total/NA
Nickel	9.8		0.55	0.16	mg/Kg	1		☼	6010B	Total/NA
Selenium	0.40	J	0.55	0.33	mg/Kg	1		☼	6010B	Total/NA
Vanadium	11		0.28	0.065	mg/Kg	1		☼	6010B	Total/NA
Zinc	66		1.1	0.49	mg/Kg	1		☼	6010B	Total/NA
Potassium	870		28	9.8	mg/Kg	1		☼	6010B	Total/NA
Sodium	180		55	8.2	mg/Kg	1		☼	6010B	Total/NA
Barium	0.43	J	0.50	0.050	mg/L	1			6010B	TCLP
Cadmium	0.0038	J	0.0050	0.0020	mg/L	1			6010B	TCLP
Calcium	290		5.0	0.50	mg/L	1			6010B	TCLP
Copper	0.031		0.025	0.010	mg/L	1			6010B	TCLP
Lead	0.015		0.0075	0.0075	mg/L	1			6010B	TCLP
Magnesium	150		2.5	0.50	mg/L	1			6010B	TCLP
Manganese	0.32		0.025	0.010	mg/L	1			6010B	TCLP
Potassium	3.5		2.5	0.50	mg/L	1			6010B	TCLP
Zinc	0.12	J ^	0.50	0.020	mg/L	1			6010B	TCLP
Lead	0.26		0.0075	0.0075	mg/L	1			6010B	SPLP East
Manganese	0.37		0.025	0.010	mg/L	1			6010B	SPLP East
Mercury	0.026		0.019	0.0063	mg/Kg	1		☼	7471B	Total/NA
Cyanide, Total	0.52		0.51	0.18	mg/Kg	1		☼	9014	Total/NA
pH	8.3		0.20	0.20	SU	1			9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Client Sample ID: 2696V-31-B03 (0-2)**

**Lab Sample ID: 500-136834-6**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.11		0.030	0.013	mg/Kg	1	☼	8260B	Total/NA
Acenaphthylene	0.013	J	0.038	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.025	J	0.038	0.0064	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.086		0.038	0.0051	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.13		0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.19		0.038	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.076		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.057		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.12		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.050		0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.19		0.038	0.0071	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.0083	J	0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.076		0.038	0.0099	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.034	J	0.077	0.0070	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.026	J	0.038	0.0059	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.094		0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.14		0.038	0.0076	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.31	J	1.1	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.9		0.55	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	52		0.55	0.062	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.58		0.22	0.051	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.43	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	10		0.55	0.27	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.3		0.27	0.071	mg/Kg	1	☼	6010B	Total/NA
Copper	16		0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	12000		11	5.7	mg/Kg	1	☼	6010B	Total/NA
Lead	83		0.27	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	16000		5.5	2.7	mg/Kg	1	☼	6010B	Total/NA
Calcium	30000	B	11	1.8	mg/Kg	1	☼	6010B	Total/NA
Manganese	220		0.55	0.079	mg/Kg	1	☼	6010B	Total/NA
Nickel	14		0.55	0.16	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.52	J	0.55	0.32	mg/Kg	1	☼	6010B	Total/NA
Vanadium	14		0.27	0.064	mg/Kg	1	☼	6010B	Total/NA
Zinc	74		1.1	0.48	mg/Kg	1	☼	6010B	Total/NA
Potassium	1300		27	9.7	mg/Kg	1	☼	6010B	Total/NA
Sodium	310		55	8.1	mg/Kg	1	☼	6010B	Total/NA
Barium	0.55		0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0027	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	400		5.0	0.50	mg/L	1		6010B	TCLP
Cobalt	0.012	J	0.025	0.010	mg/L	1		6010B	TCLP
Copper	0.028		0.025	0.010	mg/L	1		6010B	TCLP
Lead	0.029		0.0075	0.0075	mg/L	1		6010B	TCLP
Magnesium	60		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	3.4		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.015	J	0.025	0.010	mg/L	1		6010B	TCLP
Potassium	5.0		2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.19	J ^	0.50	0.020	mg/L	1		6010B	TCLP
Lead	0.071		0.0075	0.0075	mg/L	1		6010B	SPLP East
Manganese	0.18		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.034		0.017	0.0057	mg/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

## Client Sample ID: 2696V-31-B03 (0-2) (Continued)

## Lab Sample ID: 500-136834-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	0.20	J	0.57	0.20	mg/Kg	1	☼	9014	Total/NA
pH	8.0		0.20	0.20	SU	1		9045D	Total/NA

## Client Sample ID: 2696V-31-B04 (0-2)

## Lab Sample ID: 500-136834-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.027	J	0.036	0.0065	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.017	J	0.036	0.0048	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.11		0.036	0.0060	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.43		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.55		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.83		0.036	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.25		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.27		0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Carbazole	0.11	J	0.18	0.090	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.51		0.036	0.0098	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.091		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	1.3		0.036	0.0067	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.035	J	0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.26		0.036	0.0094	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.0068	J	0.073	0.0066	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.0072	J	0.036	0.0056	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.60		0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.89		0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA
Arsenic	7.2		0.55	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	52		0.55	0.063	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.47		0.22	0.051	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.32	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	11		0.55	0.27	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.7		0.27	0.072	mg/Kg	1	☼	6010B	Total/NA
Copper	22		0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	13000		11	5.7	mg/Kg	1	☼	6010B	Total/NA
Lead	120		0.27	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	15000		5.5	2.7	mg/Kg	1	☼	6010B	Total/NA
Calcium	24000	B	11	1.9	mg/Kg	1	☼	6010B	Total/NA
Manganese	160		0.55	0.080	mg/Kg	1	☼	6010B	Total/NA
Nickel	15		0.55	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	15		0.27	0.065	mg/Kg	1	☼	6010B	Total/NA
Zinc	100		1.1	0.48	mg/Kg	1	☼	6010B	Total/NA
Potassium	1300		27	9.7	mg/Kg	1	☼	6010B	Total/NA
Sodium	170		55	8.1	mg/Kg	1	☼	6010B	Total/NA
Barium	0.49	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0038	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	320		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.030		0.025	0.010	mg/L	1		6010B	TCLP
Lead	0.016		0.0075	0.0075	mg/L	1		6010B	TCLP
Magnesium	130		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.64		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	5.8		2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.20	J ^	0.50	0.020	mg/L	1		6010B	TCLP

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

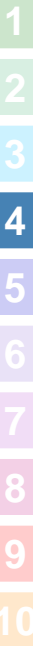
**Client Sample ID: 2696V-31-B04 (0-2) (Continued)**

**Lab Sample ID: 500-136834-7**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.21		0.0075	0.0075	mg/L	1		6010B	SPLP East
Manganese	0.38		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.031		0.019	0.0062	mg/Kg	1	*	7471B	Total/NA
pH	8.4		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago



# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136834-4	2696V-31-B01 (0-2)	Solid	11/06/17 11:00	11/06/17 16:13
500-136834-5	2696V-31-B02 (0-2)	Solid	11/06/17 11:15	11/06/17 16:13
500-136834-6	2696V-31-B03 (0-2)	Solid	11/06/17 11:30	11/06/17 16:13
500-136834-7	2696V-31-B04 (0-2)	Solid	11/06/17 11:45	11/06/17 16:13

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Client Sample ID: 2696V-31-B01 (0-2)**

**Lab Sample ID: 500-136834-4**

**Date Collected: 11/06/17 11:00**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 86.8**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.020		0.020	0.0087	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Benzene	<0.0020		0.0020	0.00051	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Bromodichloromethane	<0.0020		0.0020	0.00041	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Bromoform	<0.0020		0.0020	0.00058	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Bromomethane	<0.0050		0.0050	0.0019	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
2-Butanone (MEK)	<0.0050		0.0050	0.0022	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Carbon disulfide	<0.0050		0.0050	0.0010	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Carbon tetrachloride	<0.0020		0.0020	0.00058	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Chlorobenzene	<0.0020		0.0020	0.00074	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Chloroethane	<0.0050		0.0050	0.0015	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Chloroform	<0.0020		0.0020	0.00069	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Chloromethane	<0.0050		0.0050	0.0020	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
cis-1,2-Dichloroethene	<0.0020		0.0020	0.00056	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
cis-1,3-Dichloropropene	<0.0020		0.0020	0.00060	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Dibromochloromethane	<0.0020		0.0020	0.00065	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
1,1-Dichloroethane	<0.0020		0.0020	0.00069	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
1,2-Dichloroethane	<0.0050		0.0050	0.0016	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
1,1-Dichloroethene	<0.0020		0.0020	0.00069	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
1,2-Dichloropropane	<0.0020		0.0020	0.00052	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
1,3-Dichloropropene, Total	<0.0020		0.0020	0.00070	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Ethylbenzene	<0.0020		0.0020	0.00096	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
2-Hexanone	<0.0050		0.0050	0.0016	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Methylene Chloride	<0.0050		0.0050	0.0020	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
4-Methyl-2-pentanone (MIBK)	<0.0050		0.0050	0.0015	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Methyl tert-butyl ether	<0.0020		0.0020	0.00059	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Styrene	<0.0020		0.0020	0.00060	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
1,1,2,2-Tetrachloroethane	<0.0020		0.0020	0.00064	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Tetrachloroethene	<0.0020		0.0020	0.00068	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Toluene	<0.0020		0.0020	0.00051	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
trans-1,2-Dichloroethene	<0.0020		0.0020	0.00089	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
trans-1,3-Dichloropropene	<0.0020		0.0020	0.00070	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
1,1,1-Trichloroethane	<0.0020		0.0020	0.00067	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
1,1,2-Trichloroethane	<0.0020		0.0020	0.00086	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Trichloroethene	<0.0020		0.0020	0.00068	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Vinyl acetate	<0.0050		0.0050	0.0017	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Vinyl chloride	<0.0020		0.0020	0.00089	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1
Xylenes, Total	<0.0040		0.0040	0.00064	mg/Kg	☼	11/07/17 09:15	11/09/17 17:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		75 - 131	11/07/17 09:15	11/09/17 17:13	1
Dibromofluoromethane	105		75 - 126	11/07/17 09:15	11/09/17 17:13	1
1,2-Dichloroethane-d4 (Surr)	102		70 - 134	11/07/17 09:15	11/09/17 17:13	1
Toluene-d8 (Surr)	117		75 - 124	11/07/17 09:15	11/09/17 17:13	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.036		0.036	0.0065	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Acenaphthylene	0.0096	J	0.036	0.0048	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Anthracene	0.019	J	0.036	0.0060	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Benzo[a]anthracene	0.12		0.036	0.0049	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Client Sample ID: 2696V-31-B01 (0-2)**

**Lab Sample ID: 500-136834-4**

**Date Collected: 11/06/17 11:00**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 86.8**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.19</b>		0.036	0.0070	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
<b>Benzo[b]fluoranthene</b>	<b>0.28</b>		0.036	0.0078	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
<b>Benzo[g,h,i]perylene</b>	<b>0.11</b>		0.036	0.012	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
<b>Benzo[k]fluoranthene</b>	<b>0.098</b>		0.036	0.011	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.066	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Butyl benzyl phthalate	<0.18		0.18	0.069	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Carbazole	<0.18		0.18	0.090	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
4-Chloroaniline	<0.73		0.73	0.17	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
<b>Chrysene</b>	<b>0.16</b>		0.036	0.0099	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
<b>Dibenz(a,h)anthracene</b>	<b>0.054</b>		0.036	0.0070	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
1,2-Dichlorobenzene	<0.18		0.18	0.043	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
2,4-Dichlorophenol	<0.36		0.36	0.086	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Di-n-butyl phthalate	<0.18		0.18	0.055	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
4,6-Dinitro-2-methylphenol	<0.73		0.73	0.29	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
2,4-Dinitrophenol	<0.73		0.73	0.64	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
2,6-Dinitrotoluene	<0.18		0.18	0.071	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
<b>Fluoranthene</b>	<b>0.34</b>		0.036	0.0067	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
<b>Fluorene</b>	<b>0.0055 J</b>		0.036	0.0051	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Hexachlorobenzene	<0.073		0.073	0.0084	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Hexachlorocyclopentadiene	<0.73		0.73	0.21	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.11</b>		0.036	0.0094	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
2-Methylnaphthalene	<0.073		0.073	0.0066	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Nitrobenzene	<0.036		0.036	0.0090	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
2-Nitrophenol	<0.36		0.36	0.085	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Client Sample ID: 2696V-31-B01 (0-2)**

**Lab Sample ID: 500-136834-4**

Date Collected: 11/06/17 11:00

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 86.8

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.73		0.73	0.34	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
N-Nitrosodi-n-propylamine	<0.073		0.073	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Pentachlorophenol	<0.73		0.73	0.58	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
<b>Phenanthrene</b>	<b>0.11</b>		0.036	0.0050	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
Phenol	<0.18		0.18	0.080	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
<b>Pyrene</b>	<b>0.23</b>		0.036	0.0072	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
2,4,5-Trichlorophenol	<0.36		0.36	0.082	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	11/13/17 07:19	11/15/17 16:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	92		44 - 121	11/13/17 07:19	11/15/17 16:32	1
2-Fluorophenol	109		46 - 133	11/13/17 07:19	11/15/17 16:32	1
Nitrobenzene-d5	96		41 - 120	11/13/17 07:19	11/15/17 16:32	1
Phenol-d5	106		46 - 125	11/13/17 07:19	11/15/17 16:32	1
Terphenyl-d14	95		35 - 160	11/13/17 07:19	11/15/17 16:32	1
2,4,6-Tribromophenol	94		25 - 139	11/13/17 07:19	11/15/17 16:32	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.29</b>	<b>J</b>	1.1	0.21	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
<b>Arsenic</b>	<b>4.5</b>		0.54	0.19	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
<b>Barium</b>	<b>28</b>		0.54	0.062	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
<b>Beryllium</b>	<b>0.28</b>		0.22	0.051	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
<b>Cadmium</b>	<b>0.41</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
<b>Chromium</b>	<b>7.5</b>		0.54	0.27	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
<b>Cobalt</b>	<b>2.6</b>		0.27	0.071	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
<b>Copper</b>	<b>9.4</b>		0.54	0.15	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
<b>Iron</b>	<b>7500</b>		11	5.6	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
<b>Lead</b>	<b>60</b>		0.27	0.13	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
<b>Magnesium</b>	<b>7700</b>		5.4	2.7	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
<b>Calcium</b>	<b>13000</b>	<b>B</b>	11	1.8	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
<b>Manganese</b>	<b>90</b>		0.54	0.079	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
<b>Nickel</b>	<b>7.0</b>		0.54	0.16	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
Selenium	<0.54		0.54	0.32	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
Silver	<0.27		0.27	0.070	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
Thallium	<0.54		0.54	0.27	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
<b>Vanadium</b>	<b>11</b>		0.27	0.064	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
<b>Zinc</b>	<b>44</b>		1.1	0.48	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
<b>Potassium</b>	<b>620</b>		27	9.6	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1
<b>Sodium</b>	<b>140</b>		54	8.0	mg/Kg	☼	11/08/17 07:33	11/09/17 04:10	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 16:44	11/11/17 19:02	1
<b>Barium</b>	<b>0.27</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 16:44	11/11/17 19:02	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 16:44	11/11/17 19:02	1
<b>Cadmium</b>	<b>0.0047</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 16:44	11/11/17 19:02	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Client Sample ID: 2696V-31-B01 (0-2)**

**Lab Sample ID: 500-136834-4**

**Date Collected: 11/06/17 11:00**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 86.8**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>180</b>		5.0	0.50	mg/L		11/10/17 16:44	11/11/17 19:02	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:02	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:02	1
<b>Copper</b>	<b>0.024</b>	<b>J</b>	0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:02	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 16:44	11/11/17 19:02	1
<b>Lead</b>	<b>0.011</b>		0.0075	0.0075	mg/L		11/10/17 16:44	11/11/17 19:02	1
<b>Magnesium</b>	<b>89</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:02	1
<b>Manganese</b>	<b>0.33</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:02	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:02	1
<b>Potassium</b>	<b>1.2</b>	<b>J</b>	2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:02	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 16:44	11/11/17 19:02	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:02	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:02	1
<b>Zinc</b>	<b>0.093</b>	<b>J ^</b>	0.50	0.020	mg/L		11/10/17 16:44	11/11/17 19:02	1

**Method: 6010B - SPLP Metals - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lead</b>	<b>0.079</b>		0.0075	0.0075	mg/L		11/09/17 16:43	11/11/17 03:14	1
<b>Manganese</b>	<b>0.14</b>		0.025	0.010	mg/L		11/09/17 16:43	11/11/17 03:14	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 16:44	11/13/17 11:45	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 16:44	11/13/17 11:45	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/10/17 15:28	11/13/17 10:25	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.021</b>		0.019	0.0063	mg/Kg	☼	11/08/17 16:15	11/09/17 10:29	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.50		0.50	0.17	mg/Kg	☼	11/13/17 11:30	11/13/17 17:18	1
<b>pH</b>	<b>8.2</b>		0.20	0.20	SU			11/14/17 17:36	1



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Client Sample ID: 2696V-31-B02 (0-2)**

**Lab Sample ID: 500-136834-5**

**Date Collected: 11/06/17 11:15**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 87.5**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.023		0.023	0.010	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Benzene	<0.0023		0.0023	0.00059	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Bromodichloromethane	<0.0023		0.0023	0.00047	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Bromoform	<0.0023		0.0023	0.00068	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Bromomethane	<0.0058		0.0058	0.0022	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
2-Butanone (MEK)	<0.0058		0.0058	0.0026	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Carbon disulfide	<0.0058		0.0058	0.0012	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Carbon tetrachloride	<0.0023		0.0023	0.00068	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Chlorobenzene	<0.0023		0.0023	0.00086	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Chloroethane	<0.0058		0.0058	0.0017	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Chloroform	<0.0023		0.0023	0.00081	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Chloromethane	<0.0058		0.0058	0.0023	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
cis-1,2-Dichloroethene	<0.0023		0.0023	0.00065	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
cis-1,3-Dichloropropene	<0.0023		0.0023	0.00070	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Dibromochloromethane	<0.0023		0.0023	0.00076	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
1,1-Dichloroethane	<0.0023		0.0023	0.00080	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
1,2-Dichloroethane	<0.0058		0.0058	0.0018	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
1,1-Dichloroethene	<0.0023		0.0023	0.00080	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
1,2-Dichloropropane	<0.0023		0.0023	0.00060	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
1,3-Dichloropropene, Total	<0.0023		0.0023	0.00082	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Ethylbenzene	<0.0023		0.0023	0.0011	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
2-Hexanone	<0.0058		0.0058	0.0018	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Methylene Chloride	<0.0058		0.0058	0.0023	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
4-Methyl-2-pentanone (MIBK)	<0.0058		0.0058	0.0017	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Methyl tert-butyl ether	<0.0023		0.0023	0.00068	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Styrene	<0.0023		0.0023	0.00070	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
1,1,2,2-Tetrachloroethane	<0.0023		0.0023	0.00074	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Tetrachloroethene	<0.0023		0.0023	0.00079	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Toluene	<0.0023		0.0023	0.00059	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
trans-1,2-Dichloroethene	<0.0023		0.0023	0.0010	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
trans-1,3-Dichloropropene	<0.0023		0.0023	0.00082	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
1,1,1-Trichloroethane	<0.0023		0.0023	0.00078	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
1,1,2-Trichloroethane	<0.0023		0.0023	0.0010	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Trichloroethene	<0.0023		0.0023	0.00079	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Vinyl acetate	<0.0058		0.0058	0.0020	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Vinyl chloride	<0.0023		0.0023	0.0010	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1
Xylenes, Total	<0.0047		0.0047	0.00075	mg/Kg	☼	11/07/17 09:35	11/09/17 17:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		75 - 131	11/07/17 09:35	11/09/17 17:38	1
Dibromofluoromethane	93		75 - 126	11/07/17 09:35	11/09/17 17:38	1
1,2-Dichloroethane-d4 (Surr)	103		70 - 134	11/07/17 09:35	11/09/17 17:38	1
Toluene-d8 (Surr)	97		75 - 124	11/07/17 09:35	11/09/17 17:38	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.013	J	0.037	0.0067	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Acenaphthylene	0.039		0.037	0.0049	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Anthracene	0.039		0.037	0.0062	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Benzo[a]anthracene	0.15		0.037	0.0050	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Client Sample ID: 2696V-31-B02 (0-2)**

