

# E

## Uncontaminated Soil Certification Forms



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 355 (IL Route 176) Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):  
106 W. State Road (ISGS #2459V-5)

City: Island Lake State: IL Zip Code: 60042

County: Cook Township: Nunda

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

Latitude: 42.27267 Longitude: -88.1987

(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: 60196-1096 Phone: 847-705-4122

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Tyler Petersen

Contact: Tyler Petersen

Email, if available: tyler.petersen@illinois.gov

Email, if available: tyler.petersen@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 355 (IL Route 176)Latitude: 42.27267 Longitude: -88.1987Uncontaminated 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)]:

Location 2459-05-B01 was sampled within the construction zone adjacent to ISGS #2459V-5 (Mixed-use Building). Refer to PSI Report for ISGS #2459V-5 (Mixed-use Building) including Table 4-3, and Figures 4-1 and 4-2.

- 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]:

See attached data summary table and associated laboratory data package J140697-1.

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

I, Neil J. Brown (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.

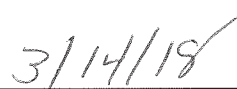
*Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))*

Company Name: Ecology and Environment, Inc.Street Address: 33 West Monroe StreetCity: Chicago State: IL Zip Code: 60603Phone: 312-578-9243Neil J. Brown

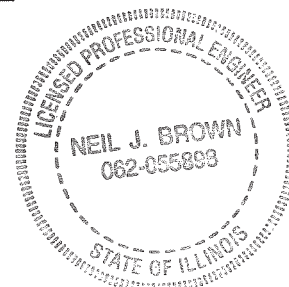
Printed Name:



Licensed Professional Engineer or  
Licensed Professional Geologist Signature:



Date:



P.E. or L.P.G. Seal:



## Analytical Data Summary

**PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-705-09; WorkOrder #39**

### Key to Data Tables

- MAC = Maximum Allowable Concentration of Chemical Constituent in Uncontaminated Soil Used as Fill Material At Regulated Fill Operations
- mg/kg = Milligrams per kilogram.
- mg/L = Milligrams per liter.
- MSA = Metropolitan Statistical Area
- TACO = Tiered Approach to Corrective Action Objectives
- TCLP = Toxicity Characteristic Leaching Procedure.
- GCGIER = Groundwater Component of the Groundwater Ingestion Exposure Route
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed or not applicable.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.
- PID = Photoionization detector.
- = No PID readings detected above background (within instrument margin of error).

### Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
-  = Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
-  = Concentration exceeds applicable comparison criteria.

## CONTAMINANTS OF CONCERN

SITE	ISGS #2459V-5 (Mixed-use Building)	Comparison Criteria					
		MACs			TACO		
BORING	2459-05-B01	Most Stringent	Within an MSA	Within Chicago	Residential	Construction Worker	SCGIER
SAMPLE	2459-05-B01 (0-2)						
MATRIX	Soil						
DEPTH (feet)	0-2						
pH	8.0						
PID > Bkgd.	--						
<b>VOCs (None Detected)</b>							
<b>SVOCs (mg/kg)</b>							
Acenaphthylene	0.0056 J	--	--	--	--	--	--
Anthracene	0.014 J	12,000	--	--	23,000	610,000	--
Benzo(a)anthracene	0.10	0.9	1.8	1.1	1.8	170	--
Benzo(a)pyrene	0.14 †	0.09	2.1	1.3	2.1	17	--
Benzo(b)fluoranthene	0.20	0.9	2.1	1.5	2.1	170	--
Benzo(g,h,i)perylene	0.094	--	--	--	--	--	--
Benzo(k)fluoranthene	0.075	9	--	--	9	1,700	--
Chrysene	0.14	88	--	--	88	17,000	--
Dibenz(a,h)anthracene	0.020 J	0.09	0.42	0.2	0.42	17	--
Fluoranthene	0.24	3,100	--	--	3,100	82,000	--
Indeno(1,2,3-cd)pyrene	0.092	0.9	1.6	0.9	1.6	170	--
Phenanthrene	0.069	--	--	--	--	--	--
Pyrene	0.17	2,300	--	--	2,300	61,000	--
<b>Inorganics (mg/kg)</b>							
Antimony	0.35 J	5	--	--	31	82	--
Arsenic	4.9	11.3	13	--	13	61	--
Barium	70	1,500	--	--	5,500	14,000	--
Beryllium	0.46	22	--	--	160	410	--
Boron	4.0 J	40	--	--	16,000	41,000	--
Calcium	12,000	--	--	--	--	--	--
Chromium	14	21	--	--	230	690	--
Cobalt	9.0	20	--	--	4,700	12,000	--
Copper	15	2,900	--	--	2,900	8,200	--
Iron	13,000	15,000	15,900	--	--	--	--
Lead	59	107	--	--	400	700	--
Magnesium	7,300	325,000	--	--	--	730,000	--
Manganese	590	630	636	--	1,600	4,100	--
Mercury	0.033	0.89	--	--	10	0.1	--
Nickel	17	100	--	--	1,600	4,100	--
Potassium	990 J	--	--	--	--	--	--
Selenium	0.62 J	1.3	--	--	390	1,000	--
Sodium	170	--	--	--	--	--	--
Vanadium	21	550	--	--	550	1,400	--
Zinc	160	5,100	--	--	23,000	61,000	--
<b>TCLP Metals (mg/L)</b>							
Barium	0.44 J	--	--	--	--	--	2
Cadmium	0.0032 J	--	--	--	--	--	0.005
Manganese	0.28 L	--	--	--	--	--	0.15
Zinc	0.42 J	--	--	--	--	--	5
<b>SPLP Metals (mg/L)</b>							
Manganese	0.63 L	--	--	--	--	--	0.15

# 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: 500-140697-1

Client Project/Site: IDOT - 176-001-WO039

Revision: 1

For:

Ecology and Environment, Inc.

33 West Monroe St.

Suite 1410

Chicago, Illinois 60603

Attn: Mr. Dean Tiebout



Authorized for release by:

2/23/2018 3:46:49 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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-1

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**Job ID: 500-140697-1**

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**Laboratory: TestAmerica Chicago**

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**Narrative**

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**Job Narrative  
500-140697-1**

**Revised Report**

The ID for sample 500-140697-1 has been changed to 2459-05-B01 (0-2) per the client's 02/23/2018 request.

**Receipt**

The samples were received on 2/8/2018 12:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.4° C and 3.1° 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**

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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-1

**Client Sample ID: 2459-05-B01 (0-2)**

**Lab Sample ID: 500-140697-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthylene	0.0056	J	0.039	0.0052	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.069		0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.014	J	0.039	0.0066	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.24		0.039	0.0074	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.17		0.039	0.0079	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.10		0.039	0.0053	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.14		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.20		0.039	0.0086	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.075		0.039	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.14		0.039	0.0077	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.092		0.039	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.020	J	0.039	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.094		0.039	0.013	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.35	J F1	1.2	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	4.9		0.58	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	70		0.58	0.067	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.46		0.23	0.055	mg/Kg	1	☼	6010B	Total/NA
Boron	4.0	F1	2.9	0.27	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.29	B	0.12	0.021	mg/Kg	1	☼	6010B	Total/NA
Calcium	12000	B F2	12	2.0	mg/Kg	1	☼	6010B	Total/NA
Chromium	14		0.58	0.29	mg/Kg	1	☼	6010B	Total/NA
Cobalt	9.0		0.29	0.076	mg/Kg	1	☼	6010B	Total/NA
Copper	15	B	0.58	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	13000		12	6.1	mg/Kg	1	☼	6010B	Total/NA
Lead	59		0.29	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	7300		5.8	2.9	mg/Kg	1	☼	6010B	Total/NA
Manganese	590		0.58	0.085	mg/Kg	1	☼	6010B	Total/NA
Nickel	17		0.58	0.17	mg/Kg	1	☼	6010B	Total/NA
Potassium	990	F1	29	10	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.62	F1	0.58	0.34	mg/Kg	1	☼	6010B	Total/NA
Sodium	170		58	8.6	mg/Kg	1	☼	6010B	Total/NA
Vanadium	21		0.29	0.069	mg/Kg	1	☼	6010B	Total/NA
Zinc	160		1.2	0.51	mg/Kg	1	☼	6010B	Total/NA
Barium	0.44	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.091	J B	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0032	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Manganese	0.28		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.42	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.63		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.033		0.019	0.0063	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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-140697-1	2459-05-B01 (0-2)	Solid	02/07/18 15:25	02/08/18 12:30

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# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-1