**Lab Sample ID: 500-136834-5**

**Date Collected: 11/06/17 11:15**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 87.5**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.25</b>		0.037	0.0072	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
<b>Benzo[b]fluoranthene</b>	<b>0.35</b>		0.037	0.0081	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
<b>Benzo[g,h,i]perylene</b>	<b>0.13</b>		0.037	0.012	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
<b>Benzo[k]fluoranthene</b>	<b>0.097</b>		0.037	0.011	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Carbazole	<0.19		0.19	0.093	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
4-Chloroaniline	<0.75		0.75	0.18	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
<b>Chrysene</b>	<b>0.19</b>		0.037	0.010	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
<b>Dibenz(a,h)anthracene</b>	<b>0.065</b>		0.037	0.0072	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
2,4-Dinitrophenol	<0.75		0.75	0.66	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
2,6-Dinitrotoluene	<0.19		0.19	0.073	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
<b>Fluoranthene</b>	<b>0.30</b>		0.037	0.0069	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
<b>Fluorene</b>	<b>0.0083 J</b>		0.037	0.0053	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Hexachlorobenzene	<0.075		0.075	0.0087	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Hexachlorocyclopentadiene	<0.75		0.75	0.21	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.13</b>		0.037	0.0097	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
<b>2-Methylnaphthalene</b>	<b>0.014 J</b>		0.075	0.0069	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
<b>Naphthalene</b>	<b>0.0094 J</b>		0.037	0.0058	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Client Sample ID: 2696V-31-B02 (0-2)**

**Lab Sample ID: 500-136834-5**

Date Collected: 11/06/17 11:15

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 87.5

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.75		0.75	0.36	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.046	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Pentachlorophenol	<0.75		0.75	0.60	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
<b>Phenanthrene</b>	<b>0.11</b>		0.037	0.0052	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
Phenol	<0.19		0.19	0.083	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
<b>Pyrene</b>	<b>0.23</b>		0.037	0.0074	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/13/17 07:19	11/15/17 17:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	84		44 - 121	11/13/17 07:19	11/15/17 17:00	1
2-Fluorophenol	98		46 - 133	11/13/17 07:19	11/15/17 17:00	1
Nitrobenzene-d5	85		41 - 120	11/13/17 07:19	11/15/17 17:00	1
Phenol-d5	93		46 - 125	11/13/17 07:19	11/15/17 17:00	1
Terphenyl-d14	91		35 - 160	11/13/17 07:19	11/15/17 17:00	1
2,4,6-Tribromophenol	93		25 - 139	11/13/17 07:19	11/15/17 17:00	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.22</b>	<b>J</b>	1.1	0.22	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1
<b>Arsenic</b>	<b>5.9</b>		0.55	0.19	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1
<b>Barium</b>	<b>46</b>		0.55	0.063	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1
<b>Beryllium</b>	<b>0.41</b>		0.22	0.052	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1
<b>Cadmium</b>	<b>0.44</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1
<b>Chromium</b>	<b>8.3</b>		0.55	0.27	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1
<b>Cobalt</b>	<b>3.5</b>		0.28	0.073	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1
<b>Copper</b>	<b>18</b>		0.55	0.16	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1
<b>Iron</b>	<b>9500</b>		11	5.8	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1
<b>Lead</b>	<b>130</b>		0.28	0.13	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1
<b>Magnesium</b>	<b>24000</b>		5.5	2.7	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1
<b>Calcium</b>	<b>63000</b>	<b>B</b>	110	19	mg/Kg	☼	11/08/17 07:33	11/09/17 18:12	10
<b>Manganese</b>	<b>170</b>		0.55	0.080	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1
<b>Nickel</b>	<b>9.8</b>		0.55	0.16	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1
<b>Selenium</b>	<b>0.40</b>	<b>J</b>	0.55	0.33	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1
Silver	<0.28		0.28	0.071	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1
Thallium	<0.55		0.55	0.28	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1
<b>Vanadium</b>	<b>11</b>		0.28	0.065	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1
<b>Zinc</b>	<b>66</b>		1.1	0.49	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1
<b>Potassium</b>	<b>870</b>		28	9.8	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1
<b>Sodium</b>	<b>180</b>		55	8.2	mg/Kg	☼	11/08/17 07:33	11/09/17 04:14	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 16:44	11/11/17 19:06	1
<b>Barium</b>	<b>0.43</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 16:44	11/11/17 19:06	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 16:44	11/11/17 19:06	1
<b>Cadmium</b>	<b>0.0038</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 16:44	11/11/17 19:06	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Client Sample ID: 2696V-31-B02 (0-2)**

**Lab Sample ID: 500-136834-5**

Date Collected: 11/06/17 11:15

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 87.5

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>290</b>		5.0	0.50	mg/L		11/10/17 16:44	11/11/17 19:06	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:06	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:06	1
<b>Copper</b>	<b>0.031</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:06	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 16:44	11/11/17 19:06	1
<b>Lead</b>	<b>0.015</b>		0.0075	0.0075	mg/L		11/10/17 16:44	11/11/17 19:06	1
<b>Magnesium</b>	<b>150</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:06	1
<b>Manganese</b>	<b>0.32</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:06	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:06	1
<b>Potassium</b>	<b>3.5</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:06	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 16:44	11/11/17 19:06	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:06	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:06	1
<b>Zinc</b>	<b>0.12</b>	J ^	0.50	0.020	mg/L		11/10/17 16:44	11/11/17 19:06	1

**Method: 6010B - SPLP Metals - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lead</b>	<b>0.26</b>		0.0075	0.0075	mg/L		11/09/17 16:43	11/11/17 03:18	1
<b>Manganese</b>	<b>0.37</b>		0.025	0.010	mg/L		11/09/17 16:43	11/11/17 03:18	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 16:44	11/13/17 11:48	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 16:44	11/13/17 11:48	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/10/17 15:28	11/13/17 10:27	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<b>0.026</b>		0.019	0.0063	mg/Kg	☼	11/08/17 16:15	11/09/17 10:32	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cyanide, Total</b>	<b>0.52</b>		0.51	0.18	mg/Kg	☼	11/13/17 11:30	11/13/17 17:18	1
<b>pH</b>	<b>8.3</b>		0.20	0.20	SU			11/14/17 17:36	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Client Sample ID: 2696V-31-B03 (0-2)**

**Lab Sample ID: 500-136834-6**

**Date Collected: 11/06/17 11:30**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 84.1**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.11</b>		0.030	0.013	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Benzene	<0.0030		0.0030	0.00077	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Bromodichloromethane	<0.0030		0.0030	0.00062	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Bromoform	<0.0030		0.0030	0.00088	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Bromomethane	<0.0076		0.0076	0.0029	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
2-Butanone (MEK)	<0.0076		0.0076	0.0034	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Carbon disulfide	<0.0076		0.0076	0.0016	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Carbon tetrachloride	<0.0030		0.0030	0.00088	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Chlorobenzene	<0.0030		0.0030	0.0011	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Chloroethane	<0.0076	*	0.0076	0.0022	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Chloroform	<0.0030		0.0030	0.0010	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Chloromethane	<0.0076		0.0076	0.0030	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
cis-1,2-Dichloroethene	<0.0030		0.0030	0.00084	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
cis-1,3-Dichloropropene	<0.0030		0.0030	0.00091	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Dibromochloromethane	<0.0030		0.0030	0.00099	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
1,1-Dichloroethane	<0.0030		0.0030	0.0010	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
1,2-Dichloroethane	<0.0076		0.0076	0.0024	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
1,1-Dichloroethene	<0.0030		0.0030	0.0010	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
1,2-Dichloropropane	<0.0030		0.0030	0.00078	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
1,3-Dichloropropane, Total	<0.0030		0.0030	0.0011	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Ethylbenzene	<0.0030		0.0030	0.0014	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
2-Hexanone	<0.0076		0.0076	0.0024	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Methylene Chloride	<0.0076		0.0076	0.0030	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
4-Methyl-2-pentanone (MIBK)	<0.0076		0.0076	0.0022	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Methyl tert-butyl ether	<0.0030		0.0030	0.00089	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Styrene	<0.0030		0.0030	0.00091	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
1,1,2,2-Tetrachloroethane	<0.0030		0.0030	0.00097	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Tetrachloroethene	<0.0030		0.0030	0.0010	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Toluene	<0.0030		0.0030	0.00076	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
trans-1,2-Dichloroethene	<0.0030		0.0030	0.0013	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
trans-1,3-Dichloropropene	<0.0030		0.0030	0.0011	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
1,1,1-Trichloroethane	<0.0030		0.0030	0.0010	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
1,1,2-Trichloroethane	<0.0030		0.0030	0.0013	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Trichloroethene	<0.0030		0.0030	0.0010	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Vinyl acetate	<0.0076		0.0076	0.0026	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Vinyl chloride	<0.0030		0.0030	0.0013	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1
Xylenes, Total	<0.0060		0.0060	0.00097	mg/Kg	☼	11/07/17 07:20	11/14/17 14:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		75 - 131	11/07/17 07:20	11/14/17 14:46	1
Dibromofluoromethane	101		75 - 126	11/07/17 07:20	11/14/17 14:46	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 134	11/07/17 07:20	11/14/17 14:46	1
Toluene-d8 (Surr)	98		75 - 124	11/07/17 07:20	11/14/17 14:46	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.038		0.038	0.0068	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
<b>Acenaphthylene</b>	<b>0.013</b>	<b>J</b>	0.038	0.0050	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
<b>Anthracene</b>	<b>0.025</b>	<b>J</b>	0.038	0.0064	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
<b>Benzo[a]anthracene</b>	<b>0.086</b>		0.038	0.0051	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Client Sample ID: 2696V-31-B03 (0-2)**

**Lab Sample ID: 500-136834-6**

**Date Collected: 11/06/17 11:30**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 84.1**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.13</b>		0.038	0.0074	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
<b>Benzo[b]fluoranthene</b>	<b>0.19</b>		0.038	0.0082	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
<b>Benzo[g,h,i]perylene</b>	<b>0.076</b>		0.038	0.012	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
<b>Benzo[k]fluoranthene</b>	<b>0.057</b>		0.038	0.011	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.070	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
Carbazole	<0.19		0.19	0.095	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
4-Chloroaniline	<0.77		0.77	0.18	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
2-Chlorophenol	<0.19		0.19	0.065	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
<b>Chrysene</b>	<b>0.12</b>		0.038	0.010	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
<b>Dibenz(a,h)anthracene</b>	<b>0.050</b>		0.038	0.0074	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
2,4-Dichlorophenol	<0.38		0.38	0.090	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
2,4-Dimethylphenol	<0.38		0.38	0.14	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
4,6-Dinitro-2-methylphenol	<0.77		0.77	0.31	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
2,4-Dinitrophenol	<0.77		0.77	0.67	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
2,6-Dinitrotoluene	<0.19		0.19	0.075	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
<b>Fluoranthene</b>	<b>0.19</b>		0.038	0.0071	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
<b>Fluorene</b>	<b>0.0083 J</b>		0.038	0.0053	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
Hexachlorobenzene	<0.077		0.077	0.0088	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
Hexachlorocyclopentadiene	<0.77		0.77	0.22	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.076</b>		0.038	0.0099	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
<b>2-Methylnaphthalene</b>	<b>0.034 J</b>		0.077	0.0070	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
<b>Naphthalene</b>	<b>0.026 J</b>		0.038	0.0059	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
Nitrobenzene	<0.038		0.038	0.0095	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
2-Nitrophenol	<0.38		0.38	0.090	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Client Sample ID: 2696V-31-B03 (0-2)**

**Lab Sample ID: 500-136834-6**

Date Collected: 11/06/17 11:30

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 84.1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.77		0.77	0.36	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
N-Nitrosodi-n-propylamine	<0.077		0.077	0.047	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
Pentachlorophenol	<0.77		0.77	0.61	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
<b>Phenanthrene</b>	<b>0.094</b>		0.038	0.0053	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
Phenol	<0.19		0.19	0.085	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
<b>Pyrene</b>	<b>0.14</b>		0.038	0.0076	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
2,4,5-Trichlorophenol	<0.38		0.38	0.087	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	11/13/17 07:19	11/15/17 17:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	85		44 - 121	11/13/17 07:19	11/15/17 17:28	1
2-Fluorophenol	108		46 - 133	11/13/17 07:19	11/15/17 17:28	1
Nitrobenzene-d5	87		41 - 120	11/13/17 07:19	11/15/17 17:28	1
Phenol-d5	104		46 - 125	11/13/17 07:19	11/15/17 17:28	1
Terphenyl-d14	98		35 - 160	11/13/17 07:19	11/15/17 17:28	1
2,4,6-Tribromophenol	87		25 - 139	11/13/17 07:19	11/15/17 17:28	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.31</b>	<b>J</b>	1.1	0.21	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
<b>Arsenic</b>	<b>4.9</b>		0.55	0.19	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
<b>Barium</b>	<b>52</b>		0.55	0.062	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
<b>Beryllium</b>	<b>0.58</b>		0.22	0.051	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
<b>Cadmium</b>	<b>0.43</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
<b>Chromium</b>	<b>10</b>		0.55	0.27	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
<b>Cobalt</b>	<b>5.3</b>		0.27	0.071	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
<b>Copper</b>	<b>16</b>		0.55	0.15	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
<b>Iron</b>	<b>12000</b>		11	5.7	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
<b>Lead</b>	<b>83</b>		0.27	0.13	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
<b>Magnesium</b>	<b>16000</b>		5.5	2.7	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
<b>Calcium</b>	<b>30000</b>	<b>B</b>	11	1.8	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
<b>Manganese</b>	<b>220</b>		0.55	0.079	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
<b>Nickel</b>	<b>14</b>		0.55	0.16	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
<b>Selenium</b>	<b>0.52</b>	<b>J</b>	0.55	0.32	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
Silver	<0.27		0.27	0.070	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
<b>Vanadium</b>	<b>14</b>		0.27	0.064	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
<b>Zinc</b>	<b>74</b>		1.1	0.48	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
<b>Potassium</b>	<b>1300</b>		27	9.7	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1
<b>Sodium</b>	<b>310</b>		55	8.1	mg/Kg	☼	11/08/17 07:33	11/09/17 04:18	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 16:44	11/11/17 19:10	1
<b>Barium</b>	<b>0.55</b>		0.50	0.050	mg/L		11/10/17 16:44	11/11/17 19:10	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 16:44	11/11/17 19:10	1
<b>Cadmium</b>	<b>0.0027</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 16:44	11/11/17 19:10	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Client Sample ID: 2696V-31-B03 (0-2)**

**Lab Sample ID: 500-136834-6**

Date Collected: 11/06/17 11:30

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 84.1

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	400		5.0	0.50	mg/L		11/10/17 16:44	11/11/17 19:10	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:10	1
Cobalt	0.012	J	0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:10	1
Copper	0.028		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:10	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 16:44	11/11/17 19:10	1
Lead	0.029		0.0075	0.0075	mg/L		11/10/17 16:44	11/11/17 19:10	1
Magnesium	60		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:10	1
Manganese	3.4		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:10	1
Nickel	0.015	J	0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:10	1
Potassium	5.0		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:10	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 16:44	11/11/17 19:10	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:10	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:10	1
Zinc	0.19	J ^	0.50	0.020	mg/L		11/10/17 16:44	11/11/17 19:10	1

**Method: 6010B - SPLP Metals - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.071		0.0075	0.0075	mg/L		11/09/17 16:43	11/11/17 03:22	1
Manganese	0.18		0.025	0.010	mg/L		11/09/17 16:43	11/11/17 03:22	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 16:44	11/13/17 11:51	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 16:44	11/13/17 11:51	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/10/17 15:28	11/13/17 10:29	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.034		0.017	0.0057	mg/Kg	☼	11/08/17 16:15	11/09/17 10:34	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.20	J	0.57	0.20	mg/Kg	☼	11/13/17 11:30	11/13/17 17:19	1
pH	8.0		0.20	0.20	SU			11/14/17 17:36	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Client Sample ID: 2696V-31-B04 (0-2)**

**Lab Sample ID: 500-136834-7**

**Date Collected: 11/06/17 11:45**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 88.3**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.028		0.028	0.012	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Benzene	<0.0028		0.0028	0.00071	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Bromodichloromethane	<0.0028		0.0028	0.00057	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Bromoform	<0.0028		0.0028	0.00081	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Bromomethane	<0.0069		0.0069	0.0026	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
2-Butanone (MEK)	<0.0069		0.0069	0.0031	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Carbon disulfide	<0.0069		0.0069	0.0014	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Carbon tetrachloride	<0.0028		0.0028	0.00081	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Chlorobenzene	<0.0028		0.0028	0.0010	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Chloroethane	<0.0069		0.0069	0.0021	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Chloroform	<0.0028		0.0028	0.00096	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Chloromethane	<0.0069		0.0069	0.0028	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
cis-1,2-Dichloroethene	<0.0028		0.0028	0.00078	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
cis-1,3-Dichloropropene	<0.0028		0.0028	0.00084	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Dibromochloromethane	<0.0028		0.0028	0.00091	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
1,1-Dichloroethane	<0.0028		0.0028	0.00095	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
1,2-Dichloroethane	<0.0069		0.0069	0.0022	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
1,1-Dichloroethene	<0.0028		0.0028	0.00096	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
1,2-Dichloropropane	<0.0028		0.0028	0.00072	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
1,3-Dichloropropane, Total	<0.0028		0.0028	0.00097	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Ethylbenzene	<0.0028		0.0028	0.0013	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
2-Hexanone	<0.0069		0.0069	0.0022	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Methylene Chloride	<0.0069		0.0069	0.0027	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
4-Methyl-2-pentanone (MIBK)	<0.0069		0.0069	0.0021	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Methyl tert-butyl ether	<0.0028		0.0028	0.00082	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Styrene	<0.0028		0.0028	0.00084	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
1,1,2,2-Tetrachloroethane	<0.0028		0.0028	0.00089	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Tetrachloroethene	<0.0028		0.0028	0.00095	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Toluene	<0.0028		0.0028	0.00070	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
trans-1,2-Dichloroethene	<0.0028		0.0028	0.0012	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
trans-1,3-Dichloropropene	<0.0028		0.0028	0.00097	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
1,1,1-Trichloroethane	<0.0028		0.0028	0.00093	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
1,1,2-Trichloroethane	<0.0028		0.0028	0.0012	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Trichloroethene	<0.0028		0.0028	0.00094	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Vinyl acetate	<0.0069		0.0069	0.0024	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Vinyl chloride	<0.0028		0.0028	0.0012	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1
Xylenes, Total	<0.0056		0.0056	0.00089	mg/Kg	☼	11/07/17 11:15	11/09/17 18:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		75 - 131	11/07/17 11:15	11/09/17 18:28	1
Dibromofluoromethane	125		75 - 126	11/07/17 11:15	11/09/17 18:28	1
1,2-Dichloroethane-d4 (Surr)	122		70 - 134	11/07/17 11:15	11/09/17 18:28	1
Toluene-d8 (Surr)	97		75 - 124	11/07/17 11:15	11/09/17 18:28	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.027	J	0.036	0.0065	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Acenaphthylene	0.017	J	0.036	0.0048	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Anthracene	0.11		0.036	0.0060	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Benzo[a]anthracene	0.43		0.036	0.0049	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Client Sample ID: 2696V-31-B04 (0-2)**