**Client Sample ID: 2459-05-B01 (0-2)**

**Lab Sample ID: 500-140697-1**

Date Collected: 02/07/18 15:25

Matrix: Solid

Date Received: 02/08/18 12:30

Percent Solids: 83.5

## 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	☼	02/08/18 16:02	02/10/18 16:11	1
Benzene	<0.0018		0.0018	0.00047	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Bromodichloromethane	<0.0018		0.0018	0.00037	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Bromoform	<0.0018		0.0018	0.00053	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Bromomethane	<0.0046		0.0046	0.0017	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
2-Butanone (MEK)	<0.0046		0.0046	0.0020	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Carbon disulfide	<0.0046		0.0046	0.00095	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Carbon tetrachloride	<0.0018		0.0018	0.00053	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Chlorobenzene	<0.0018		0.0018	0.00067	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Chloroethane	<0.0046		0.0046	0.0014	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Chloroform	<0.0018		0.0018	0.00063	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Chloromethane	<0.0046		0.0046	0.0018	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
cis-1,2-Dichloroethene	<0.0018		0.0018	0.00051	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
cis-1,3-Dichloropropene	<0.0018		0.0018	0.00055	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Dibromochloromethane	<0.0018		0.0018	0.00060	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
1,1-Dichloroethane	<0.0018		0.0018	0.00062	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
1,2-Dichloroethane	<0.0046		0.0046	0.0014	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
1,1-Dichloroethene	<0.0018		0.0018	0.00063	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
1,2-Dichloropropane	<0.0018		0.0018	0.00047	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
1,3-Dichloropropane, Total	<0.0018		0.0018	0.00064	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Ethylbenzene	<0.0018		0.0018	0.00087	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
2-Hexanone	<0.0046		0.0046	0.0014	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Methylene Chloride	<0.0046		0.0046	0.0018	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
4-Methyl-2-pentanone (MIBK)	<0.0046		0.0046	0.0014	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Methyl tert-butyl ether	<0.0018		0.0018	0.00054	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Styrene	<0.0018		0.0018	0.00055	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
1,1,2,2-Tetrachloroethane	<0.0018		0.0018	0.00058	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Tetrachloroethene	<0.0018		0.0018	0.00062	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Toluene	<0.0018		0.0018	0.00046	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
trans-1,2-Dichloroethene	<0.0018		0.0018	0.00081	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
trans-1,3-Dichloropropene	<0.0018		0.0018	0.00064	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
1,1,1-Trichloroethane	<0.0018		0.0018	0.00061	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
1,1,2-Trichloroethane	<0.0018		0.0018	0.00078	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Trichloroethene	<0.0018		0.0018	0.00062	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Vinyl acetate	<0.0046		0.0046	0.0016	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Vinyl chloride	<0.0018		0.0018	0.00081	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1
Xylenes, Total	<0.0036		0.0036	0.00058	mg/Kg	☼	02/08/18 16:02	02/10/18 16:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		75 - 131	02/08/18 16:02	02/10/18 16:11	1
Dibromofluoromethane	102		75 - 126	02/08/18 16:02	02/10/18 16:11	1
1,2-Dichloroethane-d4 (Surr)	88		70 - 134	02/08/18 16:02	02/10/18 16:11	1
Toluene-d8 (Surr)	92		75 - 124	02/08/18 16:02	02/10/18 16:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.088	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.060	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-1

**Client Sample ID: 2459-05-B01 (0-2)**

**Lab Sample ID: 500-140697-1**

**Date Collected: 02/07/18 15:25**

**Matrix: Solid**

**Date Received: 02/08/18 12:30**

**Percent Solids: 83.5**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.20		0.20	0.047	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
2-Methylphenol	<0.20		0.20	0.064	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
N-Nitrosodi-n-propylamine	<0.080		0.080	0.049	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
2-Chlorophenol	<0.20		0.20	0.068	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Nitrobenzene	<0.039		0.039	0.0099	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Isophorone	<0.20		0.20	0.045	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Naphthalene	<0.039		0.039	0.0061	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
2,4-Dichlorophenol	<0.39		0.39	0.094	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
4-Chloroaniline	<0.80		0.80	0.19	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
2,4,6-Trichlorophenol	<0.39		0.39	0.14	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
2,4,5-Trichlorophenol	<0.39		0.39	0.091	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Hexachlorocyclopentadiene	<0.80		0.80	0.23	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
2-Methylnaphthalene	<0.080		0.080	0.0073	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
4-Chloro-3-methylphenol	<0.39		0.39	0.14	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
2,6-Dinitrotoluene	<0.20		0.20	0.078	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
2-Nitrophenol	<0.39		0.39	0.094	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Dimethyl phthalate	<0.20		0.20	0.052	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
2,4-Dinitrophenol	<0.80		0.80	0.70	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
<b>Acenaphthylene</b>	<b>0.0056</b>	<b>J</b>	0.039	0.0052	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
2,4-Dinitrotoluene	<0.20		0.20	0.063	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Acenaphthene	<0.039		0.039	0.0071	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
4-Nitrophenol	<0.80		0.80	0.38	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Fluorene	<0.039		0.039	0.0056	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
4-Nitroaniline	<0.39		0.39	0.17	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Hexachlorobenzene	<0.080		0.080	0.0092	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Diethyl phthalate	<0.20		0.20	0.067	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Pentachlorophenol	<0.80		0.80	0.64	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
4,6-Dinitro-2-methylphenol	<0.80		0.80	0.32	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
<b>Phenanthrene</b>	<b>0.069</b>		0.039	0.0055	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
<b>Anthracene</b>	<b>0.014</b>	<b>J</b>	0.039	0.0066	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Carbazole	<0.20		0.20	0.099	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Di-n-butyl phthalate	<0.20		0.20	0.061	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
<b>Fluoranthene</b>	<b>0.24</b>		0.039	0.0074	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
<b>Pyrene</b>	<b>0.17</b>		0.039	0.0079	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Butyl benzyl phthalate	<0.20		0.20	0.076	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
<b>Benzo[a]anthracene</b>	<b>0.10</b>		0.039	0.0053	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-1

**Client Sample ID: 2459-05-B01 (0-2)**

**Lab Sample ID: 500-140697-1**

Date Collected: 02/07/18 15:25

Matrix: Solid

Date Received: 02/08/18 12:30

Percent Solids: 83.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chrysene</b>	<b>0.14</b>		0.039	0.011	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.056	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.073	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
Di-n-octyl phthalate	<0.20		0.20	0.065	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
<b>Benzo[b]fluoranthene</b>	<b>0.20</b>		0.039	0.0086	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
<b>Benzo[k]fluoranthene</b>	<b>0.075</b>		0.039	0.012	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
<b>Benzo[a]pyrene</b>	<b>0.14</b>		0.039	0.0077	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.092</b>		0.039	0.010	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
<b>Dibenz(a,h)anthracene</b>	<b>0.020</b>	<b>J</b>	0.039	0.0077	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
<b>Benzo[g,h,i]perylene</b>	<b>0.094</b>		0.039	0.013	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1
3 & 4 Methylphenol	<0.20		0.20	0.066	mg/Kg	☼	02/12/18 17:31	02/13/18 16:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	84		46 - 133	02/12/18 17:31	02/13/18 16:03	1
Phenol-d5	83		46 - 125	02/12/18 17:31	02/13/18 16:03	1
Nitrobenzene-d5	76		41 - 120	02/12/18 17:31	02/13/18 16:03	1
2-Fluorobiphenyl	83		44 - 121	02/12/18 17:31	02/13/18 16:03	1
2,4,6-Tribromophenol	71		25 - 139	02/12/18 17:31	02/13/18 16:03	1
Terphenyl-d14	69		35 - 160	02/12/18 17:31	02/13/18 16:03	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.35</b>	<b>J F1</b>	1.2	0.23	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
<b>Arsenic</b>	<b>4.9</b>		0.58	0.20	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
<b>Barium</b>	<b>70</b>		0.58	0.067	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
<b>Beryllium</b>	<b>0.46</b>		0.23	0.055	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
<b>Boron</b>	<b>4.0</b>	<b>F1</b>	2.9	0.27	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
<b>Cadmium</b>	<b>0.29</b>	<b>B</b>	0.12	0.021	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
<b>Calcium</b>	<b>12000</b>	<b>B F2</b>	12	2.0	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
<b>Chromium</b>	<b>14</b>		0.58	0.29	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
<b>Cobalt</b>	<b>9.0</b>		0.29	0.076	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
<b>Copper</b>	<b>15</b>	<b>B</b>	0.58	0.16	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
<b>Iron</b>	<b>13000</b>		12	6.1	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
<b>Lead</b>	<b>59</b>		0.29	0.13	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
<b>Magnesium</b>	<b>7300</b>		5.8	2.9	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
<b>Manganese</b>	<b>590</b>		0.58	0.085	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
<b>Nickel</b>	<b>17</b>		0.58	0.17	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
<b>Potassium</b>	<b>990</b>	<b>F1</b>	29	10	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
<b>Selenium</b>	<b>0.62</b>	<b>F1</b>	0.58	0.34	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
Silver	<0.29		0.29	0.075	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
<b>Sodium</b>	<b>170</b>		58	8.6	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
Thallium	<0.58		0.58	0.29	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
<b>Vanadium</b>	<b>21</b>		0.29	0.069	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1
<b>Zinc</b>	<b>160</b>		1.2	0.51	mg/Kg	☼	02/10/18 10:47	02/11/18 18:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.44</b>	<b>J</b>	0.50	0.050	mg/L		02/12/18 08:40	02/12/18 16:35	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/12/18 08:40	02/12/18 16:35	1
<b>Boron</b>	<b>0.091</b>	<b>J B</b>	0.50	0.050	mg/L		02/12/18 08:40	02/12/18 16:35	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-1