**Lab Sample ID: 500-136834-7**

**Date Collected: 11/06/17 11:45**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 88.3**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.55</b>		0.036	0.0070	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
<b>Benzo[b]fluoranthene</b>	<b>0.83</b>		0.036	0.0078	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
<b>Benzo[g,h,i]perylene</b>	<b>0.25</b>		0.036	0.012	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
<b>Benzo[k]fluoranthene</b>	<b>0.27</b>		0.036	0.011	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.066	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Butyl benzyl phthalate	<0.18		0.18	0.069	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
<b>Carbazole</b>	<b>0.11</b>	<b>J</b>	0.18	0.090	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
4-Chloroaniline	<0.73		0.73	0.17	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
<b>Chrysene</b>	<b>0.51</b>		0.036	0.0098	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
<b>Dibenz(a,h)anthracene</b>	<b>0.091</b>		0.036	0.0070	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
1,2-Dichlorobenzene	<0.18		0.18	0.043	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
2,4-Dichlorophenol	<0.36		0.36	0.086	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Di-n-butyl phthalate	<0.18		0.18	0.055	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
4,6-Dinitro-2-methylphenol	<0.73		0.73	0.29	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
2,4-Dinitrophenol	<0.73		0.73	0.64	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
2,6-Dinitrotoluene	<0.18		0.18	0.071	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
<b>Fluoranthene</b>	<b>1.3</b>		0.036	0.0067	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
<b>Fluorene</b>	<b>0.035</b>	<b>J</b>	0.036	0.0051	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Hexachlorobenzene	<0.073		0.073	0.0084	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Hexachlorocyclopentadiene	<0.73		0.73	0.21	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.26</b>		0.036	0.0094	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
<b>2-Methylnaphthalene</b>	<b>0.0068</b>	<b>J</b>	0.073	0.0066	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
<b>Naphthalene</b>	<b>0.0072</b>	<b>J</b>	0.036	0.0056	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Nitrobenzene	<0.036		0.036	0.0090	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
2-Nitrophenol	<0.36		0.36	0.085	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Client Sample ID: 2696V-31-B04 (0-2)**

**Lab Sample ID: 500-136834-7**

Date Collected: 11/06/17 11:45

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 88.3

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.73		0.73	0.34	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
N-Nitrosodi-n-propylamine	<0.073		0.073	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Pentachlorophenol	<0.73		0.73	0.58	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
<b>Phenanthrene</b>	<b>0.60</b>		0.036	0.0050	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
Phenol	<0.18		0.18	0.080	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
<b>Pyrene</b>	<b>0.89</b>		0.036	0.0072	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
2,4,5-Trichlorophenol	<0.36		0.36	0.082	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	11/13/17 07:19	11/15/17 17:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	85		44 - 121	11/13/17 07:19	11/15/17 17:55	1
2-Fluorophenol	100		46 - 133	11/13/17 07:19	11/15/17 17:55	1
Nitrobenzene-d5	90		41 - 120	11/13/17 07:19	11/15/17 17:55	1
Phenol-d5	86		46 - 125	11/13/17 07:19	11/15/17 17:55	1
Terphenyl-d14	92		35 - 160	11/13/17 07:19	11/15/17 17:55	1
2,4,6-Tribromophenol	77		25 - 139	11/13/17 07:19	11/15/17 17:55	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.21	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
<b>Arsenic</b>	<b>7.2</b>		0.55	0.19	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
<b>Barium</b>	<b>52</b>		0.55	0.063	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
<b>Beryllium</b>	<b>0.47</b>		0.22	0.051	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
<b>Cadmium</b>	<b>0.32</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
<b>Chromium</b>	<b>11</b>		0.55	0.27	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
<b>Cobalt</b>	<b>5.7</b>		0.27	0.072	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
<b>Copper</b>	<b>22</b>		0.55	0.15	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
<b>Iron</b>	<b>13000</b>		11	5.7	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
<b>Lead</b>	<b>120</b>		0.27	0.13	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
<b>Magnesium</b>	<b>15000</b>		5.5	2.7	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
<b>Calcium</b>	<b>24000</b>	<b>B</b>	11	1.9	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
<b>Manganese</b>	<b>160</b>		0.55	0.080	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
<b>Nickel</b>	<b>15</b>		0.55	0.16	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
Selenium	<0.55		0.55	0.32	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
Silver	<0.27		0.27	0.071	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
Thallium	<0.55		0.55	0.27	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
<b>Vanadium</b>	<b>15</b>		0.27	0.065	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
<b>Zinc</b>	<b>100</b>		1.1	0.48	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
<b>Potassium</b>	<b>1300</b>		27	9.7	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1
<b>Sodium</b>	<b>170</b>		55	8.1	mg/Kg	☼	11/08/17 07:33	11/09/17 04:22	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 16:44	11/11/17 19:14	1
<b>Barium</b>	<b>0.49</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 16:44	11/11/17 19:14	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 16:44	11/11/17 19:14	1
<b>Cadmium</b>	<b>0.0038</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 16:44	11/11/17 19:14	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

**Client Sample ID: 2696V-31-B04 (0-2)**

**Lab Sample ID: 500-136834-7**

Date Collected: 11/06/17 11:45

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 88.3

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>320</b>		5.0	0.50	mg/L		11/10/17 16:44	11/11/17 19:14	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:14	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:14	1
<b>Copper</b>	<b>0.030</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:14	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 16:44	11/11/17 19:14	1
<b>Lead</b>	<b>0.016</b>		0.0075	0.0075	mg/L		11/10/17 16:44	11/11/17 19:14	1
<b>Magnesium</b>	<b>130</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:14	1
<b>Manganese</b>	<b>0.64</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:14	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:14	1
<b>Potassium</b>	<b>5.8</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:14	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 16:44	11/11/17 19:14	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:14	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:14	1
<b>Zinc</b>	<b>0.20</b>	J ^	0.50	0.020	mg/L		11/10/17 16:44	11/11/17 19:14	1

**Method: 6010B - SPLP Metals - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Lead</b>	<b>0.21</b>		0.0075	0.0075	mg/L		11/09/17 16:43	11/11/17 03:26	1
<b>Manganese</b>	<b>0.38</b>		0.025	0.010	mg/L		11/09/17 16:43	11/11/17 03:26	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 16:44	11/13/17 11:55	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 16:44	11/13/17 11:55	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/10/17 15:28	11/13/17 10:31	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.031</b>		0.019	0.0062	mg/Kg	☼	11/08/17 16:15	11/09/17 10:37	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.54		0.54	0.19	mg/Kg	☼	11/13/17 11:30	11/13/17 17:19	1
<b>pH</b>	<b>8.4</b>		0.20	0.20	SU			11/14/17 17:36	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

### General Chemistry

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

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-2

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)  
 Contact: MATT WGISS  
 Company: TERRACON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-136834  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: \_\_\_\_\_

Client		Client Project #		Preservative		Parameter													
TERRACON		11177029M																	
Project Name				Project Location/State				Lab Project #				Lab PM				Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other			
WORK ORDER 037				MARKHAM, IL								DICK WIGGAT							
Sampler		CRAIG VARDANO		Sampling		# of Containers		Matrix											
Lab ID	MS/MSD	Sample ID	Date	Time															
4		2696V-31-B01-(0-2)	11-6-17	1100	5	S	VOCS												
5		2696V-31-B02-(0-2)	11-6-17	1115	5	S	SVOCs												
6		2696V-31-B03-(0-2)	11-6-17	1130	5	S	23 TAL METALS												
7		2696V-31-B04-(0-2)	11-6-17	1145	5	S	TCLP 23 TAL METALS												

Turnaround Time Required (Business Days)

\_\_\_ 1 Day \_\_\_ 2 Days \_\_\_ 5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRACON</u> Date: <u>11-6-17</u> Time: <u>1545</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/6/17</u> Time: <u>1545</u>
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/6/17</u> Time: <u>1613</u>	Received By: <u>[Signature]</u> Company: <u>TA-CMT</u> Date: <u>11/7/17</u> Time: <u>0705</u>

Lab Courier: TA  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

Matrix Key

WW - Wastewater SE - Sediment  
 W - Water SO - Soil  
 S - Soil L - Leachate  
 SL - Sludge WI - Wipe  
 MS - Miscellaneous DW - Drinking Water  
 OL - Oil O - Other  
 A - Air

Client Comments

NO ALUMINUM

Lab Comments:

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136834-2

**Login Number: 136834**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Scott, Sherri L**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.7,4.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

US Route 6 (Eastbound) IDOT STA 38+60 to 39+80 (ISGS Site 2696V-32)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

Soil from boring B01 was sampled adjacent to ISGS Site No 2696V-32.  
See Exhibits 6, 6F and Table 59 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136834-3.  
Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

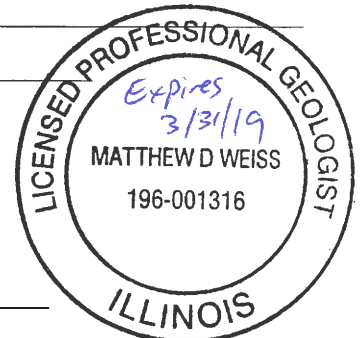
**Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))**

Company Name: Terracon Consultants, Inc  
 Street Address: 135 Ambassador Drive  
 City: Naperville State: IL Zip Code: 60540  
 Phone: 630-717-4263

Matt Weiss  
 Printed Name:

[Signature]  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

7/24/18  
 Date:



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-32)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 1 of 2

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-32-B01 (0-2)
				CCDD	Sample Depth (feet)	(0-2)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/06/2017
<b>Semivolatile Organic Analytical Parameters</b>						
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.02
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.052
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.063
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.052
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		0.012
Chrysene	mg/kg	1.2	2.7	88		0.026
Dibenzo(a,h)anthracene	mg/kg	0.2	0.42	0.09		0.04
Fluoranthene	mg/kg	2.7	4.1	3100		0.036
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.048
Phenanthrene	mg/kg	1.3	2.5	210		0.014
Pyrene	mg/kg	1.9	3.0	2300		0.029
<b>Inorganic Analytical Parameters</b>						
Arsenic	mg/kg	---	13	11.3		4.8
Barium	mg/kg	---	110	1500		28
Cadmium	mg/kg	---	0.6	5.2		0.23
Chromium, total	mg/kg	---	16.2	21		6.2
Lead	mg/kg	---	36	107		23
Mercury	mg/kg	---	0.06	0.89*		0.11
Selenium	mg/kg	---	0.48	1.3		<0.55
Silver	mg/kg	---	0.55	4.4		<0.28
Antimony	mg/kg	---	4.0	5		0.24
Beryllium	mg/kg	---	0.59	22		0.29
Calcium	mg/kg	---	9,300	---		70000
Cobalt	mg/kg	---	8.9	20		3.9
Copper	mg/kg	---	19.6	2900		11
Cyanide	mg/kg	---	0.51	---		<0.47
Iron	mg/kg	---	15,900	15000		10000
Magnesium	mg/kg	---	4,820	325000		30000
Manganese	mg/kg	---	636	630		220
Nickel	mg/kg	---	18	100		10
Potassium	mg/kg	---	1,268	---		780
Sodium	mg/kg	---	130	---		170
Thallium	mg/kg	---	0.32	2.6		<0.55
Vanadium	mg/kg	---	25.2	550		9.4
Zinc	mg/kg	---	95	5100		42
pH			6.25	9		8.5

Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-32)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 2 of 2

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-32-B01 (0-2)
				CCDD	Sample Depth (feet)	(0-2)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/06/2017
<b>Inorganic Analytical Parameters (SPLP)</b>						
Antimony,SPLP	mg/L	---	---	---		--
Arsenic,SPLP	mg/L	---	---	---		--
Barium,SPLP	mg/L	---	---	---		--
Beryllium,SPLP	mg/L	---	---	---		--
Cadmium,SPLP	mg/L	---	---	---		--
Calcium,SPLP	mg/L	---	---	---		--
Chromium,SPLP	mg/L	---	---	---		--
Cobalt,SPLP	mg/L	---	---	---		--
Copper,SPLP	mg/L	---	---	---		--
Iron,SPLP	mg/L	---	---	---		--
Lead,SPLP	mg/L	---	---	---		--
Magnesium,SPLP	mg/L	---	---	---		--
Manganese,SPLP	mg/L	---	---	---		0.18
Mercury,SPLP	mg/L	---	---	---		--
Nickel,SPLP	mg/L	---	---	---		--
Potassium,SPLP	mg/L	---	---	---		--
Selenium,SPLP	mg/L	---	---	---		--
Silver,SPLP	mg/L	---	---	---		--
Sodium,SPLP	mg/L	---	---	---		--
Thallium,SPLP	mg/L	---	---	---		--
Vanadium,SPLP	mg/L	---	---	---		--
Zinc,SPLP	mg/L	---	---	---		--
Cyanide,SPLP	mg/L	---	---	---		--
<b>Inorganic Analytical Parameters (TCLP)</b>						
Arsenic,TCLP	mg/L	---	---	---		<0.050
Barium,TCLP	mg/L	---	---	---		0.39
Cadmium,TCLP	mg/L	---	---	---		0.0024
Chromium,TCLP	mg/L	---	---	---		<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050
Silver,TCLP	mg/L	---	---	---		<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040
Calcium,TCLP	mg/L	---	---	---		440
Cobalt,TCLP	mg/L	---	---	---		<0.025
Copper,TCLP	mg/L	---	---	---		0.029
Cyanide,TCLP	mg/L	---	---	---		----
Iron,TCLP	mg/L	---	---	---		<0.40
Magnesium,TCLP	mg/L	---	---	---		65
Manganese,TCLP	mg/L	---	---	---		0.55
Nickel,TCLP	mg/L	---	---	---		<0.025
Potassium,TCLP	mg/L	---	---	---		1.5
Sodium,TCLP	mg/L	---	---	---		----
Thallium,TCLP	mg/L	---	---	---		<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025
Zinc,TCLP	mg/L	---	---	---		0.077

\*Elemental mercury was determined not to be a contaminant of concern

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-136834-3

Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:

Terracon Consulting Eng & Scientists

135 Ambassador Drive

Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:

11/16/2017 5:49:05 PM

Jodie Bracken, Project Management Assistant II

[jodie.bracken@testamericainc.com](mailto:jodie.bracken@testamericainc.com)

Designee for

Richard Wright, Senior Project Manager

(708)534-5200

[richard.wright@testamericainc.com](mailto:richard.wright@testamericainc.com)

### LINKS

Review your project  
results through

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Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-3

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**Job ID: 500-136834-3**

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**Laboratory: TestAmerica Chicago**

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**Narrative**

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**Job Narrative  
500-136834-3**

**Receipt**

The samples were received on 11/6/2017 4:13 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.7° C and 4.0° C.

**GC/MS VOA**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**GC/MS Semi VOA**

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**Metals**

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-409604 recovered above the upper control limit for Zinc. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following sample is impacted: 2696V-32-B01 (0-2) (500-136834-8).

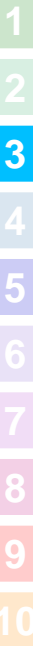
No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**General Chemistry**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Organic Prep**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-3

**Client Sample ID: 2696V-32-B01 (0-2)**

**Lab Sample ID: 500-136834-8**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	0.020	J	0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.052		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.063		0.036	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.052		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.012	J	0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.026	J	0.036	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.040		0.036	0.0071	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.036		0.036	0.0068	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.048		0.036	0.0095	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.014	J	0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.029	J	0.036	0.0073	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.24	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.8		0.55	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	28		0.55	0.063	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.29		0.22	0.052	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.23	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Chromium	6.2		0.55	0.27	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.9		0.28	0.073	mg/Kg	1	☼	6010B	Total/NA
Copper	11		0.55	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	10000		11	5.8	mg/Kg	1	☼	6010B	Total/NA
Lead	23		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	30000		5.5	2.7	mg/Kg	1	☼	6010B	Total/NA
Calcium	70000	B	110	19	mg/Kg	10	☼	6010B	Total/NA
Manganese	220		0.55	0.080	mg/Kg	1	☼	6010B	Total/NA
Nickel	10		0.55	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	9.4		0.28	0.065	mg/Kg	1	☼	6010B	Total/NA
Zinc	42		1.1	0.49	mg/Kg	1	☼	6010B	Total/NA
Potassium	780		28	9.8	mg/Kg	1	☼	6010B	Total/NA
Sodium	170		55	8.2	mg/Kg	1	☼	6010B	Total/NA
Barium	0.39	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0024	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	440		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.029		0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	65		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.55		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	1.5	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.077	J ^	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.18		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.11		0.016	0.0054	mg/Kg	1	☼	7471B	Total/NA
pH	8.5		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-3

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136834-8	2696V-32-B01 (0-2)	Solid	11/06/17 09:50	11/06/17 16:13

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-3

**Client Sample ID: 2696V-32-B01 (0-2)**

**Lab Sample ID: 500-136834-8**

**Date Collected: 11/06/17 09:50**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 89.2**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.016		0.016	0.0072	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Benzene	<0.0016		0.0016	0.00042	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Bromodichloromethane	<0.0016		0.0016	0.00033	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Bromoform	<0.0016		0.0016	0.00048	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Bromomethane	<0.0041		0.0041	0.0016	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
2-Butanone (MEK)	<0.0041		0.0041	0.0018	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Carbon disulfide	<0.0041		0.0041	0.00086	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Carbon tetrachloride	<0.0016		0.0016	0.00048	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Chlorobenzene	<0.0016		0.0016	0.00061	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Chloroethane	<0.0041		0.0041	0.0012	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Chloroform	<0.0016		0.0016	0.00057	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Chloromethane	<0.0041		0.0041	0.0017	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
cis-1,2-Dichloroethene	<0.0016		0.0016	0.00046	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
cis-1,3-Dichloropropene	<0.0016		0.0016	0.00050	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Dibromochloromethane	<0.0016		0.0016	0.00054	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
1,1-Dichloroethane	<0.0016		0.0016	0.00056	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
1,2-Dichloroethane	<0.0041		0.0041	0.0013	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
1,1-Dichloroethene	<0.0016		0.0016	0.00057	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
1,2-Dichloropropane	<0.0016		0.0016	0.00043	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
1,3-Dichloropropane, Total	<0.0016		0.0016	0.00058	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Ethylbenzene	<0.0016		0.0016	0.00079	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
2-Hexanone	<0.0041		0.0041	0.0013	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Methylene Chloride	<0.0041		0.0041	0.0016	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
4-Methyl-2-pentanone (MIBK)	<0.0041		0.0041	0.0012	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Methyl tert-butyl ether	<0.0016		0.0016	0.00048	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Styrene	<0.0016		0.0016	0.00050	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
1,1,2,2-Tetrachloroethane	<0.0016		0.0016	0.00053	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Tetrachloroethene	<0.0016		0.0016	0.00056	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Toluene	<0.0016		0.0016	0.00042	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
trans-1,2-Dichloroethene	<0.0016		0.0016	0.00073	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
trans-1,3-Dichloropropene	<0.0016		0.0016	0.00058	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
1,1,1-Trichloroethane	<0.0016		0.0016	0.00055	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
1,1,2-Trichloroethane	<0.0016		0.0016	0.00071	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Trichloroethene	<0.0016		0.0016	0.00056	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Vinyl acetate	<0.0041		0.0041	0.0014	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Vinyl chloride	<0.0016		0.0016	0.00073	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1
Xylenes, Total	<0.0033		0.0033	0.00053	mg/Kg	☼	11/07/17 11:30	11/09/17 18:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		75 - 131	11/07/17 11:30	11/09/17 18:54	1
Dibromofluoromethane	105		75 - 126	11/07/17 11:30	11/09/17 18:54	1
1,2-Dichloroethane-d4 (Surr)	101		70 - 134	11/07/17 11:30	11/09/17 18:54	1
Toluene-d8 (Surr)	96		75 - 124	11/07/17 11:30	11/09/17 18:54	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.036		0.036	0.0066	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Acenaphthylene	<0.036		0.036	0.0048	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Anthracene	<0.036		0.036	0.0061	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
<b>Benzo[a]anthracene</b>	<b>0.020</b>	<b>J</b>	0.036	0.0049	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-3