**Client Sample ID: 2459-05-B01 (0-2)**

**Lab Sample ID: 500-140697-1**

**Date Collected: 02/07/18 15:25**

**Matrix: Solid**

**Date Received: 02/08/18 12:30**

**Percent Solids: 83.5**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cadmium</b>	<b>0.0032</b>	<b>J</b>	0.0050	0.0020	mg/L	-	02/12/18 08:40	02/12/18 16:35	1
Chromium	<0.025		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:35	1
Cobalt	<0.025		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:35	1
Iron	<0.40		0.40	0.20	mg/L	-	02/12/18 08:40	02/12/18 16:35	1
Lead	<0.0075		0.0075	0.0075	mg/L	-	02/12/18 08:40	02/12/18 16:35	1
<b>Manganese</b>	<b>0.28</b>		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:35	1
Nickel	<0.025		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:35	1
Selenium	<0.050		0.050	0.020	mg/L	-	02/12/18 08:40	02/12/18 16:35	1
Silver	<0.025		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:35	1
<b>Zinc</b>	<b>0.42</b>	<b>J</b>	0.50	0.020	mg/L	-	02/12/18 08:40	02/12/18 16:35	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.63</b>		0.025	0.010	mg/L	-	02/13/18 06:45	02/13/18 18:13	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	-	02/12/18 08:40	02/13/18 12:19	1
Thallium	<0.0020		0.0020	0.0020	mg/L	-	02/12/18 08:40	02/13/18 12:19	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	-	02/12/18 11:40	02/13/18 10:13	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	☼	02/12/18 14:50	02/13/18 10:09	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>pH</b>	<b>8.0</b>		0.20	0.20	SU	-		02/15/18 14:06	1

# Definitions/Glossary

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-1

## 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
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
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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-1

## 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: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

Bill To (optional)  
 Contact: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 PO#/Reference# 500-140697 COC



## Chain of Custody Record

Lab Job #: 500-140697  
 Chain of Custody Number: EE93906  
 Page \_\_\_\_\_ of \_\_\_\_\_  
 Temperature °C of Cooler: (3.1)(2.4)

Client		Client Project #		Preservative		Parameter		Sampler		Lab Project #		Lab PM		Preservative Key	
EE		1069341.0039.02						E. B. Baker		D. Wright				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		Sampling		# of Containers		Matrix		Date		Time		Comments	
FAP 355 (IL Route 176)		Lake, Mettong IL													
Lab ID	MS/MSD	Sample ID	Date	Time	# of Containers	Matrix	Substrate	Vol	pH	Total metal	TCLP/SPRP				
1		2454-05-Bol(0-3)	2/7/18	1525	2	S	Sua	x	x	x	x				

Elmhurst



503325

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>FNE</u>	Date: <u>2/7/18</u>	Time: <u>1530</u>	Received By: <u>[Signature]</u>	Company: <u>TA</u>	Date: <u>2/7/18</u>	Time: <u>1530</u>
Relinquished By: <u>[Signature]</u>	Company: <u>TA</u>	Date: <u>2/8/18</u>	Time: <u>1230</u>	Received By: <u>[Signature]</u>	Company: <u>TA</u>	Date: <u>02/08/18</u>	Time: <u>1230</u>

Lab Courier:   
 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

Lab Comments:

# Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-140697-1

**Login Number: 140697**

**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	
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.	False	Received extra sample not listed on COC.
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 355 (IL Route 176) Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):  
100-200 block of W. State Road (ISGS #2459V-9)

City: Island Lake State: IL Zip Code: 60042

County: Cook Township: Nunda

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

Latitude: 42.27262 Longitude: -88.20034  
(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: 60196-1096 Phone: 847-705-4122

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Tyler Petersen

Contact: Tyler Petersen

Email, if available: tyler.petersen@illinois.gov

Email, if available: tyler.petersen@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 355 (IL Route 176)

Latitude: 42.27262 Longitude: -88.20034

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)]:

Location 2459-09-B01 was sampled within the construction zone adjacent to ISGS #2459V-9 (Residential Buildings). Refer to PSI Report for ISGS #2459V-9 (Residential Buildings) including Table 4-3, and Figures 4-1 and 4-2.

- 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]:

See attached data summary table and associated laboratory data package J140697-2.

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

I, Neil J. Brown (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: Ecology and Environment, Inc.

Street Address: 33 West Monroe Street

City: Chicago State: IL Zip Code: 60603

Phone: 312-578-9243

Neil J. Brown

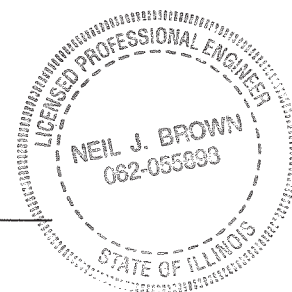
Printed Name:

*Neil J. Brown*

Licensed Professional Engineer or  
Licensed Professional Geologist Signature:

3/14/18

Date:



P.E. or L.P.G. Seal:



## Analytical Data Summary

**PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-705-09; WorkOrder #39**

### Key to Data Tables

- MAC = Maximum Allowable Concentration of Chemical Constituent in  
Uncontaminated Soil Used as Fill Material At Regulated Fill Operations
- mg/kg = Milligrams per kilogram.
- mg/L = Milligrams per liter.
- MSA = Metropolitan Statistical Area
- TACO = Tiered Approach to Corrective Action Objectives
- TCLP = Toxicity Characteristic Leaching Procedure.
- GCGIER = Groundwater Component of the Groundwater Ingestion Exposure Route
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed or not applicable.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.
- PID = Photoionization detector.
- = No PID readings detected above background (within instrument margin of error).

### Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
-  = Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
-  = Concentration exceeds applicable comparison criteria.

## CONTAMINANTS OF CONCERN

SITE	ISGS #2459V-9 (Residential Buildings)	Comparison Criteria					
		MACs			TACO		
BORING	2459-09-B01	Most Stringent	Within an MSA	Within Chicago	Residential	Construction Worker	SCGIER
SAMPLE	2459-09-B01 (0-3)						
MATRIX	Soil						
DEPTH (feet)	0-3						
pH	8.0						
PID > Bkgd.	--						
<b>VOCs (None Detected)</b>							
<b>SVOCs (mg/kg)</b>							
Anthracene	0.015 J	12,000	--	--	23,000	610,000	--
Benzo(a)anthracene	0.093	0.9	1.8	1.1	1.8	170	--
Benzo(a)pyrene	0.12 †	0.09	2.1	1.3	2.1	17	--
Benzo(b)fluoranthene	0.18	0.9	2.1	1.5	2.1	170	--
Benzo(g,h,i)perylene	0.088	--	--	--	--	--	--
Benzo(k)fluoranthene	0.057	9	--	--	9	1,700	--
Chrysene	0.12	88	--	--	88	17,000	--
Dibenz(a,h)anthracene	0.020 J	0.09	0.42	0.2	0.42	17	--
Fluoranthene	0.23	3,100	--	--	3,100	82,000	--
Indeno(1,2,3-cd)pyrene	0.083	0.9	1.6	0.9	1.6	170	--
Phenanthrene	0.080	--	--	--	--	--	--
Pyrene	0.16	2,300	--	--	2,300	61,000	--
<b>Inorganics (mg/kg)</b>							
Arsenic	4.9	11.3	13	--	13	61	--
Barium	60	1,500	--	--	5,500	14,000	--
Beryllium	0.40	22	--	--	160	410	--
Boron	3.3	40	--	--	16,000	41,000	--
Calcium	19,000	--	--	--	--	--	--
Chromium	14	21	--	--	230	690	--
Cobalt	7.6	20	--	--	4,700	12,000	--
Copper	14	2,900	--	--	2,900	8,200	--
Iron	13,000	15,000	15,900	--	--	--	--
Lead	38	107	--	--	400	700	--
Magnesium	10,000	325,000	--	--	--	730,000	--
Manganese	480	630	636	--	1,600	4,100	--
Mercury	0.024	0.89	--	--	10	0.1	--
Nickel	15	100	--	--	1,600	4,100	--
Potassium	990	--	--	--	--	--	--
Selenium	0.84	1.3	--	--	390	1,000	--
Sodium	280	--	--	--	--	--	--
Vanadium	22	550	--	--	550	1,400	--
Zinc	57	5,100	--	--	23,000	61,000	--
<b>TCLP Metals (mg/L)</b>							
Barium	0.51	--	--	--	--	--	2
Cadmium	0.0027 J	--	--	--	--	--	0.005
Manganese	0.36 L	--	--	--	--	--	0.15
Zinc	0.048 J	--	--	--	--	--	5
<b>SPLP Metals (mg/L)</b>							
Manganese	0.99 L	--	--	--	--	--	0.15