**Client Sample ID: 2696V-32-B01 (0-2)**

**Lab Sample ID: 500-136834-8**

**Date Collected: 11/06/17 09:50**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 89.2**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.052		0.036	0.0071	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Benzo[b]fluoranthene	0.063		0.036	0.0079	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Benzo[g,h,i]perylene	0.052		0.036	0.012	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Benzo[k]fluoranthene	0.012	J	0.036	0.011	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Butyl benzyl phthalate	<0.18		0.18	0.070	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Carbazole	<0.18		0.18	0.091	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Chrysene	0.026	J	0.036	0.010	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Dibenz(a,h)anthracene	0.040		0.036	0.0071	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
1,2-Dichlorobenzene	<0.18		0.18	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
2,4-Dichlorophenol	<0.36		0.36	0.087	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.29	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
2,4-Dinitrophenol	<0.74		0.74	0.64	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Di-n-octyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Fluoranthene	0.036		0.036	0.0068	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Fluorene	<0.036		0.036	0.0051	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Hexachlorobenzene	<0.074		0.074	0.0085	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Hexachloroethane	<0.18		0.18	0.056	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Indeno[1,2,3-cd]pyrene	0.048		0.036	0.0095	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
2-Methylnaphthalene	<0.074		0.074	0.0067	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
2-Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Nitrobenzene	<0.036		0.036	0.0091	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
2-Nitrophenol	<0.36		0.36	0.086	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-3

**Client Sample ID: 2696V-32-B01 (0-2)**

**Lab Sample ID: 500-136834-8**

Date Collected: 11/06/17 09:50

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 89.2

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
<b>Phenanthrene</b>	<b>0.014</b>	<b>J</b>	0.036	0.0051	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
Phenol	<0.18		0.18	0.081	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
<b>Pyrene</b>	<b>0.029</b>	<b>J</b>	0.036	0.0073	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
2,4,5-Trichlorophenol	<0.36		0.36	0.083	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1
2,4,6-Trichlorophenol	<0.36		0.36	0.13	mg/Kg	☼	11/13/17 07:19	11/15/17 12:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	89		44 - 121	11/13/17 07:19	11/15/17 12:52	1
2-Fluorophenol	105		46 - 133	11/13/17 07:19	11/15/17 12:52	1
Nitrobenzene-d5	98		41 - 120	11/13/17 07:19	11/15/17 12:52	1
Phenol-d5	99		46 - 125	11/13/17 07:19	11/15/17 12:52	1
Terphenyl-d14	89		35 - 160	11/13/17 07:19	11/15/17 12:52	1
2,4,6-Tribromophenol	80		25 - 139	11/13/17 07:19	11/15/17 12:52	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.24</b>	<b>J</b>	1.1	0.22	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1
<b>Arsenic</b>	<b>4.8</b>		0.55	0.19	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1
<b>Barium</b>	<b>28</b>		0.55	0.063	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1
<b>Beryllium</b>	<b>0.29</b>		0.22	0.052	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1
<b>Cadmium</b>	<b>0.23</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1
<b>Chromium</b>	<b>6.2</b>		0.55	0.27	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1
<b>Cobalt</b>	<b>3.9</b>		0.28	0.073	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1
<b>Copper</b>	<b>11</b>		0.55	0.16	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1
<b>Iron</b>	<b>10000</b>		11	5.8	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1
<b>Lead</b>	<b>23</b>		0.28	0.13	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1
<b>Magnesium</b>	<b>30000</b>		5.5	2.7	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1
<b>Calcium</b>	<b>70000</b>	<b>B</b>	110	19	mg/Kg	☼	11/08/17 07:33	11/09/17 18:16	10
<b>Manganese</b>	<b>220</b>		0.55	0.080	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1
<b>Nickel</b>	<b>10</b>		0.55	0.16	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1
Selenium	<0.55		0.55	0.33	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1
Silver	<0.28		0.28	0.071	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1
Thallium	<0.55		0.55	0.28	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1
<b>Vanadium</b>	<b>9.4</b>		0.28	0.065	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1
<b>Zinc</b>	<b>42</b>		1.1	0.49	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1
<b>Potassium</b>	<b>780</b>		28	9.8	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1
<b>Sodium</b>	<b>170</b>		55	8.2	mg/Kg	☼	11/08/17 07:33	11/09/17 04:26	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 16:44	11/11/17 19:18	1
<b>Barium</b>	<b>0.39</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 16:44	11/11/17 19:18	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 16:44	11/11/17 19:18	1
<b>Cadmium</b>	<b>0.0024</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 16:44	11/11/17 19:18	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-3

**Client Sample ID: 2696V-32-B01 (0-2)**

**Lab Sample ID: 500-136834-8**

**Date Collected: 11/06/17 09:50**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 89.2**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>440</b>		5.0	0.50	mg/L		11/10/17 16:44	11/11/17 19:18	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:18	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:18	1
<b>Copper</b>	<b>0.029</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:18	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 16:44	11/11/17 19:18	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 16:44	11/11/17 19:18	1
<b>Magnesium</b>	<b>65</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:18	1
<b>Manganese</b>	<b>0.55</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:18	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:18	1
<b>Potassium</b>	<b>1.5 J</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:18	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 16:44	11/11/17 19:18	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:18	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:18	1
<b>Zinc</b>	<b>0.077 J ^</b>		0.50	0.020	mg/L		11/10/17 16:44	11/11/17 19:18	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.18</b>		0.025	0.010	mg/L		11/09/17 16:43	11/11/17 03:30	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 16:44	11/13/17 11:58	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 16:44	11/13/17 11:58	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/10/17 15:28	11/13/17 10:33	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.11</b>		0.016	0.0054	mg/Kg	☼	11/08/17 16:15	11/09/17 10:39	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.47		0.47	0.16	mg/Kg	☼	11/13/17 11:30	11/13/17 17:20	1
<b>pH</b>	<b>8.5</b>		0.20	0.20	SU			11/14/17 17:36	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-3

## Qualifiers

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-3

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To (optional)  
 Contact: MATT WIGGS  
 Company: TERRACON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-136834  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: \_\_\_\_\_

Client		Client Project #		Preservative		Parameter		Matrix		Comments		
<u>TERRACON</u>		<u>11177029 M</u>								Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other		
Project Name		Lab Project #										
<u>WORK ORDER 037</u>												
Project Location/State		Lab PM										
<u>MARKHAM, IL</u>		<u>DICK WRIGHT</u>										
Sampler												
<u>CRAIG VARLAND</u>												
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	VOCs	SVOCs	23 TAL METALS I	PH	TOTAL 23 TAL METALS	Comments
			Date	Time								
<u>8</u>		<u>2696V-32-B01-(0-2)</u>	<u>11-6-17</u>	<u>0950</u>	<u>5</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>		

Turnaround Time Required (Business Days)

1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By <u>[Signature]</u> Company <u>TERRACON</u>	Date <u>11-6-17</u>	Time <u>1545</u>	Received By <u>[Signature]</u> Company <u>TA</u>	Date <u>11/6/17</u>	Time <u>1545</u>
Relinquished By <u>[Signature]</u> Company <u>TA</u>	Date <u>11/6/17</u>	Time <u>1613</u>	Received By <u>[Signature]</u> Company <u>TA-CHT</u>	Date <u>11/7/17</u>	Time <u>0705</u>
Relinquished By _____	Date _____	Time _____	Received By _____	Date _____	Time _____

Lab Courier: TA  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

Matrix Key

WW - Wastewater SE - Sediment  
 W - Water SO - Soil  
 S - Soil L - Leachate  
 SL - Sludge WI - Wipe  
 MS - Miscellaneous DW - Drinking Water  
 OL - Oil O - Other  
 A - Air

Client Comments

NO ALUMINUM

Lab Comments:

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136834-3

**Login Number: 136834**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Scott, Sherri L**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.7,4.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

US Route 6 (Eastbound) IDOT STA 36+50 to 38+60 (ISGS Site 2696V-33)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

EPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located [35 Ill. Adm. Code 1100.610(a)]:

Soil from borings B02 and B03 were sampled adjacent to ISGS Site No 2696V-33. See Exhibits 6, 6G, and Table 61 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136834-4. Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

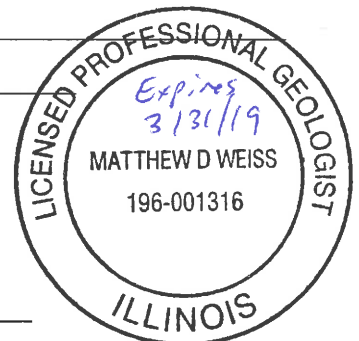
**Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))**

Company Name: Terracon Consultants, Inc  
 Street Address: 135 Ambassador Drive  
 City: Naperville State: IL Zip Code: 60540  
 Phone: 630-717-4263

Matt Weiss  
 Printed Name:

[Signature]  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

7/24/18  
 Date:





Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-33)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 1 of 2

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-33-B02 (0-2)	2696V-33-B03 (0-2)
				CCDD	Sample Depth (feet)	(0-2)	(0-2)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/06/2017	11/06/2017
<b>Volatile Organic Analytical Parameters</b>							
Acetone	mg/kg	---	---	25		<0.016	0.066
<b>Semivolatile Organic Analytical Parameters</b>							
Acenaphthylene	mg/kg	0.03	0.07	85		0.0093	0.0052
Anthracene	mg/kg	0.25	0.4	12000		0.024	0.0076
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.098	0.042
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.14	0.087
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		0.2	0.099
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.082	0.073
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		0.064	0.027
Chrysene	mg/kg	1.2	2.7	88		0.11	0.051
Dibenzo(a,h)anthracene	mg/kg	0.2	0.42	0.09		0.049	0.045
Fluoranthene	mg/kg	2.7	4.1	3100		0.23	0.073
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.083	0.07
Phenanthrene	mg/kg	1.3	2.5	210		0.092	0.029
Pyrene	mg/kg	1.9	3.0	2300		0.16	0.055
<b>Inorganic Analytical Parameters</b>							
Arsenic	mg/kg	---	13	11.3		4.8	6.4
Barium	mg/kg	---	110	1500		46	37
Cadmium	mg/kg	---	0.6	5.2		0.29	0.23
Chromium, total	mg/kg	---	16.2	21		9.8	8.8
Lead	mg/kg	---	36	107		50	33
Mercury	mg/kg	---	0.06	0.1		0.045	0.051
Selenium	mg/kg	---	0.48	1.3		<0.59	0.32
Silver	mg/kg	---	0.55	4.4		<0.30	<0.25
Antimony	mg/kg	---	4.0	5		0.3	0.19
Beryllium	mg/kg	---	0.59	22		0.44	0.39
Calcium	mg/kg	---	9,300	---		34000	57000
Cobalt	mg/kg	---	8.9	20		5.1	6
Copper	mg/kg	---	19.6	2900		13	17
Cyanide	mg/kg	---	0.51	---		<0.56	<0.50
Iron	mg/kg	---	15,900	15000		11000	13000
Magnesium	mg/kg	---	4,820	325000		14000	22000
Manganese	mg/kg	---	636	630		200	270
Nickel	mg/kg	---	18	100		13	15
Potassium	mg/kg	---	1,268	---		1100	1200
Sodium	mg/kg	---	130	---		250	140
Thallium	mg/kg	---	0.32	2.6		<0.59	<0.50
Vanadium	mg/kg	---	25.2	550		13	12
Zinc	mg/kg	---	95	5100		54	59
pH			6.25	9		8.7	8.5

Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-33)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 2 of 2

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-33-B02 (0-2)	2696V-33-B03 (0-2)
				CCDD	Sample Depth (feet)	(0-2)	(0-2)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/06/2017	11/06/2017
<b>Inorganic Analytical Parameters (SPLP)</b>							
Antimony,SPLP	mg/L	---	---	---		--	--
Arsenic,SPLP	mg/L	---	---	---		--	--
Barium,SPLP	mg/L	---	---	---		--	--
Beryllium,SPLP	mg/L	---	---	---		--	--
Cadmium,SPLP	mg/L	---	---	---		--	--
Calcium,SPLP	mg/L	---	---	---		--	--
Chromium,SPLP	mg/L	---	---	---		--	--
Cobalt,SPLP	mg/L	---	---	---		--	--
Copper,SPLP	mg/L	---	---	---		--	--
Iron,SPLP	mg/L	---	---	---		--	--
Lead,SPLP	mg/L	---	---	---		--	--
Magnesium,SPLP	mg/L	---	---	---		--	--
Manganese,SPLP	mg/L	---	---	---		0.22	0.24
Mercury,SPLP	mg/L	---	---	---		--	--
Nickel,SPLP	mg/L	---	---	---		--	--
Potassium,SPLP	mg/L	---	---	---		--	--
Selenium,SPLP	mg/L	---	---	---		--	--
Silver,SPLP	mg/L	---	---	---		--	--
Sodium,SPLP	mg/L	---	---	---		--	--
Thallium,SPLP	mg/L	---	---	---		--	--
Vanadium,SPLP	mg/L	---	---	---		--	--
Zinc,SPLP	mg/L	---	---	---		--	--
Cyanide,SPLP	mg/L	---	---	---		--	--
<b>Inorganic Analytical Parameters (TCLP)</b>							
Arsenic,TCLP	mg/L	---	---	---		<0.050	<0.050
Barium,TCLP	mg/L	---	---	---		0.38	0.35
Cadmium,TCLP	mg/L	---	---	---		0.0028	0.0031
Chromium,TCLP	mg/L	---	---	---		<0.025	<0.025
Lead,TCLP	mg/L	---	---	---		<0.0075	<0.0075
Mercury,TCLP	mg/L	---	---	---		<0.00020	<0.00020
Selenium,TCLP	mg/L	---	---	---		<0.050	0.023
Silver,TCLP	mg/L	---	---	---		<0.025	<0.025
Antimony,TCLP	mg/L	---	---	---		<0.0060	<0.0060
Beryllium,TCLP	mg/L	---	---	---		<0.0040	<0.0040
Calcium,TCLP	mg/L	---	---	---		440	350
Cobalt,TCLP	mg/L	---	---	---		<0.025	<0.025
Copper,TCLP	mg/L	---	---	---		0.03	0.032
Cyanide,TCLP	mg/L	---	---	---		----	----
Iron,TCLP	mg/L	---	---	---		<0.40	<0.40
Magnesium,TCLP	mg/L	---	---	---		64	130
Manganese,TCLP	mg/L	---	---	---		0.55	1.1
Nickel,TCLP	mg/L	---	---	---		<0.025	<0.025
Potassium,TCLP	mg/L	---	---	---		1.4	1.5
Sodium,TCLP	mg/L	---	---	---		----	----
Thallium,TCLP	mg/L	---	---	---		<0.0020	<0.0020
Vanadium,TCLP	mg/L	---	---	---		<0.025	<0.025
Zinc,TCLP	mg/L	---	---	---		0.074	0.076

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-136834-4

Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:

Terracon Consulting Eng & Scientists

135 Ambassador Drive

Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:

11/16/2017 5:51:57 PM

Jodie Bracken, Project Management Assistant II

[jodie.bracken@testamericainc.com](mailto:jodie.bracken@testamericainc.com)

Designee for

Richard Wright, Senior Project Manager

(708)534-5200

[richard.wright@testamericainc.com](mailto:richard.wright@testamericainc.com)

### LINKS

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[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-4

**Job ID: 500-136834-4**

**Laboratory: TestAmerica Chicago**

## Narrative

### Job Narrative 500-136834-4

#### Receipt

The samples were received on 11/6/2017 4:13 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.7° C and 4.0° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Metals

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-409604 recovered above the upper control limit for Zinc. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: 2696V-33-B03 (0-2) (500-136834-9), 2696V-33-B02 (0-2) (500-136834-10) and 2696V-33-B01 (0-2) (500-136834-11).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-4

**Client Sample ID: 2696V-33-B03 (0-2)**

**Lab Sample ID: 500-136834-9**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.066		0.017	0.0075	mg/Kg	1	☼	8260B	Total/NA
Acenaphthylene	0.0052	J	0.036	0.0048	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.0076	J	0.036	0.0060	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.042		0.036	0.0049	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.087		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.099		0.036	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.073		0.036	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.027	J	0.036	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.051		0.036	0.0099	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.045		0.036	0.0070	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.073		0.036	0.0067	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.070		0.036	0.0094	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.029	J	0.036	0.0050	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.055		0.036	0.0072	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.19	J	0.99	0.19	mg/Kg	1	☼	6010B	Total/NA
Arsenic	6.4		0.50	0.17	mg/Kg	1	☼	6010B	Total/NA
Barium	37		0.50	0.057	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.39		0.20	0.046	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.23	B	0.099	0.018	mg/Kg	1	☼	6010B	Total/NA
Chromium	8.8		0.50	0.25	mg/Kg	1	☼	6010B	Total/NA
Cobalt	6.0		0.25	0.065	mg/Kg	1	☼	6010B	Total/NA
Copper	17		0.50	0.14	mg/Kg	1	☼	6010B	Total/NA
Iron	13000		9.9	5.2	mg/Kg	1	☼	6010B	Total/NA
Lead	33		0.25	0.11	mg/Kg	1	☼	6010B	Total/NA
Magnesium	22000		5.0	2.5	mg/Kg	1	☼	6010B	Total/NA
Calcium	57000	B	99	17	mg/Kg	10	☼	6010B	Total/NA
Manganese	270		0.50	0.072	mg/Kg	1	☼	6010B	Total/NA
Nickel	15		0.50	0.14	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.32	J	0.50	0.29	mg/Kg	1	☼	6010B	Total/NA
Vanadium	12		0.25	0.059	mg/Kg	1	☼	6010B	Total/NA
Zinc	59		0.99	0.44	mg/Kg	1	☼	6010B	Total/NA
Potassium	1200		25	8.8	mg/Kg	1	☼	6010B	Total/NA
Sodium	140		50	7.3	mg/Kg	1	☼	6010B	Total/NA
Barium	0.35	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0031	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	350		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.032		0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	130		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	1.1		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	1.5	J	2.5	0.50	mg/L	1		6010B	TCLP
Selenium	0.023	J	0.050	0.020	mg/L	1		6010B	TCLP
Zinc	0.076	J ^	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.24		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.051		0.017	0.0056	mg/Kg	1	☼	7471B	Total/NA
pH	8.5		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-33-B02 (0-2)**

**Lab Sample ID: 500-136834-10**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0093	J	0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-4

**Client Sample ID: 2696V-33-B02 (0-2) (Continued)**

**Lab Sample ID: 500-136834-10**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	0.024	J	0.037	0.0063	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.098		0.037	0.0051	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.14		0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.20		0.037	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.082		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.064		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.11		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.049		0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.23		0.037	0.0070	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.083		0.037	0.0098	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.092		0.037	0.0053	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.16		0.037	0.0075	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.30	J	1.2	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.8		0.59	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	46		0.59	0.068	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.44		0.24	0.056	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.29	B	0.12	0.021	mg/Kg	1	☼	6010B	Total/NA
Chromium	9.8		0.59	0.29	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.1		0.30	0.078	mg/Kg	1	☼	6010B	Total/NA
Copper	13		0.59	0.17	mg/Kg	1	☼	6010B	Total/NA
Iron	11000		12	6.2	mg/Kg	1	☼	6010B	Total/NA
Lead	50		0.30	0.14	mg/Kg	1	☼	6010B	Total/NA
Magnesium	14000		5.9	2.9	mg/Kg	1	☼	6010B	Total/NA
Calcium	34000	B	12	2.0	mg/Kg	1	☼	6010B	Total/NA
Manganese	200		0.59	0.086	mg/Kg	1	☼	6010B	Total/NA
Nickel	13		0.59	0.17	mg/Kg	1	☼	6010B	Total/NA
Vanadium	13		0.30	0.070	mg/Kg	1	☼	6010B	Total/NA
Zinc	54		1.2	0.52	mg/Kg	1	☼	6010B	Total/NA
Potassium	1100		30	11	mg/Kg	1	☼	6010B	Total/NA
Sodium	250		59	8.8	mg/Kg	1	☼	6010B	Total/NA
Barium	0.38	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0028	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	440		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.030		0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	64		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.55		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	1.4	J	2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.074	J ^	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.22		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.045		0.018	0.0060	mg/Kg	1	☼	7471B	Total/NA
pH	8.7		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2696V-33-B01 (0-2)**

**Lab Sample ID: 500-136834-11**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.032		0.017	0.0074	mg/Kg	1	☼	8260B	Total/NA
Acenaphthylene	0.0090	J	0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.014	J	0.037	0.0063	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.090		0.037	0.0051	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.21		0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago



# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-4

**Client Sample ID: 2696V-33-B01 (0-2) (Continued)**

**Lab Sample ID: 500-136834-11**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	0.31		0.037	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.15		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.086		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.13		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.065		0.037	0.0073	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.13		0.037	0.0070	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.15		0.037	0.0098	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.016	J	0.076	0.0069	mg/Kg	1	☼	8270D	Total/NA
Naphthalene	0.015	J	0.037	0.0058	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.061		0.037	0.0053	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.097		0.037	0.0075	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.25	J	1.1	0.21	mg/Kg	1	☼	6010B	Total/NA
Arsenic	11		0.54	0.18	mg/Kg	1	☼	6010B	Total/NA
Barium	93		0.54	0.061	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.53		0.21	0.050	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.30	B	0.11	0.019	mg/Kg	1	☼	6010B	Total/NA
Chromium	12		0.54	0.27	mg/Kg	1	☼	6010B	Total/NA
Cobalt	12		0.27	0.070	mg/Kg	1	☼	6010B	Total/NA
Copper	27		0.54	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	22000		11	5.6	mg/Kg	1	☼	6010B	Total/NA
Lead	45		0.27	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	26000		5.4	2.7	mg/Kg	1	☼	6010B	Total/NA
Calcium	68000	B	110	18	mg/Kg	10	☼	6010B	Total/NA
Manganese	710		0.54	0.078	mg/Kg	1	☼	6010B	Total/NA
Nickel	23		0.54	0.16	mg/Kg	1	☼	6010B	Total/NA
Vanadium	15		0.27	0.063	mg/Kg	1	☼	6010B	Total/NA
Zinc	61		1.1	0.47	mg/Kg	1	☼	6010B	Total/NA
Potassium	1300		27	9.5	mg/Kg	1	☼	6010B	Total/NA
Sodium	280		54	7.9	mg/Kg	1	☼	6010B	Total/NA
Barium	0.36	J	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0034	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Calcium	390		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.029		0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	130		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	1.3		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	1.8	J	2.5	0.50	mg/L	1		6010B	TCLP
Selenium	0.021	J	0.050	0.020	mg/L	1		6010B	TCLP
Zinc	0.068	J ^	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.52		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.042		0.019	0.0063	mg/Kg	1	☼	7471B	Total/NA
Cyanide, Total	0.19	J	0.56	0.19	mg/Kg	1	☼	9014	Total/NA
pH	8.8		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136834-9	2696V-33-B03 (0-2)	Solid	11/06/17 10:00	11/06/17 16:13
500-136834-10	2696V-33-B02 (0-2)	Solid	11/06/17 10:15	11/06/17 16:13
500-136834-11	2696V-33-B01 (0-2)	Solid	11/06/17 10:30	11/06/17 16:13

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-4

**Client Sample ID: 2696V-33-B03 (0-2)**

**Lab Sample ID: 500-136834-9**

**Date Collected: 11/06/17 10:00**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 87.7**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.066</b>		0.017	0.0075	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Benzene	<0.0017		0.0017	0.00044	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Bromodichloromethane	<0.0017		0.0017	0.00035	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Bromoform	<0.0017		0.0017	0.00050	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Bromomethane	<0.0043		0.0043	0.0016	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
2-Butanone (MEK)	<0.0043		0.0043	0.0019	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Carbon disulfide	<0.0043		0.0043	0.00090	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Carbon tetrachloride	<0.0017		0.0017	0.00050	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Chlorobenzene	<0.0017		0.0017	0.00064	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Chloroethane	<0.0043		0.0043	0.0013	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Chloroform	<0.0017		0.0017	0.00060	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Chloromethane	<0.0043		0.0043	0.0017	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
cis-1,2-Dichloroethene	<0.0017		0.0017	0.00048	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
cis-1,3-Dichloropropene	<0.0017		0.0017	0.00052	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Dibromochloromethane	<0.0017		0.0017	0.00056	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
1,1-Dichloroethane	<0.0017		0.0017	0.00059	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
1,2-Dichloroethane	<0.0043		0.0043	0.0013	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
1,1-Dichloroethene	<0.0017		0.0017	0.00059	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
1,2-Dichloropropane	<0.0017		0.0017	0.00045	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
1,3-Dichloropropane, Total	<0.0017		0.0017	0.00060	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Ethylbenzene	<0.0017		0.0017	0.00082	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
2-Hexanone	<0.0043		0.0043	0.0013	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Methylene Chloride	<0.0043		0.0043	0.0017	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
4-Methyl-2-pentanone (MIBK)	<0.0043		0.0043	0.0013	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Methyl tert-butyl ether	<0.0017		0.0017	0.00051	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Styrene	<0.0017		0.0017	0.00052	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
1,1,2,2-Tetrachloroethane	<0.0017		0.0017	0.00055	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Tetrachloroethene	<0.0017		0.0017	0.00059	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Toluene	<0.0017		0.0017	0.00044	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
trans-1,2-Dichloroethene	<0.0017		0.0017	0.00076	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
trans-1,3-Dichloropropene	<0.0017		0.0017	0.00060	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
1,1,1-Trichloroethane	<0.0017		0.0017	0.00058	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
1,1,2-Trichloroethane	<0.0017		0.0017	0.00074	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Trichloroethene	<0.0017		0.0017	0.00058	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Vinyl acetate	<0.0043		0.0043	0.0015	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Vinyl chloride	<0.0017		0.0017	0.00076	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1
Xylenes, Total	<0.0034		0.0034	0.00055	mg/Kg	☼	11/07/17 11:45	11/09/17 19:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		75 - 131	11/07/17 11:45	11/09/17 19:18	1
Dibromofluoromethane	104		75 - 126	11/07/17 11:45	11/09/17 19:18	1
1,2-Dichloroethane-d4 (Surr)	100		70 - 134	11/07/17 11:45	11/09/17 19:18	1
Toluene-d8 (Surr)	95		75 - 124	11/07/17 11:45	11/09/17 19:18	1

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.036		0.036	0.0065	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
<b>Acenaphthylene</b>	<b>0.0052</b>	<b>J</b>	0.036	0.0048	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
<b>Anthracene</b>	<b>0.0076</b>	<b>J</b>	0.036	0.0060	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
<b>Benzo[a]anthracene</b>	<b>0.042</b>		0.036	0.0049	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-4

**Client Sample ID: 2696V-33-B03 (0-2)**

**Lab Sample ID: 500-136834-9**

**Date Collected: 11/06/17 10:00**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 87.7**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzo[a]pyrene</b>	<b>0.087</b>		0.036	0.0070	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
<b>Benzo[b]fluoranthene</b>	<b>0.099</b>		0.036	0.0078	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
<b>Benzo[g,h,i]perylene</b>	<b>0.073</b>		0.036	0.012	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
<b>Benzo[k]fluoranthene</b>	<b>0.027</b>	<b>J</b>	0.036	0.011	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.066	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Butyl benzyl phthalate	<0.18		0.18	0.069	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Carbazole	<0.18		0.18	0.090	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
4-Chloroaniline	<0.73		0.73	0.17	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
<b>Chrysene</b>	<b>0.051</b>		0.036	0.0099	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
<b>Dibenz(a,h)anthracene</b>	<b>0.045</b>		0.036	0.0070	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
1,2-Dichlorobenzene	<0.18		0.18	0.043	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
2,4-Dichlorophenol	<0.36		0.36	0.086	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Di-n-butyl phthalate	<0.18		0.18	0.055	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
4,6-Dinitro-2-methylphenol	<0.73		0.73	0.29	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
2,4-Dinitrophenol	<0.73		0.73	0.64	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
2,6-Dinitrotoluene	<0.18		0.18	0.071	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
<b>Fluoranthene</b>	<b>0.073</b>		0.036	0.0067	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Fluorene	<0.036		0.036	0.0051	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Hexachlorobenzene	<0.073		0.073	0.0084	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Hexachlorobutadiene	<0.18		0.18	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Hexachlorocyclopentadiene	<0.73		0.73	0.21	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.070</b>		0.036	0.0094	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
2-Methylnaphthalene	<0.073		0.073	0.0066	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Nitrobenzene	<0.036		0.036	0.0090	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
2-Nitrophenol	<0.36		0.36	0.085	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-4

**Client Sample ID: 2696V-33-B03 (0-2)**

**Lab Sample ID: 500-136834-9**

Date Collected: 11/06/17 10:00

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 87.7

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.73		0.73	0.34	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
N-Nitrosodi-n-propylamine	<0.073		0.073	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Pentachlorophenol	<0.73		0.73	0.58	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
<b>Phenanthrene</b>	<b>0.029</b>	<b>J</b>	0.036	0.0050	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
Phenol	<0.18		0.18	0.080	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
<b>Pyrene</b>	<b>0.055</b>		0.036	0.0072	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
2,4,5-Trichlorophenol	<0.36		0.36	0.082	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	11/13/17 07:19	11/15/17 13:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	91		44 - 121	11/13/17 07:19	11/15/17 13:47	1
2-Fluorophenol	111		46 - 133	11/13/17 07:19	11/15/17 13:47	1
Nitrobenzene-d5	98		41 - 120	11/13/17 07:19	11/15/17 13:47	1
Phenol-d5	110		46 - 125	11/13/17 07:19	11/15/17 13:47	1
Terphenyl-d14	93		35 - 160	11/13/17 07:19	11/15/17 13:47	1
2,4,6-Tribromophenol	77		25 - 139	11/13/17 07:19	11/15/17 13:47	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.19</b>	<b>J</b>	0.99	0.19	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1
<b>Arsenic</b>	<b>6.4</b>		0.50	0.17	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1
<b>Barium</b>	<b>37</b>		0.50	0.057	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1
<b>Beryllium</b>	<b>0.39</b>		0.20	0.046	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1
<b>Cadmium</b>	<b>0.23</b>	<b>B</b>	0.099	0.018	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1
<b>Chromium</b>	<b>8.8</b>		0.50	0.25	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1
<b>Cobalt</b>	<b>6.0</b>		0.25	0.065	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1
<b>Copper</b>	<b>17</b>		0.50	0.14	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1
<b>Iron</b>	<b>13000</b>		9.9	5.2	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1
<b>Lead</b>	<b>33</b>		0.25	0.11	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1
<b>Magnesium</b>	<b>22000</b>		5.0	2.5	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1
<b>Calcium</b>	<b>57000</b>	<b>B</b>	99	17	mg/Kg	☼	11/08/17 07:33	11/09/17 18:20	10
<b>Manganese</b>	<b>270</b>		0.50	0.072	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1
<b>Nickel</b>	<b>15</b>		0.50	0.14	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1
<b>Selenium</b>	<b>0.32</b>	<b>J</b>	0.50	0.29	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1
Silver	<0.25		0.25	0.064	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1
Thallium	<0.50		0.50	0.25	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1
<b>Vanadium</b>	<b>12</b>		0.25	0.059	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1
<b>Zinc</b>	<b>59</b>		0.99	0.44	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1
<b>Potassium</b>	<b>1200</b>		25	8.8	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1
<b>Sodium</b>	<b>140</b>		50	7.3	mg/Kg	☼	11/08/17 07:33	11/09/17 04:30	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 16:44	11/11/17 19:22	1
<b>Barium</b>	<b>0.35</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 16:44	11/11/17 19:22	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 16:44	11/11/17 19:22	1
<b>Cadmium</b>	<b>0.0031</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 16:44	11/11/17 19:22	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-4

**Client Sample ID: 2696V-33-B03 (0-2)**

**Lab Sample ID: 500-136834-9**

**Date Collected: 11/06/17 10:00**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 87.7**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>350</b>		5.0	0.50	mg/L		11/10/17 16:44	11/11/17 19:22	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:22	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:22	1
<b>Copper</b>	<b>0.032</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:22	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 16:44	11/11/17 19:22	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 16:44	11/11/17 19:22	1
<b>Magnesium</b>	<b>130</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:22	1
<b>Manganese</b>	<b>1.1</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:22	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:22	1
<b>Potassium</b>	<b>1.5 J</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:22	1
<b>Selenium</b>	<b>0.023 J</b>		0.050	0.020	mg/L		11/10/17 16:44	11/11/17 19:22	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:22	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:22	1
<b>Zinc</b>	<b>0.076 J ^</b>		0.50	0.020	mg/L		11/10/17 16:44	11/11/17 19:22	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.24</b>		0.025	0.010	mg/L		11/09/17 16:43	11/11/17 03:34	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 16:44	11/13/17 12:08	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 16:44	11/13/17 12:08	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/10/17 15:28	11/13/17 10:40	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.051</b>		0.017	0.0056	mg/Kg	☼	11/08/17 16:15	11/09/17 10:41	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.50		0.50	0.17	mg/Kg	☼	11/13/17 11:30	11/13/17 17:20	1
<b>pH</b>	<b>8.5</b>		0.20	0.20	SU			11/14/17 17:36	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-4

**Client Sample ID: 2696V-33-B02 (0-2)**

**Lab Sample ID: 500-136834-10**

**Date Collected: 11/06/17 10:15**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 83.7**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.016		0.016	0.0071	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Benzene	<0.0016		0.0016	0.00042	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Bromodichloromethane	<0.0016		0.0016	0.00033	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Bromoform	<0.0016		0.0016	0.00048	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Bromomethane	<0.0041		0.0041	0.0015	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
2-Butanone (MEK)	<0.0041		0.0041	0.0018	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Carbon disulfide	<0.0041		0.0041	0.00085	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Carbon tetrachloride	<0.0016		0.0016	0.00047	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Chlorobenzene	<0.0016		0.0016	0.00060	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Chloroethane	<0.0041		0.0041	0.0012	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Chloroform	<0.0016		0.0016	0.00056	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Chloromethane	<0.0041		0.0041	0.0016	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
cis-1,2-Dichloroethene	<0.0016		0.0016	0.00046	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
cis-1,3-Dichloropropene	<0.0016		0.0016	0.00049	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Dibromochloromethane	<0.0016		0.0016	0.00053	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
1,1-Dichloroethane	<0.0016		0.0016	0.00056	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
1,2-Dichloroethane	<0.0041		0.0041	0.0013	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
1,1-Dichloroethene	<0.0016		0.0016	0.00056	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
1,2-Dichloropropane	<0.0016		0.0016	0.00042	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
1,3-Dichloropropene, Total	<0.0016		0.0016	0.00057	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Ethylbenzene	<0.0016		0.0016	0.00078	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
2-Hexanone	<0.0041		0.0041	0.0013	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Methylene Chloride	<0.0041		0.0041	0.0016	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
4-Methyl-2-pentanone (MIBK)	<0.0041		0.0041	0.0012	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Methyl tert-butyl ether	<0.0016		0.0016	0.00048	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Styrene	<0.0016		0.0016	0.00049	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
1,1,2,2-Tetrachloroethane	<0.0016		0.0016	0.00052	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Tetrachloroethene	<0.0016		0.0016	0.00055	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Toluene	<0.0016		0.0016	0.00041	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
trans-1,2-Dichloroethene	<0.0016		0.0016	0.00072	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
trans-1,3-Dichloropropene	<0.0016		0.0016	0.00057	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
1,1,1-Trichloroethane	<0.0016		0.0016	0.00055	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
1,1,2-Trichloroethane	<0.0016		0.0016	0.00070	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Trichloroethene	<0.0016		0.0016	0.00055	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Vinyl acetate	<0.0041		0.0041	0.0014	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Vinyl chloride	<0.0016		0.0016	0.00072	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1
Xylenes, Total	<0.0033		0.0033	0.00052	mg/Kg	☼	11/07/17 07:20	11/09/17 19:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		75 - 131	11/07/17 07:20	11/09/17 19:43	1
Dibromofluoromethane	82		75 - 126	11/07/17 07:20	11/09/17 19:43	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 134	11/07/17 07:20	11/09/17 19:43	1
Toluene-d8 (Surr)	96		75 - 124	11/07/17 07:20	11/09/17 19:43	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.037		0.037	0.0068	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Acenaphthylene	0.0093	J	0.037	0.0050	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Anthracene	0.024	J	0.037	0.0063	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Benzo[a]anthracene	0.098		0.037	0.0051	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-4

**Client Sample ID: 2696V-33-B02 (0-2)**

**Lab Sample ID: 500-136834-10**

Date Collected: 11/06/17 10:15

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 83.7

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.14		0.037	0.0073	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Benzo[b]fluoranthene	0.20		0.037	0.0081	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Benzo[g,h,i]perylene	0.082		0.037	0.012	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Benzo[k]fluoranthene	0.064		0.037	0.011	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.069	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Chrysene	0.11		0.037	0.010	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Dibenz(a,h)anthracene	0.049		0.037	0.0073	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
2,4-Dichlorophenol	<0.37		0.37	0.090	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
2,4-Dinitrophenol	<0.76		0.76	0.66	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Fluoranthene	0.23		0.037	0.0070	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Hexachlorobenzene	<0.076		0.076	0.0087	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Indeno[1,2,3-cd]pyrene	0.083		0.037	0.0098	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
2-Methylnaphthalene	<0.076		0.076	0.0069	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Naphthalene	<0.037		0.037	0.0058	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Nitrobenzene	<0.037		0.037	0.0094	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
2-Nitrophenol	<0.37		0.37	0.089	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-4

**Client Sample ID: 2696V-33-B02 (0-2)**

**Lab Sample ID: 500-136834-10**

Date Collected: 11/06/17 10:15

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 83.7

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Pentachlorophenol	<0.76		0.76	0.60	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
<b>Phenanthrene</b>	<b>0.092</b>		0.037	0.0053	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
Phenol	<0.19		0.19	0.084	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
<b>Pyrene</b>	<b>0.16</b>		0.037	0.0075	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
2,4,5-Trichlorophenol	<0.37		0.37	0.086	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/13/17 07:19	11/15/17 18:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	91		44 - 121	11/13/17 07:19	11/15/17 18:23	1
2-Fluorophenol	110		46 - 133	11/13/17 07:19	11/15/17 18:23	1
Nitrobenzene-d5	94		41 - 120	11/13/17 07:19	11/15/17 18:23	1
Phenol-d5	106		46 - 125	11/13/17 07:19	11/15/17 18:23	1
Terphenyl-d14	101		35 - 160	11/13/17 07:19	11/15/17 18:23	1
2,4,6-Tribromophenol	78		25 - 139	11/13/17 07:19	11/15/17 18:23	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.30</b>	<b>J</b>	1.2	0.23	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
<b>Arsenic</b>	<b>4.8</b>		0.59	0.20	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
<b>Barium</b>	<b>46</b>		0.59	0.068	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
<b>Beryllium</b>	<b>0.44</b>		0.24	0.056	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
<b>Cadmium</b>	<b>0.29</b>	<b>B</b>	0.12	0.021	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
<b>Chromium</b>	<b>9.8</b>		0.59	0.29	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
<b>Cobalt</b>	<b>5.1</b>		0.30	0.078	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
<b>Copper</b>	<b>13</b>		0.59	0.17	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
<b>Iron</b>	<b>11000</b>		12	6.2	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
<b>Lead</b>	<b>50</b>		0.30	0.14	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
<b>Magnesium</b>	<b>14000</b>		5.9	2.9	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
<b>Calcium</b>	<b>34000</b>	<b>B</b>	12	2.0	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
<b>Manganese</b>	<b>200</b>		0.59	0.086	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
<b>Nickel</b>	<b>13</b>		0.59	0.17	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
Selenium	<0.59		0.59	0.35	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
Silver	<0.30		0.30	0.077	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
Thallium	<0.59		0.59	0.30	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
<b>Vanadium</b>	<b>13</b>		0.30	0.070	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
<b>Zinc</b>	<b>54</b>		1.2	0.52	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
<b>Potassium</b>	<b>1100</b>		30	11	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1
<b>Sodium</b>	<b>250</b>		59	8.8	mg/Kg	☼	11/08/17 07:33	11/09/17 04:35	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 16:44	11/11/17 19:34	1
<b>Barium</b>	<b>0.38</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 16:44	11/11/17 19:34	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 16:44	11/11/17 19:34	1
<b>Cadmium</b>	<b>0.0028</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 16:44	11/11/17 19:34	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-4