# 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: 500-140697-2

Client Project/Site: IDOT - 176-001-WO039

For:

Ecology and Environment, Inc.  
33 West Monroe St.  
Suite 1410  
Chicago, Illinois 60603

Attn: Mr. Dean Tiebout



Authorized for release by:  
2/16/2018 4:11:23 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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-2

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**Job ID: 500-140697-2**

---

**Laboratory: TestAmerica Chicago**

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**Narrative**

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**Job Narrative  
500-140697-2**

**Receipt**

The samples were received on 2/8/2018 12:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.4° C and 3.1° 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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-2

**Client Sample ID: 2459-09-B01 (0-3)**

**Lab Sample ID: 500-140697-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.080		0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.015	J	0.038	0.0063	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.23		0.038	0.0070	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.16		0.038	0.0075	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.093		0.038	0.0051	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.12		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.18		0.038	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.057		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.12		0.038	0.0073	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.083		0.038	0.0098	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.020	J	0.038	0.0073	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.088		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	4.9		0.57	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	60		0.57	0.065	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.40		0.23	0.053	mg/Kg	1	☼	6010B	Total/NA
Boron	3.3		2.9	0.27	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.16	B	0.11	0.021	mg/Kg	1	☼	6010B	Total/NA
Calcium	19000	B	11	1.9	mg/Kg	1	☼	6010B	Total/NA
Chromium	14		0.57	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	7.6		0.29	0.075	mg/Kg	1	☼	6010B	Total/NA
Copper	14	B	0.57	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	13000		11	5.9	mg/Kg	1	☼	6010B	Total/NA
Lead	38		0.29	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	10000		5.7	2.8	mg/Kg	1	☼	6010B	Total/NA
Manganese	480		0.57	0.083	mg/Kg	1	☼	6010B	Total/NA
Nickel	15		0.57	0.17	mg/Kg	1	☼	6010B	Total/NA
Potassium	990		29	10	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.84		0.57	0.34	mg/Kg	1	☼	6010B	Total/NA
Sodium	280		57	8.5	mg/Kg	1	☼	6010B	Total/NA
Vanadium	22		0.29	0.067	mg/Kg	1	☼	6010B	Total/NA
Zinc	57		1.1	0.50	mg/Kg	1	☼	6010B	Total/NA
Barium	0.51		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.080	J B	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0027	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Manganese	0.36		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.016	J B	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.048	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.99		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.024		0.017	0.0058	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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-2

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-140697-2	2459-09-B01 (0-3)	Solid	02/07/18 15:15	02/08/18 12:30

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# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-2

**Client Sample ID: 2459-09-B01 (0-3)**

**Lab Sample ID: 500-140697-2**

Date Collected: 02/07/18 15:15

Matrix: Solid

Date Received: 02/08/18 12:30

Percent Solids: 86.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.019		0.019	0.0082	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Benzene	<0.0019		0.0019	0.00048	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Bromodichloromethane	<0.0019		0.0019	0.00038	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Bromoform	<0.0019		0.0019	0.00055	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Bromomethane	<0.0047		0.0047	0.0018	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
2-Butanone (MEK)	<0.0047		0.0047	0.0021	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Carbon disulfide	<0.0047		0.0047	0.00098	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Carbon tetrachloride	<0.0019		0.0019	0.00055	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Chlorobenzene	<0.0019		0.0019	0.00069	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Chloroethane	<0.0047		0.0047	0.0014	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Chloroform	<0.0019		0.0019	0.00065	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Chloromethane	<0.0047		0.0047	0.0019	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
cis-1,2-Dichloroethene	<0.0019		0.0019	0.00053	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
cis-1,3-Dichloropropene	<0.0019		0.0019	0.00057	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Dibromochloromethane	<0.0019		0.0019	0.00062	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
1,1-Dichloroethane	<0.0019		0.0019	0.00064	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
1,2-Dichloroethane	<0.0047		0.0047	0.0015	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
1,1-Dichloroethene	<0.0019		0.0019	0.00065	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
1,2-Dichloropropane	<0.0019		0.0019	0.00049	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
1,3-Dichloropropane, Total	<0.0019		0.0019	0.00066	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Ethylbenzene	<0.0019		0.0019	0.00090	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
2-Hexanone	<0.0047		0.0047	0.0015	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Methylene Chloride	<0.0047		0.0047	0.0019	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
4-Methyl-2-pentanone (MIBK)	<0.0047		0.0047	0.0014	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Methyl tert-butyl ether	<0.0019		0.0019	0.00055	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Styrene	<0.0019		0.0019	0.00057	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
1,1,2,2-Tetrachloroethane	<0.0019		0.0019	0.00060	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Tetrachloroethene	<0.0019		0.0019	0.00064	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Toluene	<0.0019		0.0019	0.00048	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
trans-1,2-Dichloroethene	<0.0019		0.0019	0.00083	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
trans-1,3-Dichloropropene	<0.0019		0.0019	0.00066	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
1,1,1-Trichloroethane	<0.0019		0.0019	0.00063	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
1,1,2-Trichloroethane	<0.0019		0.0019	0.00081	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Trichloroethene	<0.0019		0.0019	0.00064	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Vinyl acetate	<0.0047		0.0047	0.0016	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Vinyl chloride	<0.0019		0.0019	0.00083	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1
Xylenes, Total	<0.0038		0.0038	0.00060	mg/Kg	☼	02/08/18 16:02	02/10/18 16:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		75 - 131	02/08/18 16:02	02/10/18 16:37	1
Dibromofluoromethane	107		75 - 126	02/08/18 16:02	02/10/18 16:37	1
1,2-Dichloroethane-d4 (Surr)	91		70 - 134	02/08/18 16:02	02/10/18 16:37	1
Toluene-d8 (Surr)	83		75 - 124	02/08/18 16:02	02/10/18 16:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.19		0.19	0.084	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-2

**Client Sample ID: 2459-09-B01 (0-3)**

**Lab Sample ID: 500-140697-2**

**Date Collected: 02/07/18 15:15**

**Matrix: Solid**

**Date Received: 02/08/18 12:30**

**Percent Solids: 86.1**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
N-Nitrosodi-n-propylamine	<0.077		0.077	0.046	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
2-Chlorophenol	<0.19		0.19	0.065	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Nitrobenzene	<0.038		0.038	0.0095	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
2,4-Dimethylphenol	<0.38		0.38	0.14	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Naphthalene	<0.038		0.038	0.0058	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
2,4-Dichlorophenol	<0.38		0.38	0.090	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
4-Chloroaniline	<0.77		0.77	0.18	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
2,4,5-Trichlorophenol	<0.38		0.38	0.087	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Hexachlorocyclopentadiene	<0.77		0.77	0.22	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
2-Methylnaphthalene	<0.077		0.077	0.0070	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
2,6-Dinitrotoluene	<0.19		0.19	0.075	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
2-Nitrophenol	<0.38		0.38	0.090	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
2,4-Dinitrophenol	<0.77		0.77	0.67	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Acenaphthylene	<0.038		0.038	0.0050	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Acenaphthene	<0.038		0.038	0.0068	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
4-Nitrophenol	<0.77		0.77	0.36	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Fluorene	<0.038		0.038	0.0053	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Hexachlorobenzene	<0.077		0.077	0.0088	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Pentachlorophenol	<0.77		0.77	0.61	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
4,6-Dinitro-2-methylphenol	<0.77		0.77	0.30	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
<b>Phenanthrene</b>	<b>0.080</b>		0.038	0.0053	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
<b>Anthracene</b>	<b>0.015 J</b>		0.038	0.0063	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Carbazole	<0.19		0.19	0.095	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
<b>Fluoranthene</b>	<b>0.23</b>		0.038	0.0070	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
<b>Pyrene</b>	<b>0.16</b>		0.038	0.0075	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Butyl benzyl phthalate	<0.19		0.19	0.072	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
<b>Benzo[a]anthracene</b>	<b>0.093</b>		0.038	0.0051	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-2