**Client Sample ID: 2696V-33-B02 (0-2)**

**Lab Sample ID: 500-136834-10**

Date Collected: 11/06/17 10:15

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 83.7

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>440</b>		5.0	0.50	mg/L		11/10/17 16:44	11/11/17 19:34	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:34	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:34	1
<b>Copper</b>	<b>0.030</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:34	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 16:44	11/11/17 19:34	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 16:44	11/11/17 19:34	1
<b>Magnesium</b>	<b>64</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:34	1
<b>Manganese</b>	<b>0.55</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:34	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:34	1
<b>Potassium</b>	<b>1.4 J</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:34	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 16:44	11/11/17 19:34	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:34	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:34	1
<b>Zinc</b>	<b>0.074 J ^</b>		0.50	0.020	mg/L		11/10/17 16:44	11/11/17 19:34	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.22</b>		0.025	0.010	mg/L		11/09/17 16:43	11/11/17 03:38	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 16:44	11/13/17 12:12	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 16:44	11/13/17 12:12	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/10/17 15:28	11/13/17 10:46	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.045</b>		0.018	0.0060	mg/Kg	☼	11/08/17 16:15	11/09/17 10:43	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.56		0.56	0.19	mg/Kg	☼	11/13/17 11:30	11/13/17 17:22	1
<b>pH</b>	<b>8.7</b>		0.20	0.20	SU			11/14/17 17:36	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-4

**Client Sample ID: 2696V-33-B01 (0-2)**

**Lab Sample ID: 500-136834-11**

**Date Collected: 11/06/17 10:30**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 85.5**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.032</b>		0.017	0.0074	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Benzene	<0.0017		0.0017	0.00043	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Bromodichloromethane	<0.0017		0.0017	0.00035	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Bromoform	<0.0017		0.0017	0.00050	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Bromomethane	<0.0043		0.0043	0.0016	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
2-Butanone (MEK)	<0.0043		0.0043	0.0019	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Carbon disulfide	<0.0043		0.0043	0.00089	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Carbon tetrachloride	<0.0017		0.0017	0.00049	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Chlorobenzene	<0.0017		0.0017	0.00063	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Chloroethane	<0.0043		0.0043	0.0013	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Chloroform	<0.0017		0.0017	0.00059	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Chloromethane	<0.0043		0.0043	0.0017	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
cis-1,2-Dichloroethene	<0.0017		0.0017	0.00048	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
cis-1,3-Dichloropropene	<0.0017		0.0017	0.00051	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Dibromochloromethane	<0.0017		0.0017	0.00056	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
1,1-Dichloroethane	<0.0017		0.0017	0.00058	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
1,2-Dichloroethane	<0.0043		0.0043	0.0013	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
1,1-Dichloroethene	<0.0017		0.0017	0.00059	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
1,2-Dichloropropane	<0.0017		0.0017	0.00044	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
1,3-Dichloropropene, Total	<0.0017		0.0017	0.00060	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Ethylbenzene	<0.0017		0.0017	0.00082	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
2-Hexanone	<0.0043		0.0043	0.0013	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Methylene Chloride	<0.0043		0.0043	0.0017	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
4-Methyl-2-pentanone (MIBK)	<0.0043		0.0043	0.0013	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Methyl tert-butyl ether	<0.0017		0.0017	0.00050	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Styrene	<0.0017		0.0017	0.00051	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
1,1,2,2-Tetrachloroethane	<0.0017		0.0017	0.00054	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Tetrachloroethene	<0.0017		0.0017	0.00058	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Toluene	<0.0017		0.0017	0.00043	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
trans-1,2-Dichloroethene	<0.0017		0.0017	0.00075	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
trans-1,3-Dichloropropene	<0.0017		0.0017	0.00060	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
1,1,1-Trichloroethane	<0.0017		0.0017	0.00057	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
1,1,2-Trichloroethane	<0.0017		0.0017	0.00073	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Trichloroethene	<0.0017		0.0017	0.00058	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Vinyl acetate	<0.0043		0.0043	0.0015	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Vinyl chloride	<0.0017		0.0017	0.00075	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1
Xylenes, Total	<0.0034		0.0034	0.00055	mg/Kg	☼	11/07/17 07:20	11/09/17 20:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		75 - 131	11/07/17 07:20	11/09/17 20:09	1
Dibromofluoromethane	108		75 - 126	11/07/17 07:20	11/09/17 20:09	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 134	11/07/17 07:20	11/09/17 20:09	1
Toluene-d8 (Surr)	97		75 - 124	11/07/17 07:20	11/09/17 20:09	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.037		0.037	0.0068	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
<b>Acenaphthylene</b>	<b>0.0090</b>	<b>J</b>	0.037	0.0050	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
<b>Anthracene</b>	<b>0.014</b>	<b>J</b>	0.037	0.0063	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
<b>Benzo[a]anthracene</b>	<b>0.090</b>		0.037	0.0051	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-4

**Client Sample ID: 2696V-33-B01 (0-2)**

**Lab Sample ID: 500-136834-11**

**Date Collected: 11/06/17 10:30**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 85.5**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.21		0.037	0.0073	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Benzo[b]fluoranthene	0.31		0.037	0.0081	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Benzo[g,h,i]perylene	0.15		0.037	0.012	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Benzo[k]fluoranthene	0.086		0.037	0.011	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.069	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Chrysene	0.13		0.037	0.010	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Dibenz(a,h)anthracene	0.065		0.037	0.0073	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
2,4-Dichlorophenol	<0.37		0.37	0.090	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
2,4-Dinitrophenol	<0.76		0.76	0.66	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Fluoranthene	0.13		0.037	0.0070	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Hexachlorobenzene	<0.076		0.076	0.0087	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Indeno[1,2,3-cd]pyrene	0.15		0.037	0.0098	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
2-Methylnaphthalene	0.016	J	0.076	0.0069	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Naphthalene	0.015	J	0.037	0.0058	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Nitrobenzene	<0.037		0.037	0.0094	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
2-Nitrophenol	<0.37		0.37	0.089	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-4

**Client Sample ID: 2696V-33-B01 (0-2)**

**Lab Sample ID: 500-136834-11**

Date Collected: 11/06/17 10:30

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 85.5

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Pentachlorophenol	<0.76		0.76	0.61	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
<b>Phenanthrene</b>	<b>0.061</b>		0.037	0.0053	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
Phenol	<0.19		0.19	0.084	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
<b>Pyrene</b>	<b>0.097</b>		0.037	0.0075	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
2,4,5-Trichlorophenol	<0.37		0.37	0.086	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/13/17 07:19	11/15/17 15:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	88		44 - 121	11/13/17 07:19	11/15/17 15:37	1
2-Fluorophenol	106		46 - 133	11/13/17 07:19	11/15/17 15:37	1
Nitrobenzene-d5	92		41 - 120	11/13/17 07:19	11/15/17 15:37	1
Phenol-d5	103		46 - 125	11/13/17 07:19	11/15/17 15:37	1
Terphenyl-d14	89		35 - 160	11/13/17 07:19	11/15/17 15:37	1
2,4,6-Tribromophenol	93		25 - 139	11/13/17 07:19	11/15/17 15:37	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.25</b>	<b>J</b>	1.1	0.21	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1
<b>Arsenic</b>	<b>11</b>		0.54	0.18	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1
<b>Barium</b>	<b>93</b>		0.54	0.061	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1
<b>Beryllium</b>	<b>0.53</b>		0.21	0.050	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1
<b>Cadmium</b>	<b>0.30</b>	<b>B</b>	0.11	0.019	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1
<b>Chromium</b>	<b>12</b>		0.54	0.27	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1
<b>Cobalt</b>	<b>12</b>		0.27	0.070	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1
<b>Copper</b>	<b>27</b>		0.54	0.15	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1
<b>Iron</b>	<b>22000</b>		11	5.6	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1
<b>Lead</b>	<b>45</b>		0.27	0.12	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1
<b>Magnesium</b>	<b>26000</b>		5.4	2.7	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1
<b>Calcium</b>	<b>68000</b>	<b>B</b>	110	18	mg/Kg	☼	11/08/17 07:33	11/09/17 18:24	10
<b>Manganese</b>	<b>710</b>		0.54	0.078	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1
<b>Nickel</b>	<b>23</b>		0.54	0.16	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1
Selenium	<0.54		0.54	0.32	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1
Silver	<0.27		0.27	0.069	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1
Thallium	<0.54		0.54	0.27	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1
<b>Vanadium</b>	<b>15</b>		0.27	0.063	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1
<b>Zinc</b>	<b>61</b>		1.1	0.47	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1
<b>Potassium</b>	<b>1300</b>		27	9.5	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1
<b>Sodium</b>	<b>280</b>		54	7.9	mg/Kg	☼	11/08/17 07:33	11/09/17 04:47	1

## Method: 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 16:44	11/11/17 19:38	1
<b>Barium</b>	<b>0.36</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 16:44	11/11/17 19:38	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 16:44	11/11/17 19:38	1
<b>Cadmium</b>	<b>0.0034</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 16:44	11/11/17 19:38	1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-4

**Client Sample ID: 2696V-33-B01 (0-2)**

**Lab Sample ID: 500-136834-11**

**Date Collected: 11/06/17 10:30**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 85.5**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>390</b>		5.0	0.50	mg/L		11/10/17 16:44	11/11/17 19:38	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:38	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:38	1
<b>Copper</b>	<b>0.029</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:38	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 16:44	11/11/17 19:38	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 16:44	11/11/17 19:38	1
<b>Magnesium</b>	<b>130</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:38	1
<b>Manganese</b>	<b>1.3</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:38	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:38	1
<b>Potassium</b>	<b>1.8</b>	J	2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:38	1
<b>Selenium</b>	<b>0.021</b>	J	0.050	0.020	mg/L		11/10/17 16:44	11/11/17 19:38	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:38	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:38	1
<b>Zinc</b>	<b>0.068</b>	J ^	0.50	0.020	mg/L		11/10/17 16:44	11/11/17 19:38	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.52</b>		0.025	0.010	mg/L		11/09/17 16:43	11/11/17 03:42	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 16:44	11/13/17 12:15	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 16:44	11/13/17 12:15	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/10/17 15:28	11/13/17 10:49	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.042</b>		0.019	0.0063	mg/Kg	☼	11/08/17 16:15	11/09/17 10:45	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cyanide, Total</b>	<b>0.19</b>	J	0.56	0.19	mg/Kg	☼	11/13/17 11:30	11/13/17 17:22	1
<b>pH</b>	<b>8.8</b>		0.20	0.20	SU			11/14/17 17:36	1



# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-4

## Qualifiers

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

### General Chemistry

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

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-4

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Report To (optional)  
Contact: MATT WISS  
Company: TERRALON  
Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
E-Mail: \_\_\_\_\_

Bill To (optional)  
Contact: \_\_\_\_\_  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
PO#/Reference# \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-136834

Chain of Custody Number: \_\_\_\_\_

Page 1 of 1

Temperature °C of Cooler: \_\_\_\_\_

Client		Client Project #		Preservative		Parameter		Comments											
<u>TERRALON</u>		<u>11177029M</u>						Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other											
Project Name		Lab Project #																	
<u>WORK ORDER 037</u>																			
Project Location/State		Lab PM																	
<u>MARSHAM ILL</u>		<u>DICK WRIGHT</u>																	
Sampler																			
<u>CRAIG VARLAND</u>																			
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	NOGS	SNOGS	23 TAL METALS PH	TCLP 23 TAL METALS									
			Date	Time															
<u>9</u>		<u>2696V-33-803-(0-2)</u>	<u>11-6-17</u>	<u>1000</u>	<u>S</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>									
<u>10</u>		<u>2696V-33-802-(0-2)</u>	<u>11-6-17</u>	<u>1015</u>	<u>S</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>									
<u>11</u>		<u>2696V-33-801-(0-2)</u>	<u>11-6-17</u>	<u>1030</u>	<u>S</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>									

Turnaround Time Required (Business Days)  
 1 Day  2 Days  5 Days  7 Days  10 Days  15 Days  Other  
 Requested Due Date: \_\_\_\_\_

Sample Disposal  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRALON</u> Date: <u>11-6-17</u> Time: <u>1545</u>	Received By: <u>P.N. Neal</u> Company: <u>JA</u> Date: <u>11/6/17</u> Time: <u>1745</u>	Lab Courier: <u>JA</u>
Relinquished By: <u>P.N. Neal</u> Company: <u>JA</u> Date: <u>11/6/17</u> Time: <u>1613</u>	Received By: <u>[Signature]</u> Company: <u>JA-CHE</u> Date: <u>11/7/17</u> Time: <u>0705</u>	Shipped: _____
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____	Hand Delivered: _____

Matrix Key  
 WW - Wastewater SE - Sediment  
 W - Water SO - Soil  
 S - Soil L - Leachate  
 SL - Sludge WI - Wipe  
 MS - Miscellaneous DW - Drinking Water  
 CL - Oil O - Other  
 A - Air

Client Comments  
NO ALUMINUM

Lab Comments:  
 \_\_\_\_\_

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136834-4

**Login Number: 136834**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Scott, Sherri L**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.7,4.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

US Route 6 (Westbound) IDOT STA 35+75 to 36+45 (ISGS Site 2696V-34)

City: Oak Forest/Markham State: IL Zip Code: 60428

County: Cook Township: Bremen

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 41.60079 Longitude: -87.69463  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

### II. Owner/Operator Information for Source Site

Site Owner

Site Operator

Name: Illinois Department of Transportation

Name: Illinois Department of Transportation

Street Address: 201 West Center Court

Street Address: 201 West Center Court

PO Box: \_\_\_\_\_

PO Box: \_\_\_\_\_

City: Schaumburg State: IL

City: Schaumburg State: IL

Zip Code: 60196 Phone: 847-705-4122

Zip Code: 60196 Phone: 847-705-4122

Contact: Paul Nickles

Contact: Paul Nickles

Email, if available: paul.nickles@illinois.gov

Email, if available: paul.nickles@illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms

Project Name: FAP 351-US Rte 6 at Pulaski/Crawford & Kedzie

Latitude: 41.60079 Longitude: -87.69463

Uncontaminated Site Certification

**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

Soil from boring B01 was sampled adjacent to ISGS Site No 2696V-34.  
See Exhibits 6, 6H, and Table 63 of the Preliminary Site Investigation Report prepared by Terracon.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

TestAmerica Lab Report No J136834-5.  
Also see Preliminary Site Investigation Report prepared by Terracon. CCDD/USFO facility in MSA County.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Matt Weiss (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

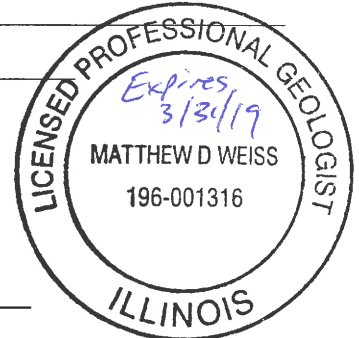
**Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))**

Company Name: Terracon Consultants, Inc  
 Street Address: 135 Ambassador Drive  
 City: Naperville State: IL Zip Code: 60540  
 Phone: 630-717-4263

Matt Weiss  
 Printed Name:

[Signature]  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

7/24/18  
 Date:



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-34)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 1 of 2

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-34-B01 (0-1)	2696V-34-B01 (0-1) Dup
				CCDD	Sample Depth (feet)	(0-1)	(0-1)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/06/2017	11/06/2017
<b>Volatile Organic Analytical Parameters</b>							
Acetone	mg/kg	---	---	25		0.022	<0.018
<b>Semivolatile Organic Analytical Parameters</b>							
Acenaphthene	mg/kg	0.09	0.13	570		0.022	<0.037
Acenaphthylene	mg/kg	0.03	0.07	85		0.019	0.0069
Anthracene	mg/kg	0.25	0.4	12000		0.087	0.016
Benzo(a)anthracene	mg/kg	1.1	1.8	0.9		0.58	0.096
Benzo(a)pyrene	mg/kg	1.3	2.1	0.09		0.73	0.14
Benzo(b)fluoranthene	mg/kg	1.5	2.1	0.9		1.2	0.24
Benzo(g,h,i)perylene	mg/kg	0.68	1.7	2300		0.36	0.084
Benzo(k)fluoranthene	mg/kg	0.99	1.7	9		0.47	0.11
Chrysene	mg/kg	1.2	2.7	88		0.7	0.12
Dibenzo(a,h)anthracene	mg/kg	0.2	0.42	0.09		0.12	0.02
Fluoranthene	mg/kg	2.7	4.1	3100		1.6	0.23
Fluorene	mg/kg	0.1	0.18	560		0.025	<0.037
Indeno(1,2,3-c,d)pyrene	mg/kg	0.86	1.6	0.9		0.36	0.07
Naphthalene	mg/kg	0.04	0.2	1.8		0.0061	<0.037
Phenanthrene	mg/kg	1.3	2.5	210		0.55	0.086
Pyrene	mg/kg	1.9	3.0	2300		1.2	0.31
bis(2-Ethylhexyl)phthalate	mg/kg	---	---	46		0.25	0.077
<b>Inorganic Analytical Parameters</b>							
Arsenic	mg/kg	---	13	11.3		4.8	12
Barium	mg/kg	---	110	1500		31	23
Cadmium	mg/kg	---	0.6	5.2		0.33	0.24
Chromium, total	mg/kg	---	16.2	21		11	7.6
Lead	mg/kg	---	36	107		71	90
Mercury	mg/kg	---	0.06	0.1		0.025	0.083
Selenium	mg/kg	---	0.48	1.3		<0.51	<0.52
Silver	mg/kg	---	0.55	4.4		<0.25	<0.26
Antimony	mg/kg	---	4.0	5		0.32	0.33
Beryllium	mg/kg	---	0.59	22		0.2	0.21
Calcium	mg/kg	---	9,300	---		160000	200000
Cobalt	mg/kg	---	8.9	20		2.7	3
Copper	mg/kg	---	19.6	2900		18	11
Cyanide	mg/kg	---	0.51	---		0.23	0.27
Iron	mg/kg	---	15,900	15000		5800	5400
Magnesium	mg/kg	---	4,820	325000		92000	120000
Manganese	mg/kg	---	636	630		180	160
Nickel	mg/kg	---	18	100		7.7	8.1
Potassium	mg/kg	---	1,268	---		680	740
Sodium	mg/kg	---	130	---		130	170
Thallium	mg/kg	---	0.32	2.6		<0.51	<0.52
Vanadium	mg/kg	---	25.2	550		6.9	7.2
Zinc	mg/kg	---	95	5100		78	43
pH			6.25	9		7.7	8