**Client Sample ID: 2459-09-B01 (0-3)**

**Lab Sample ID: 500-140697-2**

Date Collected: 02/07/18 15:15

Matrix: Solid

Date Received: 02/08/18 12:30

Percent Solids: 86.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chrysene</b>	<b>0.12</b>		0.038	0.010	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.069	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
<b>Benzo[b]fluoranthene</b>	<b>0.18</b>		0.038	0.0082	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
<b>Benzo[k]fluoranthene</b>	<b>0.057</b>		0.038	0.011	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
<b>Benzo[a]pyrene</b>	<b>0.12</b>		0.038	0.0073	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.083</b>		0.038	0.0098	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
<b>Dibenz(a,h)anthracene</b>	<b>0.020</b>	J	0.038	0.0073	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
<b>Benzo[g,h,i]perylene</b>	<b>0.088</b>		0.038	0.012	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	☼	02/12/18 17:31	02/13/18 15:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	81		46 - 133	02/12/18 17:31	02/13/18 15:09	1
Phenol-d5	76		46 - 125	02/12/18 17:31	02/13/18 15:09	1
Nitrobenzene-d5	72		41 - 120	02/12/18 17:31	02/13/18 15:09	1
2-Fluorobiphenyl	76		44 - 121	02/12/18 17:31	02/13/18 15:09	1
2,4,6-Tribromophenol	63		25 - 139	02/12/18 17:31	02/13/18 15:09	1
Terphenyl-d14	68		35 - 160	02/12/18 17:31	02/13/18 15:09	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	☼	02/10/18 10:47	02/11/18 18:58	1
<b>Arsenic</b>	<b>4.9</b>		0.57	0.20	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
<b>Barium</b>	<b>60</b>		0.57	0.065	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
<b>Beryllium</b>	<b>0.40</b>		0.23	0.053	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
<b>Boron</b>	<b>3.3</b>		2.9	0.27	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
<b>Cadmium</b>	<b>0.16</b>	B	0.11	0.021	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
<b>Calcium</b>	<b>19000</b>	B	11	1.9	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
<b>Chromium</b>	<b>14</b>		0.57	0.28	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
<b>Cobalt</b>	<b>7.6</b>		0.29	0.075	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
<b>Copper</b>	<b>14</b>	B	0.57	0.16	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
<b>Iron</b>	<b>13000</b>		11	5.9	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
<b>Lead</b>	<b>38</b>		0.29	0.13	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
<b>Magnesium</b>	<b>10000</b>		5.7	2.8	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
<b>Manganese</b>	<b>480</b>		0.57	0.083	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
<b>Nickel</b>	<b>15</b>		0.57	0.17	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
<b>Potassium</b>	<b>990</b>		29	10	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
<b>Selenium</b>	<b>0.84</b>		0.57	0.34	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
Silver	<0.29		0.29	0.074	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
<b>Sodium</b>	<b>280</b>		57	8.5	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
Thallium	<0.57		0.57	0.29	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
<b>Vanadium</b>	<b>22</b>		0.29	0.067	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1
<b>Zinc</b>	<b>57</b>		1.1	0.50	mg/Kg	☼	02/10/18 10:47	02/11/18 18:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.51</b>		0.50	0.050	mg/L		02/12/18 08:40	02/12/18 16:39	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/12/18 08:40	02/12/18 16:39	1
<b>Boron</b>	<b>0.080</b>	J B	0.50	0.050	mg/L		02/12/18 08:40	02/12/18 16:39	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-2

**Client Sample ID: 2459-09-B01 (0-3)**

**Lab Sample ID: 500-140697-2**

Date Collected: 02/07/18 15:15

Matrix: Solid

Date Received: 02/08/18 12:30

Percent Solids: 86.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cadmium</b>	<b>0.0027</b>	<b>J</b>	0.0050	0.0020	mg/L	-	02/12/18 08:40	02/12/18 16:39	1
Chromium	<0.025		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:39	1
Cobalt	<0.025		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:39	1
Iron	<0.40		0.40	0.20	mg/L	-	02/12/18 08:40	02/12/18 16:39	1
Lead	<0.0075		0.0075	0.0075	mg/L	-	02/12/18 08:40	02/12/18 16:39	1
<b>Manganese</b>	<b>0.36</b>		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:39	1
<b>Nickel</b>	<b>0.016</b>	<b>J B</b>	0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:39	1
Selenium	<0.050		0.050	0.020	mg/L	-	02/12/18 08:40	02/12/18 16:39	1
Silver	<0.025		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:39	1
<b>Zinc</b>	<b>0.048</b>	<b>J</b>	0.50	0.020	mg/L	-	02/12/18 08:40	02/12/18 16:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.99</b>		0.025	0.010	mg/L	-	02/13/18 06:45	02/13/18 18:17	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	-	02/12/18 08:40	02/13/18 12:20	1
Thallium	<0.0020		0.0020	0.0020	mg/L	-	02/12/18 08:40	02/13/18 12:20	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	-	02/12/18 11:40	02/13/18 10:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.024</b>		0.017	0.0058	mg/Kg	☼	02/12/18 14:50	02/13/18 10:18	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>pH</b>	<b>8.0</b>		0.20	0.20	SU	-		02/15/18 14:12	1

# Definitions/Glossary

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-2

## 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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-2

## 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

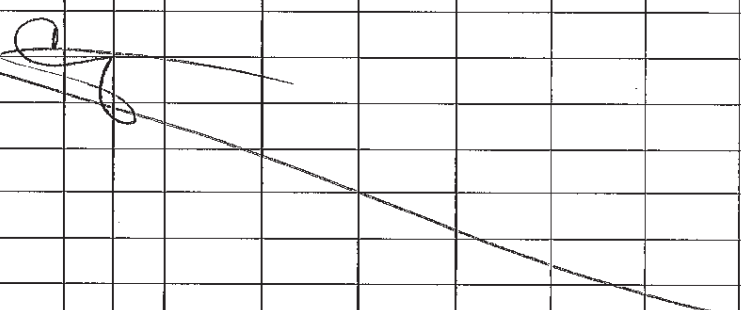
2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

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

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

## Chain of Custody Record

Lab Job #: 500-140697  
 Chain of Custody Number: EE93905  
 Page \_\_\_\_\_ of \_\_\_\_\_  
 Temperature °C of Cooler: \_\_\_\_\_

Client		Client Project #		Preservative		Parameter		Matrix		Voc		Svoc		pH		Tot/ Metil		SPUP/ TOLP		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	
Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix															Comments
EE		FAP355 (IL Rate 176)																			
Project Name		Project Location/State		Lab Project #		Lab PM															
Lake/McHenry IL		E. Bondar		D. Wright																	
2		2459-09-Bol (0.3)	2/7/18	1515	2	S				X	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 <i>[Signature]</i>	Company EE	Date 2/7/18	Time 1530	Received By <i>[Signature]</i>	Company TA	Date 2/7/18	Time 1530
Relinquished By <i>[Signature]</i>	Company TA	Date 2/9/18	Time 1230	Received By <i>[Signature]</i>	Company TA	Date 02/08/18	Time 1230
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

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: Ecology and Environment, Inc.

Job Number: 500-140697-2

**Login Number: 140697**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Kelsey, Shawn 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	
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.	False	Received extra sample not listed on COC.
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 355 (IL Route 176) Office Phone Number, if available: \_\_\_\_\_

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

100 block of W. State Road (ISGS #2459V-10)

City: Island Lake State: IL Zip Code: 60042

County: Cook Township: Nunda

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

Latitude: 42.27224 Longitude: -88.19937

(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: 60196-1096 Phone: 847-705-4122

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Tyler Petersen

Contact: Tyler Petersen

Email, if available: tyler.petersen@illinois.gov

Email, if available: tyler.petersen@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 355 (IL Route 176)

Latitude: 42.27224 Longitude: -88.19937

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)]:

Location 2459-10-B02 was sampled within the construction zone adjacent to ISGS #2459V-10 (Vacant Land). Refer to PSI Report for ISGS #2459V-10 (Vacant Land) including Table 4-3, and Figures 4-1 and 4-2.