Detected Constituents to MACs-PTB 174-009;Work Order:037A  
Preliminary Site Investigation  
FAP 351-US Rte 6 at S. Pulaski/Crawford + Kedzie (PESA #2696V-34)  
Oak Forest/Markham, Cook County, IL  
Terracon Project No. 11177029M  
Page 2 of 2

Analyte	Units	Background		Maximum Allowed Concentration	Sample Identification	2696V-34-B01 (0-1)	2696V-34-B01 (0-1) Dup
				CCDD	Sample Depth (feet)	(0-1)	(0-1)
		Chicago	MSAs	mg/kg pH 6.25-9.0	Date Collected	11/06/2017	11/06/2017
<b>Inorganic Analytical Parameters (SPLP)</b>							
Antimony, SPLP	mg/L	---	---	---		--	--
Arsenic, SPLP	mg/L	---	---	---		--	--
Barium, SPLP	mg/L	---	---	---		--	--
Beryllium, SPLP	mg/L	---	---	---		--	--
Cadmium, SPLP	mg/L	---	---	---		--	--
Calcium, SPLP	mg/L	---	---	---		--	--
Chromium, SPLP	mg/L	---	---	---		--	--
Cobalt, SPLP	mg/L	---	---	---		--	--
Copper, SPLP	mg/L	---	---	---		--	--
Iron, SPLP	mg/L	---	---	---		--	--
Lead, SPLP	mg/L	---	---	---		--	--
Magnesium, SPLP	mg/L	---	---	---		--	--
Manganese, SPLP	mg/L	---	---	---		0.073	--
Mercury, SPLP	mg/L	---	---	---		--	--
Nickel, SPLP	mg/L	---	---	---		--	--
Potassium, SPLP	mg/L	---	---	---		--	--
Selenium, SPLP	mg/L	---	---	---		--	--
Silver, SPLP	mg/L	---	---	---		--	--
Sodium, SPLP	mg/L	---	---	---		--	--
Thallium, SPLP	mg/L	---	---	---		--	--
Vanadium, SPLP	mg/L	---	---	---		--	--
Zinc, SPLP	mg/L	---	---	---		--	--
Cyanide, SPLP	mg/L	---	---	---		--	--
<b>Inorganic Analytical Parameters (TCLP)</b>							
Arsenic, TCLP	mg/L	---	---	---		<0.050	<0.050
Barium, TCLP	mg/L	---	---	---		0.37	0.41
Cadmium, TCLP	mg/L	---	---	---		0.0021	<0.0050
Chromium, TCLP	mg/L	---	---	---		<0.025	<0.025
Lead, TCLP	mg/L	---	---	---		<0.0075	<0.0075
Mercury, TCLP	mg/L	---	---	---		<0.00020	<0.00020
Selenium, TCLP	mg/L	---	---	---		<0.050	<0.050
Silver, TCLP	mg/L	---	---	---		<0.025	<0.025
Antimony, TCLP	mg/L	---	---	---		<0.0060	<0.0060
Beryllium, TCLP	mg/L	---	---	---		<0.0040	<0.0040
Calcium, TCLP	mg/L	---	---	---		310	300
Cobalt, TCLP	mg/L	---	---	---		<0.025	<0.025
Copper, TCLP	mg/L	---	---	---		0.042	0.039
Cyanide, TCLP	mg/L	---	---	---		----	----
Iron, TCLP	mg/L	---	---	---		<0.40	<0.40
Magnesium, TCLP	mg/L	---	---	---		160	160
Manganese, TCLP	mg/L	---	---	---		0.16	0.05
Nickel, TCLP	mg/L	---	---	---		<0.025	<0.025
Potassium, TCLP	mg/L	---	---	---		6.1	4.7
Sodium, TCLP	mg/L	---	---	---		----	----
Thallium, TCLP	mg/L	---	---	---		<0.0020	<0.0020
Vanadium, TCLP	mg/L	---	---	---		<0.025	<0.025
Zinc, TCLP	mg/L	---	---	---		0.15	0.13

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.  
TestAmerica Chicago  
2417 Bond Street  
University Park, IL 60484  
Tel: (708)534-5200

TestAmerica Job ID: 500-136834-5  
Client Project/Site: IDOT - Oak Forest/Markham - WO37

For:  
Terracon Consulting Eng & Scientists  
135 Ambassador Drive  
Naperville, Illinois 60540

Attn: Mr. Matthew Weiss

*Jodie Bracken*

Authorized for release by:  
11/16/2017 5:53:15 PM  
Jodie Bracken, Project Management Assistant II  
[jodie.bracken@testamericainc.com](mailto:jodie.bracken@testamericainc.com)

Designee for  
Richard Wright, Senior Project Manager  
(708)534-5200  
[richard.wright@testamericainc.com](mailto:richard.wright@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

1

2

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# Case Narrative

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-5

---

**Job ID: 500-136834-5**

---

**Laboratory: TestAmerica Chicago**

## Narrative

---

**Job Narrative**  
**500-136834-5**

### Receipt

The samples were received on 11/6/2017 4:13 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.7° C and 4.0° C.

### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### GC/MS Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### Metals

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 500-409604 recovered above the upper control limit for Zinc. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The following samples are impacted: 2696V-34-B01 (0-1) (500-136834-12) and 2696V-34-B01 (0-1) Dup (500-136834-13).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-5

**Client Sample ID: 2696V-34-B01 (0-1)**

**Lab Sample ID: 500-136834-12**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acetone	0.022		0.018	0.0077	mg/Kg	1	☼	8260B	Total/NA	
Acenaphthene	0.022	J	0.035	0.0064	mg/Kg	1	☼	8270D	Total/NA	
Acenaphthylene	0.019	J	0.035	0.0047	mg/Kg	1	☼	8270D	Total/NA	
Anthracene	0.087		0.035	0.0060	mg/Kg	1	☼	8270D	Total/NA	
Benzo[a]anthracene	0.58		0.035	0.0048	mg/Kg	1	☼	8270D	Total/NA	
Benzo[a]pyrene	0.73		0.035	0.0069	mg/Kg	1	☼	8270D	Total/NA	
Benzo[b]fluoranthene	1.2		0.035	0.0077	mg/Kg	1	☼	8270D	Total/NA	
Benzo[g,h,i]perylene	0.36		0.035	0.011	mg/Kg	1	☼	8270D	Total/NA	
Benzo[k]fluoranthene	0.47		0.035	0.011	mg/Kg	1	☼	8270D	Total/NA	
Bis(2-ethylhexyl) phthalate	0.25		0.18	0.065	mg/Kg	1	☼	8270D	Total/NA	
Chrysene	0.70		0.035	0.0097	mg/Kg	1	☼	8270D	Total/NA	
Dibenz(a,h)anthracene	0.12		0.035	0.0069	mg/Kg	1	☼	8270D	Total/NA	
Fluoranthene	1.6		0.035	0.0066	mg/Kg	1	☼	8270D	Total/NA	
Fluorene	0.025	J	0.035	0.0050	mg/Kg	1	☼	8270D	Total/NA	
Indeno[1,2,3-cd]pyrene	0.36		0.035	0.0092	mg/Kg	1	☼	8270D	Total/NA	
Naphthalene	0.0061	J	0.035	0.0055	mg/Kg	1	☼	8270D	Total/NA	
Phenanthrene	0.55		0.035	0.0050	mg/Kg	1	☼	8270D	Total/NA	
Pyrene	1.2		0.035	0.0071	mg/Kg	1	☼	8270D	Total/NA	
Antimony	0.32	J	1.0	0.20	mg/Kg	1	☼	6010B	Total/NA	
Arsenic	4.8		0.51	0.17	mg/Kg	1	☼	6010B	Total/NA	
Barium	31		0.51	0.058	mg/Kg	1	☼	6010B	Total/NA	
Beryllium	0.20		0.20	0.047	mg/Kg	1	☼	6010B	Total/NA	
Cadmium	0.33	B	0.10	0.018	mg/Kg	1	☼	6010B	Total/NA	
Chromium	11		0.51	0.25	mg/Kg	1	☼	6010B	Total/NA	
Cobalt	2.7		0.25	0.066	mg/Kg	1	☼	6010B	Total/NA	
Copper	18		0.51	0.14	mg/Kg	1	☼	6010B	Total/NA	
Iron	5800		10	5.3	mg/Kg	1	☼	6010B	Total/NA	
Lead	71		0.25	0.12	mg/Kg	1	☼	6010B	Total/NA	
Magnesium	92000		51	25	mg/Kg	10	☼	6010B	Total/NA	
Calcium	160000	B	100	17	mg/Kg	10	☼	6010B	Total/NA	
Manganese	180		0.51	0.074	mg/Kg	1	☼	6010B	Total/NA	
Nickel	7.7		0.51	0.15	mg/Kg	1	☼	6010B	Total/NA	
Vanadium	6.9		0.25	0.060	mg/Kg	1	☼	6010B	Total/NA	
Zinc	78		1.0	0.45	mg/Kg	1	☼	6010B	Total/NA	
Potassium	680		25	9.0	mg/Kg	1	☼	6010B	Total/NA	
Sodium	130		51	7.5	mg/Kg	1	☼	6010B	Total/NA	
Barium	0.37	J	0.50	0.050	mg/L	1		6010B	TCLP	
Cadmium	0.0021	J	0.0050	0.0020	mg/L	1		6010B	TCLP	
Calcium	310		5.0	0.50	mg/L	1		6010B	TCLP	
Copper	0.042		0.025	0.010	mg/L	1		6010B	TCLP	
Magnesium	160		2.5	0.50	mg/L	1		6010B	TCLP	
Manganese	0.16		0.025	0.010	mg/L	1		6010B	TCLP	
Potassium	6.1		2.5	0.50	mg/L	1		6010B	TCLP	
Zinc	0.15	J ^	0.50	0.020	mg/L	1		6010B	TCLP	
Manganese	0.073		0.025	0.010	mg/L	1		6010B	SPLP East	
Mercury	0.025		0.018	0.0060	mg/Kg	1	☼	7471B	Total/NA	
Cyanide, Total	0.23	J	0.42	0.14	mg/Kg	1	☼	9014	Total/NA	
pH	7.7		0.20	0.20	SU	1		9045D	Total/NA	

**Client Sample ID: 2696V-34-B01 (0-1) Dup**

**Lab Sample ID: 500-136834-13**

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-5

**Client Sample ID: 2696V-34-B01 (0-1) Dup (Continued)**

**Lab Sample ID: 500-136834-13**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0069	J	0.037	0.0049	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.016	J	0.037	0.0062	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.096		0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.14		0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.24		0.037	0.0080	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.084		0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.11		0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.077	J	0.19	0.068	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.12		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.020	J	0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.23		0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.070		0.037	0.0096	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.086		0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.31		0.037	0.0074	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.33	J	1.0	0.20	mg/Kg	1	☼	6010B	Total/NA
Arsenic	12		0.52	0.18	mg/Kg	1	☼	6010B	Total/NA
Barium	23		0.52	0.059	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.21		0.21	0.049	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.24	B	0.10	0.019	mg/Kg	1	☼	6010B	Total/NA
Chromium	7.6		0.52	0.26	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.0		0.26	0.068	mg/Kg	1	☼	6010B	Total/NA
Copper	11		0.52	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	5400		10	5.4	mg/Kg	1	☼	6010B	Total/NA
Lead	90		0.26	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	120000		52	26	mg/Kg	10	☼	6010B	Total/NA
Calcium	200000	B	100	18	mg/Kg	10	☼	6010B	Total/NA
Manganese	160		0.52	0.076	mg/Kg	1	☼	6010B	Total/NA
Nickel	8.1		0.52	0.15	mg/Kg	1	☼	6010B	Total/NA
Vanadium	7.2		0.26	0.061	mg/Kg	1	☼	6010B	Total/NA
Zinc	43		1.0	0.46	mg/Kg	1	☼	6010B	Total/NA
Potassium	740		26	9.2	mg/Kg	1	☼	6010B	Total/NA
Sodium	170		52	7.7	mg/Kg	1	☼	6010B	Total/NA
Barium	0.41	J	0.50	0.050	mg/L	1		6010B	TCLP
Calcium	300		5.0	0.50	mg/L	1		6010B	TCLP
Copper	0.039		0.025	0.010	mg/L	1		6010B	TCLP
Magnesium	160		2.5	0.50	mg/L	1		6010B	TCLP
Manganese	0.050		0.025	0.010	mg/L	1		6010B	TCLP
Potassium	4.7		2.5	0.50	mg/L	1		6010B	TCLP
Zinc	0.13	J ^	0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.083		0.016	0.0054	mg/Kg	1	☼	7471B	Total/NA
Cyanide, Total	0.27	J	0.51	0.18	mg/Kg	1	☼	9014	Total/NA
pH	8.0		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-5

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-136834-12	2696V-34-B01 (0-1)	Solid	11/06/17 11:00	11/06/17 16:13
500-136834-13	2696V-34-B01 (0-1) Dup	Solid	11/06/17 11:00	11/06/17 16:13

1

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# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-5

**Client Sample ID: 2696V-34-B01 (0-1)**

**Lab Sample ID: 500-136834-12**

Date Collected: 11/06/17 11:00

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 89.9

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acetone</b>	<b>0.022</b>		0.018	0.0077	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Benzene	<0.0018		0.0018	0.00045	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Bromodichloromethane	<0.0018		0.0018	0.00036	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Bromoform	<0.0018		0.0018	0.00052	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Bromomethane	<0.0044		0.0044	0.0017	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
2-Butanone (MEK)	<0.0044		0.0044	0.0020	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Carbon disulfide	<0.0044		0.0044	0.00092	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Carbon tetrachloride	<0.0018		0.0018	0.00052	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Chlorobenzene	<0.0018		0.0018	0.00066	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Chloroethane	<0.0044		0.0044	0.0013	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Chloroform	<0.0018		0.0018	0.00062	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Chloromethane	<0.0044		0.0044	0.0018	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
cis-1,2-Dichloroethene	<0.0018		0.0018	0.00050	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
cis-1,3-Dichloropropene	<0.0018		0.0018	0.00054	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Dibromochloromethane	<0.0018		0.0018	0.00058	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
1,1-Dichloroethane	<0.0018		0.0018	0.00061	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
1,2-Dichloroethane	<0.0044		0.0044	0.0014	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
1,1-Dichloroethene	<0.0018		0.0018	0.00061	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
1,2-Dichloropropane	<0.0018		0.0018	0.00046	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
1,3-Dichloropropane, Total	<0.0018		0.0018	0.00062	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Ethylbenzene	<0.0018		0.0018	0.00085	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
2-Hexanone	<0.0044		0.0044	0.0014	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Methylene Chloride	<0.0044		0.0044	0.0017	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
4-Methyl-2-pentanone (MIBK)	<0.0044		0.0044	0.0013	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Methyl tert-butyl ether	<0.0018		0.0018	0.00052	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Styrene	<0.0018		0.0018	0.00054	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
1,1,2,2-Tetrachloroethane	<0.0018		0.0018	0.00057	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Tetrachloroethene	<0.0018		0.0018	0.00060	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Toluene	<0.0018		0.0018	0.00045	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
trans-1,2-Dichloroethene	<0.0018		0.0018	0.00079	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
trans-1,3-Dichloropropene	<0.0018		0.0018	0.00062	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
1,1,1-Trichloroethane	<0.0018		0.0018	0.00060	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
1,1,2-Trichloroethane	<0.0018		0.0018	0.00076	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Trichloroethene	<0.0018		0.0018	0.00060	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Vinyl acetate	<0.0044		0.0044	0.0015	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Vinyl chloride	<0.0018		0.0018	0.00079	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1
Xylenes, Total	<0.0036		0.0036	0.00057	mg/Kg	☼	11/07/17 07:20	11/09/17 20:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		75 - 131	11/07/17 07:20	11/09/17 20:34	1
Dibromofluoromethane	104		75 - 126	11/07/17 07:20	11/09/17 20:34	1
1,2-Dichloroethane-d4 (Surr)	101		70 - 134	11/07/17 07:20	11/09/17 20:34	1
Toluene-d8 (Surr)	96		75 - 124	11/07/17 07:20	11/09/17 20:34	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Acenaphthene</b>	<b>0.022</b>	<b>J</b>	0.035	0.0064	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
<b>Acenaphthylene</b>	<b>0.019</b>	<b>J</b>	0.035	0.0047	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
<b>Anthracene</b>	<b>0.087</b>		0.035	0.0060	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
<b>Benzo[a]anthracene</b>	<b>0.58</b>		0.035	0.0048	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-5

**Client Sample ID: 2696V-34-B01 (0-1)**

**Lab Sample ID: 500-136834-12**

**Date Collected: 11/06/17 11:00**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 89.9**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.73		0.035	0.0069	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Benzo[b]fluoranthene	1.2		0.035	0.0077	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Benzo[g,h,i]perylene	0.36		0.035	0.011	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Benzo[k]fluoranthene	0.47		0.035	0.011	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.053	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Bis(2-ethylhexyl) phthalate	0.25		0.18	0.065	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Butyl benzyl phthalate	<0.18		0.18	0.068	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Carbazole	<0.18		0.18	0.089	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
4-Chloroaniline	<0.72		0.72	0.17	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
4-Chloro-3-methylphenol	<0.35		0.35	0.12	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
2-Chlorophenol	<0.18		0.18	0.061	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Chrysene	0.70		0.035	0.0097	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Dibenz(a,h)anthracene	0.12		0.035	0.0069	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
1,2-Dichlorobenzene	<0.18		0.18	0.043	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
2,4-Dichlorophenol	<0.35		0.35	0.085	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Diethyl phthalate	<0.18		0.18	0.060	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
2,4-Dimethylphenol	<0.35		0.35	0.14	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Di-n-butyl phthalate	<0.18		0.18	0.054	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
4,6-Dinitro-2-methylphenol	<0.72		0.72	0.29	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
2,4-Dinitrophenol	<0.72		0.72	0.63	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
2,6-Dinitrotoluene	<0.18		0.18	0.070	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Di-n-octyl phthalate	<0.18		0.18	0.058	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Fluoranthene	1.6		0.035	0.0066	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Fluorene	0.025 J		0.035	0.0050	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Hexachlorobenzene	<0.072		0.072	0.0083	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Hexachlorobutadiene	<0.18		0.18	0.056	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Hexachlorocyclopentadiene	<0.72		0.72	0.21	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Hexachloroethane	<0.18		0.18	0.054	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Indeno[1,2,3-cd]pyrene	0.36		0.035	0.0092	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
2-Methylnaphthalene	<0.072		0.072	0.0066	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
2-Methylphenol	<0.18		0.18	0.057	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Naphthalene	0.0061 J		0.035	0.0055	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
3-Nitroaniline	<0.35		0.35	0.11	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
4-Nitroaniline	<0.35		0.35	0.15	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Nitrobenzene	<0.035		0.035	0.0089	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
2-Nitrophenol	<0.35		0.35	0.084	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-5