- 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]:

See attached data summary table and associated laboratory data package J140697-3.

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

I, Neil J. Brown (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.

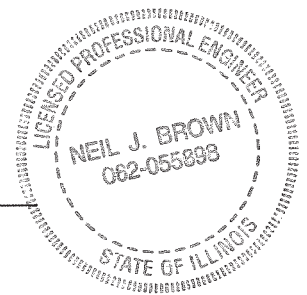
*Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))*

Company Name: Ecology and Environment, Inc.  
 Street Address: 33 West Monroe Street  
 City: Chicago State: IL Zip Code: 60603  
 Phone: 312-578-9243

Neil J. Brown  
 Printed Name:

*Neil J. Brown*  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

3/14/18  
 Date:





## Analytical Data Summary

**PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-705-09; WorkOrder #39**

### Key to Data Tables

- MAC = Maximum Allowable Concentration of Chemical Constituent in  
Uncontaminated Soil Used as Fill Material At Regulated Fill Operations
- mg/kg = Milligrams per kilogram.
- mg/L = Milligrams per liter.
- MSA = Metropolitan Statistical Area
- TACO = Tiered Approach to Corrective Action Objectives
- TCLP = Toxicity Characteristic Leaching Procedure.
- GCGIER = Groundwater Component of the Groundwater Ingestion Exposure Route
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed or not applicable.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.
- PID = Photoionization detector.
- = No PID readings detected above background (within instrument margin of error).

### Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
-  = Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
-  = Concentration exceeds applicable comparison criteria.

## CONTAMINANTS OF CONCERN

SITE	ISGS #2459V-10 (Vacant Land)	Comparison Criteria					
		MACs			TACO		
BORING	2459-10-B02	Most Stringent	Within an MSA	Within Chicago	Residential	Construction Worker	SCGIER
SAMPLE	2459-10-B02 (0-2)						
MATRIX	Soil						
DEPTH (feet)	0-2						
pH	8.1						
PID > Bkgd.	--						
<b>VOCs (None Detected)</b>							
<b>SVOCs (mg/kg)</b>							
2-Methylnaphthalene	0.017 J	--	--	--	--	--	--
Anthracene	0.011 J	12,000	--	--	23,000	610,000	--
Benzo(a)anthracene	0.065	0.9	1.8	1.1	1.8	170	--
Benzo(a)pyrene	0.084	0.09	2.1	1.3	2.1	17	--
Benzo(b)fluoranthene	0.13	0.9	2.1	1.5	2.1	170	--
Benzo(g,h,i)perylene	0.060	--	--	--	--	--	--
Benzo(k)fluoranthene	0.043	9	--	--	9	1,700	--
Chrysene	0.083	88	--	--	88	17,000	--
Dibenz(a,h)anthracene	0.015 J	0.09	0.42	0.2	0.42	17	--
Fluoranthene	0.16	3,100	--	--	3,100	82,000	--
Fluorene	0.0069 J	560	--	--	3,100	82,000	--
Indeno(1,2,3-cd)pyrene	0.056	0.9	1.6	0.9	1.6	170	--
Phenanthrene	0.077	--	--	--	--	--	--
Pyrene	0.11	2,300	--	--	2,300	61,000	--
<b>Inorganics (mg/kg)</b>							
Antimony	0.33 J	5	--	--	31	82	--
Arsenic	6.2	11.3	13	--	13	61	--
Barium	59	1,500	--	--	5,500	14,000	--
Beryllium	0.47	22	--	--	160	410	--
Boron	5.2	40	--	--	16,000	41,000	--
Calcium	30,000	--	--	--	--	--	--
Chromium	13	21	--	--	230	690	--
Cobalt	9.9	20	--	--	4,700	12,000	--
Copper	19	2,900	--	--	2,900	8,200	--
Iron	14,000	15,000	15,900	--	--	--	--
Lead	52	107	--	--	400	700	--
Magnesium	18,000	325,000	--	--	--	730,000	--
Manganese	540	630	636	--	1,600	4,100	--
Mercury	0.035	0.89	--	--	10	0.1	--
Nickel	20	100	--	--	1,600	4,100	--
Potassium	1,300	--	--	--	--	--	--
Selenium	0.55 J	1.3	--	--	390	1,000	--
Sodium	140	--	--	--	--	--	--
Vanadium	20	550	--	--	550	1,400	--
Zinc	73	5,100	--	--	23,000	61,000	--
<b>TCLP Metals (mg/L)</b>							
Barium	0.44 J	--	--	--	--	--	2
Cadmium	0.0022 J	--	--	--	--	--	0.005
Manganese	0.14	--	--	--	--	--	0.15
Zinc	0.050 J	--	--	--	--	--	5
<b>SPLP Metals (Not Analyzed)</b>							

# 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: 500-140697-3

Client Project/Site: IDOT - 176-001-WO039

For:

Ecology and Environment, Inc.

33 West Monroe St.

Suite 1410

Chicago, Illinois 60603

Attn: Mr. Dean Tiebout



Authorized for release by:

2/16/2018 4:11:58 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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-3

---

**Job ID: 500-140697-3**

---

**Laboratory: TestAmerica Chicago**

## Narrative

---

### Job Narrative 500-140697-3

#### Receipt

The samples were received on 2/8/2018 12:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.4° C and 3.1° 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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-3

**Client Sample ID: 2459-10-B02 (0-2)**

**Lab Sample ID: 500-140697-3**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Methylnaphthalene	0.017	J	0.078	0.0071	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.0069	J	0.038	0.0054	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.077		0.038	0.0054	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.011	J	0.038	0.0064	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.16		0.038	0.0071	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.11		0.038	0.0077	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.065		0.038	0.0052	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.083		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.13		0.038	0.0083	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.043		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.084		0.038	0.0075	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.056		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.015	J	0.038	0.0075	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.060		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.33	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	6.2		0.57	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	59		0.57	0.065	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.47		0.23	0.053	mg/Kg	1	☼	6010B	Total/NA
Boron	5.2		2.9	0.27	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.24	B	0.11	0.021	mg/Kg	1	☼	6010B	Total/NA
Calcium	30000	B	11	1.9	mg/Kg	1	☼	6010B	Total/NA
Chromium	13		0.57	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	9.9		0.29	0.075	mg/Kg	1	☼	6010B	Total/NA
Copper	19	B	0.57	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	14000		11	5.9	mg/Kg	1	☼	6010B	Total/NA
Lead	52		0.29	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	18000		5.7	2.8	mg/Kg	1	☼	6010B	Total/NA
Manganese	540		0.57	0.083	mg/Kg	1	☼	6010B	Total/NA
Nickel	20		0.57	0.17	mg/Kg	1	☼	6010B	Total/NA
Potassium	1300		29	10	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.55	J	0.57	0.34	mg/Kg	1	☼	6010B	Total/NA
Sodium	140		57	8.5	mg/Kg	1	☼	6010B	Total/NA
Vanadium	20		0.29	0.067	mg/Kg	1	☼	6010B	Total/NA
Zinc	73		1.1	0.50	mg/Kg	1	☼	6010B	Total/NA
Barium	0.44	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.10	J B	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0022	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Manganese	0.14		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.050	J	0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.035		0.017	0.0058	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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-3

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-140697-3	2459-10-B02 (0-2)	Solid	02/07/18 11:40	02/08/18 12:30

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# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-3

**Client Sample ID: 2459-10-B02 (0-2)**

**Lab Sample ID: 500-140697-3**

Date Collected: 02/07/18 11:40

Matrix: Solid

Date Received: 02/08/18 12:30

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	0.0076	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Benzene	<0.0017		0.0017	0.00045	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Bromodichloromethane	<0.0017		0.0017	0.00036	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Bromoform	<0.0017		0.0017	0.00051	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Bromomethane	<0.0044		0.0044	0.0017	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
2-Butanone (MEK)	<0.0044		0.0044	0.0019	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Carbon disulfide	<0.0044		0.0044	0.00091	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Carbon tetrachloride	<0.0017		0.0017	0.00051	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Chlorobenzene	<0.0017		0.0017	0.00064	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Chloroethane	<0.0044		0.0044	0.0013	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Chloroform	<0.0017		0.0017	0.00061	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Chloromethane	<0.0044		0.0044	0.0018	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
cis-1,2-Dichloroethene	<0.0017		0.0017	0.00049	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
cis-1,3-Dichloropropene	<0.0017		0.0017	0.00053	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Dibromochloromethane	<0.0017		0.0017	0.00057	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
1,1-Dichloroethane	<0.0017		0.0017	0.00060	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
1,2-Dichloroethane	<0.0044		0.0044	0.0014	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
1,1-Dichloroethene	<0.0017		0.0017	0.00060	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
1,2-Dichloropropane	<0.0017		0.0017	0.00045	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
1,3-Dichloropropane, Total	<0.0017		0.0017	0.00061	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Ethylbenzene	<0.0017		0.0017	0.00084	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
2-Hexanone	<0.0044		0.0044	0.0014	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Methylene Chloride	<0.0044		0.0044	0.0017	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
4-Methyl-2-pentanone (MIBK)	<0.0044		0.0044	0.0013	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Methyl tert-butyl ether	<0.0017		0.0017	0.00051	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Styrene	<0.0017		0.0017	0.00053	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
1,1,2,2-Tetrachloroethane	<0.0017		0.0017	0.00056	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Tetrachloroethene	<0.0017		0.0017	0.00059	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Toluene	<0.0017		0.0017	0.00044	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
trans-1,2-Dichloroethene	<0.0017		0.0017	0.00077	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
trans-1,3-Dichloropropene	<0.0017		0.0017	0.00061	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
1,1,1-Trichloroethane	<0.0017		0.0017	0.00059	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
1,1,2-Trichloroethane	<0.0017		0.0017	0.00075	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Trichloroethene	<0.0017		0.0017	0.00059	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Vinyl acetate	<0.0044		0.0044	0.0015	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Vinyl chloride	<0.0017		0.0017	0.00077	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1
Xylenes, Total	<0.0035		0.0035	0.00056	mg/Kg	☼	02/08/18 16:02	02/10/18 17:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		75 - 131	02/08/18 16:02	02/10/18 17:02	1
Dibromofluoromethane	102		75 - 126	02/08/18 16:02	02/10/18 17:02	1
1,2-Dichloroethane-d4 (Surr)	90		70 - 134	02/08/18 16:02	02/10/18 17:02	1
Toluene-d8 (Surr)	88		75 - 124	02/08/18 16:02	02/10/18 17:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.19		0.19	0.086	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.058	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-3

**Client Sample ID: 2459-10-B02 (0-2)**

**Lab Sample ID: 500-140697-3**

**Date Collected: 02/07/18 11:40**

**Matrix: Solid**

**Date Received: 02/08/18 12:30**

**Percent Solids: 85.5**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.19		0.19	0.046	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
2-Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.045	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
N-Nitrosodi-n-propylamine	<0.078		0.078	0.047	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Hexachloroethane	<0.19		0.19	0.059	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
2-Chlorophenol	<0.19		0.19	0.066	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Nitrobenzene	<0.038		0.038	0.0096	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
2,4-Dimethylphenol	<0.38		0.38	0.15	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Hexachlorobutadiene	<0.19		0.19	0.061	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Naphthalene	<0.038		0.038	0.0059	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
2,4-Dichlorophenol	<0.38		0.38	0.092	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
4-Chloroaniline	<0.78		0.78	0.18	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
2,4,5-Trichlorophenol	<0.38		0.38	0.088	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Hexachlorocyclopentadiene	<0.78		0.78	0.22	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
<b>2-Methylnaphthalene</b>	<b>0.017</b>	<b>J</b>	0.078	0.0071	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
2-Nitroaniline	<0.19		0.19	0.052	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
2-Chloronaphthalene	<0.19		0.19	0.043	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
2,6-Dinitrotoluene	<0.19		0.19	0.076	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
2-Nitrophenol	<0.38		0.38	0.091	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
2,4-Dinitrophenol	<0.78		0.78	0.68	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Acenaphthylene	<0.038		0.038	0.0051	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
2,4-Dinitrotoluene	<0.19		0.19	0.061	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Acenaphthene	<0.038		0.038	0.0069	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
4-Nitrophenol	<0.78		0.78	0.37	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
<b>Fluorene</b>	<b>0.0069</b>	<b>J</b>	0.038	0.0054	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.051	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Hexachlorobenzene	<0.078		0.078	0.0089	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Diethyl phthalate	<0.19		0.19	0.065	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Pentachlorophenol	<0.78		0.78	0.62	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
4,6-Dinitro-2-methylphenol	<0.78		0.78	0.31	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
<b>Phenanthrene</b>	<b>0.077</b>		0.038	0.0054	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
<b>Anthracene</b>	<b>0.011</b>	<b>J</b>	0.038	0.0064	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Carbazole	<0.19		0.19	0.096	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Di-n-butyl phthalate	<0.19		0.19	0.059	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
<b>Fluoranthene</b>	<b>0.16</b>		0.038	0.0071	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
<b>Pyrene</b>	<b>0.11</b>		0.038	0.0077	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Butyl benzyl phthalate	<0.19		0.19	0.073	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
<b>Benzo[a]anthracene</b>	<b>0.065</b>		0.038	0.0052	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-3

**Client Sample ID: 2459-10-B02 (0-2)**

**Lab Sample ID: 500-140697-3**

Date Collected: 02/07/18 11:40

Matrix: Solid

Date Received: 02/08/18 12:30

Percent Solids: 85.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chrysene</b>	<b>0.083</b>		0.038	0.011	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.054	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.070	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
Di-n-octyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
<b>Benzo[b]fluoranthene</b>	<b>0.13</b>		0.038	0.0083	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
<b>Benzo[k]fluoranthene</b>	<b>0.043</b>		0.038	0.011	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
<b>Benzo[a]pyrene</b>	<b>0.084</b>		0.038	0.0075	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.056</b>		0.038	0.010	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
<b>Dibenz(a,h)anthracene</b>	<b>0.015</b>	J	0.038	0.0075	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
<b>Benzo[g,h,i]perylene</b>	<b>0.060</b>		0.038	0.012	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1
3 & 4 Methylphenol	<0.19		0.19	0.064	mg/Kg	☼	02/12/18 17:31	02/13/18 15:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	77		46 - 133	02/12/18 17:31	02/13/18 15:36	1
Phenol-d5	77		46 - 125	02/12/18 17:31	02/13/18 15:36	1
Nitrobenzene-d5	69		41 - 120	02/12/18 17:31	02/13/18 15:36	1
2-Fluorobiphenyl	76		44 - 121	02/12/18 17:31	02/13/18 15:36	1
2,4,6-Tribromophenol	64		25 - 139	02/12/18 17:31	02/13/18 15:36	1
Terphenyl-d14	64		35 - 160	02/12/18 17:31	02/13/18 15:36	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.33</b>	J	1.1	0.22	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
<b>Arsenic</b>	<b>6.2</b>		0.57	0.20	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
<b>Barium</b>	<b>59</b>		0.57	0.065	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
<b>Beryllium</b>	<b>0.47</b>		0.23	0.053	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
<b>Boron</b>	<b>5.2</b>		2.9	0.27	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
<b>Cadmium</b>	<b>0.24</b>	B	0.11	0.021	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
<b>Calcium</b>	<b>30000</b>	B	11	1.9	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
<b>Chromium</b>	<b>13</b>		0.57	0.28	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
<b>Cobalt</b>	<b>9.9</b>		0.29	0.075	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
<b>Copper</b>	<b>19</b>	B	0.57	0.16	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
<b>Iron</b>	<b>14000</b>		11	5.9	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
<b>Lead</b>	<b>52</b>		0.29	0.13	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
<b>Magnesium</b>	<b>18000</b>		5.7	2.8	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
<b>Manganese</b>	<b>540</b>		0.57	0.083	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
<b>Nickel</b>	<b>20</b>		0.57	0.17	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
<b>Potassium</b>	<b>1300</b>		29	10	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
<b>Selenium</b>	<b>0.55</b>	J	0.57	0.34	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
Silver	<0.29		0.29	0.074	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
<b>Sodium</b>	<b>140</b>		57	8.5	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
Thallium	<0.57		0.57	0.29	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
<b>Vanadium</b>	<b>20</b>		0.29	0.067	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1
<b>Zinc</b>	<b>73</b>		1.1	0.50	mg/Kg	☼	02/10/18 10:47	02/11/18 19:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.44</b>	J	0.50	0.050	mg/L		02/12/18 08:40	02/12/18 16:43	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/12/18 08:40	02/12/18 16:43	1
<b>Boron</b>	<b>0.10</b>	J B	0.50	0.050	mg/L		02/12/18 08:40	02/12/18 16:43	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-3