**Client Sample ID: 2696V-34-B01 (0-1)**

**Lab Sample ID: 500-136834-12**

Date Collected: 11/06/17 11:00

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 89.9

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.72		0.72	0.34	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
N-Nitrosodi-n-propylamine	<0.072		0.072	0.044	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Pentachlorophenol	<0.72		0.72	0.57	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
<b>Phenanthrene</b>	<b>0.55</b>		0.035	0.0050	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
Phenol	<0.18		0.18	0.079	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
<b>Pyrene</b>	<b>1.2</b>		0.035	0.0071	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.038	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
2,4,5-Trichlorophenol	<0.35		0.35	0.081	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1
2,4,6-Trichlorophenol	<0.35		0.35	0.12	mg/Kg	☼	11/13/17 07:19	11/15/17 18:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	85		44 - 121	11/13/17 07:19	11/15/17 18:50	1
2-Fluorophenol	103		46 - 133	11/13/17 07:19	11/15/17 18:50	1
Nitrobenzene-d5	92		41 - 120	11/13/17 07:19	11/15/17 18:50	1
Phenol-d5	97		46 - 125	11/13/17 07:19	11/15/17 18:50	1
Terphenyl-d14	101		35 - 160	11/13/17 07:19	11/15/17 18:50	1
2,4,6-Tribromophenol	88		25 - 139	11/13/17 07:19	11/15/17 18:50	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.32</b>	<b>J</b>	1.0	0.20	mg/Kg	☼	11/08/17 07:33	11/09/17 04:51	1
<b>Arsenic</b>	<b>4.8</b>		0.51	0.17	mg/Kg	☼	11/08/17 07:33	11/09/17 04:51	1
<b>Barium</b>	<b>31</b>		0.51	0.058	mg/Kg	☼	11/08/17 07:33	11/09/17 04:51	1
<b>Beryllium</b>	<b>0.20</b>		0.20	0.047	mg/Kg	☼	11/08/17 07:33	11/09/17 04:51	1
<b>Cadmium</b>	<b>0.33</b>	<b>B</b>	0.10	0.018	mg/Kg	☼	11/08/17 07:33	11/09/17 04:51	1
<b>Chromium</b>	<b>11</b>		0.51	0.25	mg/Kg	☼	11/08/17 07:33	11/09/17 04:51	1
<b>Cobalt</b>	<b>2.7</b>		0.25	0.066	mg/Kg	☼	11/08/17 07:33	11/09/17 04:51	1
<b>Copper</b>	<b>18</b>		0.51	0.14	mg/Kg	☼	11/08/17 07:33	11/09/17 04:51	1
<b>Iron</b>	<b>5800</b>		10	5.3	mg/Kg	☼	11/08/17 07:33	11/09/17 04:51	1
<b>Lead</b>	<b>71</b>		0.25	0.12	mg/Kg	☼	11/08/17 07:33	11/09/17 04:51	1
<b>Magnesium</b>	<b>92000</b>		51	25	mg/Kg	☼	11/08/17 07:33	11/09/17 18:36	10
<b>Calcium</b>	<b>160000</b>	<b>B</b>	100	17	mg/Kg	☼	11/08/17 07:33	11/09/17 18:36	10
<b>Manganese</b>	<b>180</b>		0.51	0.074	mg/Kg	☼	11/08/17 07:33	11/09/17 04:51	1
<b>Nickel</b>	<b>7.7</b>		0.51	0.15	mg/Kg	☼	11/08/17 07:33	11/09/17 04:51	1
Selenium	<0.51		0.51	0.30	mg/Kg	☼	11/08/17 07:33	11/09/17 04:51	1
Silver	<0.25		0.25	0.065	mg/Kg	☼	11/08/17 07:33	11/09/17 04:51	1
Thallium	<0.51		0.51	0.25	mg/Kg	☼	11/08/17 07:33	11/09/17 04:51	1
<b>Vanadium</b>	<b>6.9</b>		0.25	0.060	mg/Kg	☼	11/08/17 07:33	11/09/17 04:51	1
<b>Zinc</b>	<b>78</b>		1.0	0.45	mg/Kg	☼	11/08/17 07:33	11/09/17 04:51	1
<b>Potassium</b>	<b>680</b>		25	9.0	mg/Kg	☼	11/08/17 07:33	11/09/17 04:51	1
<b>Sodium</b>	<b>130</b>		51	7.5	mg/Kg	☼	11/08/17 07:33	11/09/17 04:51	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 16:44	11/11/17 19:54	1
<b>Barium</b>	<b>0.37</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 16:44	11/11/17 19:54	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 16:44	11/11/17 19:54	1
<b>Cadmium</b>	<b>0.0021</b>	<b>J</b>	0.0050	0.0020	mg/L		11/10/17 16:44	11/11/17 19:54	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-5

**Client Sample ID: 2696V-34-B01 (0-1)**

**Lab Sample ID: 500-136834-12**

**Date Collected: 11/06/17 11:00**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 89.9**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>310</b>		5.0	0.50	mg/L		11/10/17 16:44	11/11/17 19:54	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:54	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:54	1
<b>Copper</b>	<b>0.042</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:54	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 16:44	11/11/17 19:54	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 16:44	11/11/17 19:54	1
<b>Magnesium</b>	<b>160</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:54	1
<b>Manganese</b>	<b>0.16</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:54	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:54	1
<b>Potassium</b>	<b>6.1</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:54	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 16:44	11/11/17 19:54	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:54	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:54	1
<b>Zinc</b>	<b>0.15</b>	J ^	0.50	0.020	mg/L		11/10/17 16:44	11/11/17 19:54	1

**Method: 6010B - Metals (ICP) - SPLP East**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.073</b>		0.025	0.010	mg/L		11/09/17 16:43	11/11/17 03:54	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 16:44	11/13/17 12:29	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 16:44	11/13/17 12:29	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/10/17 15:28	11/13/17 10:51	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.025</b>		0.018	0.0060	mg/Kg	☼	11/08/17 16:15	11/09/17 10:48	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cyanide, Total</b>	<b>0.23</b>	J	0.42	0.14	mg/Kg	☼	11/13/17 11:30	11/13/17 17:23	1
<b>pH</b>	<b>7.7</b>		0.20	0.20	SU			11/14/17 17:36	1

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-5

**Client Sample ID: 2696V-34-B01 (0-1) Dup**

**Lab Sample ID: 500-136834-13**

**Date Collected: 11/06/17 11:00**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 89.2**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.018		0.018	0.0078	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Benzene	<0.0018		0.0018	0.00046	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Bromodichloromethane	<0.0018		0.0018	0.00037	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Bromoform	<0.0018		0.0018	0.00053	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Bromomethane	<0.0045		0.0045	0.0017	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
2-Butanone (MEK)	<0.0045		0.0045	0.0020	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Carbon disulfide	<0.0045		0.0045	0.00094	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Carbon tetrachloride	<0.0018		0.0018	0.00052	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Chlorobenzene	<0.0018		0.0018	0.00066	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Chloroethane	<0.0045		0.0045	0.0013	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Chloroform	<0.0018		0.0018	0.00063	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Chloromethane	<0.0045		0.0045	0.0018	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
cis-1,2-Dichloroethene	<0.0018		0.0018	0.00050	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
cis-1,3-Dichloropropene	<0.0018		0.0018	0.00054	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Dibromochloromethane	<0.0018		0.0018	0.00059	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
1,1-Dichloroethane	<0.0018		0.0018	0.00062	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
1,2-Dichloroethane	<0.0045		0.0045	0.0014	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
1,1-Dichloroethene	<0.0018		0.0018	0.00062	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
1,2-Dichloropropane	<0.0018		0.0018	0.00047	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
1,3-Dichloropropane, Total	<0.0018		0.0018	0.00063	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Ethylbenzene	<0.0018		0.0018	0.00086	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
2-Hexanone	<0.0045		0.0045	0.0014	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Methylene Chloride	<0.0045		0.0045	0.0018	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
4-Methyl-2-pentanone (MIBK)	<0.0045		0.0045	0.0013	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Methyl tert-butyl ether	<0.0018		0.0018	0.00053	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Styrene	<0.0018		0.0018	0.00054	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
1,1,2,2-Tetrachloroethane	<0.0018		0.0018	0.00058	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Tetrachloroethene	<0.0018		0.0018	0.00061	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Toluene	<0.0018		0.0018	0.00045	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
trans-1,2-Dichloroethene	<0.0018		0.0018	0.00080	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
trans-1,3-Dichloropropene	<0.0018		0.0018	0.00063	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
1,1,1-Trichloroethane	<0.0018		0.0018	0.00060	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
1,1,2-Trichloroethane	<0.0018		0.0018	0.00077	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Trichloroethene	<0.0018		0.0018	0.00061	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Vinyl acetate	<0.0045		0.0045	0.0016	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Vinyl chloride	<0.0018		0.0018	0.00080	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1
Xylenes, Total	<0.0036		0.0036	0.00058	mg/Kg	☼	11/07/17 07:20	11/09/17 20:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		75 - 131	11/07/17 07:20	11/09/17 20:59	1
Dibromofluoromethane	92		75 - 126	11/07/17 07:20	11/09/17 20:59	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 134	11/07/17 07:20	11/09/17 20:59	1
Toluene-d8 (Surr)	98		75 - 124	11/07/17 07:20	11/09/17 20:59	1

**Method: 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Acenaphthylene	0.0069	J	0.037	0.0049	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Anthracene	0.016	J	0.037	0.0062	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Benzo[a]anthracene	0.096		0.037	0.0050	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1

TestAmerica Chicago

# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-5

**Client Sample ID: 2696V-34-B01 (0-1) Dup**

**Lab Sample ID: 500-136834-13**

**Date Collected: 11/06/17 11:00**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 89.2**

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	0.14		0.037	0.0072	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Benzo[b]fluoranthene	0.24		0.037	0.0080	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Benzo[g,h,i]perylene	0.084		0.037	0.012	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Benzo[k]fluoranthene	0.11		0.037	0.011	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Bis(2-ethylhexyl) phthalate	0.077	J	0.19	0.068	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Carbazole	<0.19		0.19	0.093	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
4-Chloroaniline	<0.75		0.75	0.17	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
2-Chlorophenol	<0.19		0.19	0.063	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.043	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Chrysene	0.12		0.037	0.010	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Dibenz(a,h)anthracene	0.020	J	0.037	0.0072	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Dibenzofuran	<0.19		0.19	0.043	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
1,2-Dichlorobenzene	<0.19		0.19	0.044	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
2,4-Dichlorophenol	<0.37		0.37	0.088	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
2,4-Dinitrophenol	<0.75		0.75	0.65	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
2,6-Dinitrotoluene	<0.19		0.19	0.073	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Fluoranthene	0.23		0.037	0.0069	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Fluorene	<0.037		0.037	0.0052	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Hexachlorobenzene	<0.075		0.075	0.0086	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Hexachlorobutadiene	<0.19		0.19	0.058	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Hexachlorocyclopentadiene	<0.75		0.75	0.21	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Hexachloroethane	<0.19		0.19	0.056	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Indeno[1,2,3-cd]pyrene	0.070		0.037	0.0096	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
2-Methylnaphthalene	<0.075		0.075	0.0068	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Naphthalene	<0.037		0.037	0.0057	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-5

**Client Sample ID: 2696V-34-B01 (0-1) Dup**

**Lab Sample ID: 500-136834-13**

Date Collected: 11/06/17 11:00

Matrix: Solid

Date Received: 11/06/17 16:13

Percent Solids: 89.2

**Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	<0.75		0.75	0.35	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.045	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Pentachlorophenol	<0.75		0.75	0.60	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
<b>Phenanthrene</b>	<b>0.086</b>		0.037	0.0052	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
Phenol	<0.19		0.19	0.082	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
<b>Pyrene</b>	<b>0.31</b>		0.037	0.0074	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	11/11/17 09:17	11/14/17 18:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	81		44 - 121	11/11/17 09:17	11/14/17 18:02	1
2-Fluorophenol	86		46 - 133	11/11/17 09:17	11/14/17 18:02	1
Nitrobenzene-d5	70		41 - 120	11/11/17 09:17	11/14/17 18:02	1
Phenol-d5	87		46 - 125	11/11/17 09:17	11/14/17 18:02	1
Terphenyl-d14	149		35 - 160	11/11/17 09:17	11/14/17 18:02	1
2,4,6-Tribromophenol	89		25 - 139	11/11/17 09:17	11/14/17 18:02	1

**Method: 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.33</b>	<b>J</b>	1.0	0.20	mg/Kg	☼	11/08/17 07:33	11/09/17 04:55	1
<b>Arsenic</b>	<b>12</b>		0.52	0.18	mg/Kg	☼	11/08/17 07:33	11/09/17 04:55	1
<b>Barium</b>	<b>23</b>		0.52	0.059	mg/Kg	☼	11/08/17 07:33	11/09/17 04:55	1
<b>Beryllium</b>	<b>0.21</b>		0.21	0.049	mg/Kg	☼	11/08/17 07:33	11/09/17 04:55	1
<b>Cadmium</b>	<b>0.24</b>	<b>B</b>	0.10	0.019	mg/Kg	☼	11/08/17 07:33	11/09/17 04:55	1
<b>Chromium</b>	<b>7.6</b>		0.52	0.26	mg/Kg	☼	11/08/17 07:33	11/09/17 04:55	1
<b>Cobalt</b>	<b>3.0</b>		0.26	0.068	mg/Kg	☼	11/08/17 07:33	11/09/17 04:55	1
<b>Copper</b>	<b>11</b>		0.52	0.15	mg/Kg	☼	11/08/17 07:33	11/09/17 04:55	1
<b>Iron</b>	<b>5400</b>		10	5.4	mg/Kg	☼	11/08/17 07:33	11/09/17 04:55	1
<b>Lead</b>	<b>90</b>		0.26	0.12	mg/Kg	☼	11/08/17 07:33	11/09/17 04:55	1
<b>Magnesium</b>	<b>120000</b>		52	26	mg/Kg	☼	11/08/17 07:33	11/09/17 18:40	10
<b>Calcium</b>	<b>200000</b>	<b>B</b>	100	18	mg/Kg	☼	11/08/17 07:33	11/09/17 18:40	10
<b>Manganese</b>	<b>160</b>		0.52	0.076	mg/Kg	☼	11/08/17 07:33	11/09/17 04:55	1
<b>Nickel</b>	<b>8.1</b>		0.52	0.15	mg/Kg	☼	11/08/17 07:33	11/09/17 04:55	1
Selenium	<0.52		0.52	0.31	mg/Kg	☼	11/08/17 07:33	11/09/17 04:55	1
Silver	<0.26		0.26	0.067	mg/Kg	☼	11/08/17 07:33	11/09/17 04:55	1
Thallium	<0.52		0.52	0.26	mg/Kg	☼	11/08/17 07:33	11/09/17 04:55	1
<b>Vanadium</b>	<b>7.2</b>		0.26	0.061	mg/Kg	☼	11/08/17 07:33	11/09/17 04:55	1
<b>Zinc</b>	<b>43</b>		1.0	0.46	mg/Kg	☼	11/08/17 07:33	11/09/17 04:55	1
<b>Potassium</b>	<b>740</b>		26	9.2	mg/Kg	☼	11/08/17 07:33	11/09/17 04:55	1
<b>Sodium</b>	<b>170</b>		52	7.7	mg/Kg	☼	11/08/17 07:33	11/09/17 04:55	1

**Method: 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.050		0.050	0.010	mg/L		11/10/17 16:44	11/11/17 19:58	1
<b>Barium</b>	<b>0.41</b>	<b>J</b>	0.50	0.050	mg/L		11/10/17 16:44	11/11/17 19:58	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		11/10/17 16:44	11/11/17 19:58	1
Cadmium	<0.0050		0.0050	0.0020	mg/L		11/10/17 16:44	11/11/17 19:58	1

TestAmerica Chicago



# Client Sample Results

Client: Terracon Consulting Eng & Scientists  
 Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-5

**Client Sample ID: 2696V-34-B01 (0-1) Dup**

**Lab Sample ID: 500-136834-13**

**Date Collected: 11/06/17 11:00**

**Matrix: Solid**

**Date Received: 11/06/17 16:13**

**Percent Solids: 89.2**

**Method: 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Calcium</b>	<b>300</b>		5.0	0.50	mg/L		11/10/17 16:44	11/11/17 19:58	1
Chromium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:58	1
Cobalt	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:58	1
<b>Copper</b>	<b>0.039</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:58	1
Iron	<0.40		0.40	0.20	mg/L		11/10/17 16:44	11/11/17 19:58	1
Lead	<0.0075		0.0075	0.0075	mg/L		11/10/17 16:44	11/11/17 19:58	1
<b>Magnesium</b>	<b>160</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:58	1
<b>Manganese</b>	<b>0.050</b>		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:58	1
Nickel	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:58	1
<b>Potassium</b>	<b>4.7</b>		2.5	0.50	mg/L		11/10/17 16:44	11/11/17 19:58	1
Selenium	<0.050		0.050	0.020	mg/L		11/10/17 16:44	11/11/17 19:58	1
Silver	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:58	1
Vanadium	<0.025		0.025	0.010	mg/L		11/10/17 16:44	11/11/17 19:58	1
<b>Zinc</b>	<b>0.13</b>	J ^	0.50	0.020	mg/L		11/10/17 16:44	11/11/17 19:58	1

**Method: 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		11/10/17 16:44	11/13/17 12:32	1
Thallium	<0.0020		0.0020	0.0020	mg/L		11/10/17 16:44	11/13/17 12:32	1

**Method: 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		11/10/17 15:28	11/13/17 10:53	1

**Method: 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.083</b>		0.016	0.0054	mg/Kg	☼	11/08/17 16:15	11/09/17 10:50	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cyanide, Total</b>	<b>0.27</b>	J	0.51	0.18	mg/Kg	☼	11/13/17 11:30	11/13/17 17:23	1
<b>pH</b>	<b>8.0</b>		0.20	0.20	SU			11/14/17 17:36	1

# Definitions/Glossary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-5

## Qualifiers

### GC/MS Semi VOA

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

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

### General Chemistry

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

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists  
Project/Site: IDOT - Oak Forest/Markham - WO37

TestAmerica Job ID: 500-136834-5

## Laboratory: TestAmerica Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Illinois	NELAP	5	100201	04-30-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
6020A	3010A	Solid	Antimony
6020A	3010A	Solid	Thallium
8260B	5035	Solid	1,3-Dichloropropene, Total
9045D		Solid	pH
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Report To (optional)  
 Contact: MATT WEISS  
 Company: TERRACON  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference#: \_\_\_\_\_

## Chain of Custody Record

Lab Job #: 500-1316834  
 Chain of Custody Number: \_\_\_\_\_  
 Page 1 of 1  
 Temperature °C of Cooler: \_\_\_\_\_

Client		Client Project #		Preservative		Parameter		Matrix		Preservative Key 1. HCL, Cool to 4° 2. H2SO4, Cool to 4° 3. HNO3, Cool to 4° 4. NaOH, Cool to 4° 5. NaOH/Zn, Cool to 4° 6. NaHSO4 7. Cool to 4° 8. None 9. Other	
Project Name		Lab Project #		Sampling		# of Containers		Matrix			
Project Location/State		Lab Project #		Date	Time						
<u>TERRACON</u>											
<u>WORK ORDER 037</u>											
<u>MARKHAM, IL</u>											
<u>CRAB VARLAND</u>		<u>DICK WRIGHT</u>									
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	VOC	SNOGS	23 TAL METALS, PH	TCLP 23 TAL METALS	Comments
<u>12</u>		<u>2696V-34-801-(0-1)</u>	<u>11-6-17</u>	<u>1100</u>	<u>5</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>13</u>		<u>2696V-34-801-DUP-(0-1)</u>	<u>1</u>	<u>-</u>	<u>5</u>	<u>S</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	

Turnaround Time Required (Business Days)

\_\_\_ 1 Day \_\_\_ 2 Days \_\_\_ 5 Days \_\_\_ 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By: <u>[Signature]</u> Company: <u>TERRACON</u> Date: <u>11-6-17</u> Time: <u>1545</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/6/17</u> Time: <u>1545</u>
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>11/6/17</u> Time: <u>1613</u>	Received By: <u>[Signature]</u> Company: <u>TA-OTI</u> Date: <u>11/7/17</u> Time: <u>0705</u>

Lab Courier: TA  
 Shipped: \_\_\_\_\_  
 Hand Delivered: \_\_\_\_\_

Matrix Key

WW - Wastewater SE - Sediment  
 W - Water SO - Soil  
 S - Soil L - Leachate  
 SL - Sludge WI - Wipe  
 MS - Miscellaneous DW - Drinking Water  
 OL - Oil O - Other  
 A - Air

Client Comments

NO NUMMIUM

Lab Comments:

## Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 500-136834-5

**Login Number: 136834**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Scott, Sherri L**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.7,4.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