**Client Sample ID: 2459-10-B02 (0-2)**

**Lab Sample ID: 500-140697-3**

**Date Collected: 02/07/18 11:40**

**Matrix: Solid**

**Date Received: 02/08/18 12:30**

**Percent Solids: 85.5**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cadmium</b>	<b>0.0022</b>	<b>J</b>	0.0050	0.0020	mg/L	-	02/12/18 08:40	02/12/18 16:43	1
Chromium	<0.025		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:43	1
Cobalt	<0.025		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:43	1
Iron	<0.40		0.40	0.20	mg/L	-	02/12/18 08:40	02/12/18 16:43	1
Lead	<0.0075		0.0075	0.0075	mg/L	-	02/12/18 08:40	02/12/18 16:43	1
<b>Manganese</b>	<b>0.14</b>		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:43	1
Nickel	<0.025		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:43	1
Selenium	<0.050		0.050	0.020	mg/L	-	02/12/18 08:40	02/12/18 16:43	1
Silver	<0.025		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:43	1
<b>Zinc</b>	<b>0.050</b>	<b>J</b>	0.50	0.020	mg/L	-	02/12/18 08:40	02/12/18 16:43	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	-	02/12/18 08:40	02/13/18 12:24	1
Thallium	<0.0020		0.0020	0.0020	mg/L	-	02/12/18 08:40	02/13/18 12:24	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	-	02/12/18 11:40	02/13/18 10:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.035</b>		0.017	0.0058	mg/Kg	☼	02/12/18 14:50	02/13/18 10:25	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>pH</b>	<b>8.1</b>		0.20	0.20	SU	-		02/15/18 14:15	1



# Definitions/Glossary

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-3

## 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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-3

## 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: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

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

## Chain of Custody Record

Lab Job #: 500-140697

Chain of Custody Number: EE93901

Page \_\_\_\_\_ of \_\_\_\_\_

Temperature °C of Cooler: \_\_\_\_\_

Client		Client Project #		Preservative		Parameter													
EE																			
Project Name		Lab Project #		# of Containers		Matrix		VOL		SVOL		TCLP/ SPLP		Total Metals		pH		Preservative Key	
PAR355 (IL Route 176)																		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 Location/State		Lab Project #																	
Like, Metony, IL																			
Sampler		Lab PM																	
E. Bender		T. Wright																	
Lab ID	MIS/MSD	Sample ID		Sampling															
				Date	Time														
3		2459-10-302(0-2)		2/7/18	1140	2	S	X	X	X	X	X	X	X	X				
4		2459-10-301(0-3)		2/7/18	1145	2	S	X	X	X	X	X	X	X	X				
5		2459-10-301(0-3)		2/7/18	1145	2	S	X	X	X	X	X	X	X	X				

Elmhurst



503325

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>EE</u> Date: <u>2/7/18</u> Time: <u>1530</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>2/7/18</u> Time: <u>1530</u>
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>2/8/18</u> Time: <u>1230</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>02/08/18</u> Time: <u>1230</u>
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____

Lab Courier: \_\_\_\_\_  
 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: \_\_\_\_\_

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

## Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-140697-3

**Login Number: 140697**

**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	
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.	False	Received extra sample not listed on COC.
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 355 (IL Route 176) Office Phone Number, if available: \_\_\_\_\_

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

4001 Roberts Road (ISGS #2459V-11)

City: Island Lake State: IL Zip Code: 60042

County: Cook Township: Nunda

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

Latitude: 42.27208 Longitude: -88.19888

(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: 60196-1096 Phone: 847-705-4122

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Tyler Petersen

Contact: Tyler Petersen

Email, if available: tyler.petersen@illinois.gov

Email, if available: tyler.petersen@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 355 (IL Route 176)

Latitude: 42.27208 Longitude: -88.19888

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):

Location 2459-11-B01 was sampled within the construction zone adjacent to ISGS #2459V-11 (Commercial Building). Refer to PSI Report for ISGS #2459V-11 (Commercial Building) including Table 4-3, and Figures 4-1 and 4-2.

- 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]:

See attached data summary table and associated laboratory data package J140697-4.

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

I, Neil J. Brown (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: Ecology and Environment, Inc.  
 Street Address: 33 West Monroe Street  
 City: Chicago State: IL Zip Code: 60603  
 Phone: 312-578-9243

Neil J. Brown

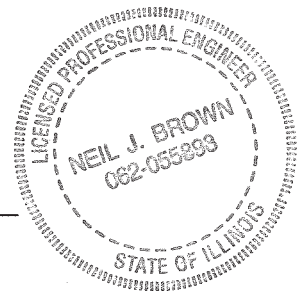
Printed Name:



3/14/18

Date:

Licensed Professional Engineer or  
Licensed Professional Geologist Signature:





## Analytical Data Summary

**PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-705-09; WorkOrder #39**

### Key to Data Tables

- MAC = Maximum Allowable Concentration of Chemical Constituent in  
Uncontaminated Soil Used as Fill Material At Regulated Fill Operations
- mg/kg = Milligrams per kilogram.
- mg/L = Milligrams per liter.
- MSA = Metropolitan Statistical Area
- TACO = Tiered Approach to Corrective Action Objectives
- TCLP = Toxicity Characteristic Leaching Procedure.
- GCGIER = Groundwater Component of the Groundwater Ingestion Exposure Route
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed or not applicable.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.
- PID = Photoionization detector.
- = No PID readings detected above background (within instrument margin of error).

### Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
-  = Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
-  = Concentration exceeds applicable comparison criteria.

## CONTAMINANTS OF CONCERN

SITE	ISGS #2459V-11 (Commercial Building)		Comparison Criteria					
	2459-11-B01		MACs			TACO		
BORING	2459-11-B01		Most Stringent	Within an MSA	Within Chicago	Residential	Construction Worker	SCGIER
SAMPLE	2459-11-B01 (0-6)	2459-11-B01 (6-11)						
MATRIX	Soil	Soil						
DEPTH (feet)	0-6	6-11						
pH	7.8	8.2						
PID > Bkgd.	--	--						
<b>VOCs (None Detected)</b>								
<b>SVOCs (mg/kg)</b>								
2-Methylnaphthalene	0.0071 J	ND U	--	--	--	--	--	--
Acenaphthene	0.052	ND U	570	--	--	4,700	120,000	--
Acenaphthylene	0.018 J	ND U	--	--	--	--	--	--
Anthracene	0.11	ND U	12,000	--	--	23,000	610,000	--
Benzo(a)anthracene	0.69	ND U	0.9	1.8	1.1	1.8	170	--
Benzo(a)pyrene	0.86 †	ND U	0.09	2.1	1.3	2.1	17	--
Benzo(b)fluoranthene	1.4 †	ND U	0.9	2.1	1.5	2.1	170	--
Benzo(g,h,i)perylene	0.50	ND U	--	--	--	--	--	--
Benzo(k)fluoranthene	0.39	ND U	9	--	--	9	1,700	--
Carbazole	0.12 J	ND U	0.6	--	--	32	6,200	--
Chrysene	0.91	ND U	88	--	--	88	17,000	--
Dibenz(a,h)anthracene	0.11 †	ND U	0.09	0.42	0.2	0.42	17	--
Fluoranthene	2.1	ND U	3,100	--	--	3,100	82,000	--
Fluorene	0.070	ND U	560	--	--	3,100	82,000	--
Indeno(1,2,3-cd)pyrene	0.50	ND U	0.9	1.6	0.9	1.6	170	--
Naphthalene	0.016 J	ND U	1.8	--	--	170	1.8	--
Phenanthrene	1.0	ND U	--	--	--	--	--	--
Pyrene	1.4	ND U	2,300	--	--	2,300	61,000	--
<b>Inorganics (mg/kg)</b>								
Arsenic	5.6	4.2	11.3	13	--	13	61	--
Barium	50	25	1,500	--	--	5,500	14,000	--
Beryllium	0.45	0.27	22	--	--	160	410	--
Boron	3.7	4.8	40	--	--	16,000	41,000	--
Calcium	17,000	110,000	--	--	--	--	--	--
Chromium	15	8.1	21	--	--	230	690	--
Cobalt	8.5	5.7	20	--	--	4,700	12,000	--
Copper	15	10	2,900	--	--	2,900	8,200	--
Iron	15,000	10,000	15,000	15,900	--	--	--	--
Lead	25	5.4	107	--	--	400	700	--
Magnesium	11,000	35,000	325,000	--	--	--	730,000	--
Manganese	400	300	630	636	--	1,600	4,100	--
Mercury	0.029	0.0083 J	0.89	--	--	10	0.1	--
Nickel	17	13	100	--	--	1,600	4,100	--
Potassium	1,100	800	--	--	--	--	--	--
Selenium	0.58	ND U	1.3	--	--	390	1,000	--
Sodium	100	150	--	--	--	--	--	--
Vanadium	25	16	550	--	--	550	1,400	--
Zinc	58	31	5,100	--	--	23,000	61,000	--
<b>TCLP Metals (mg/L)</b>								
Barium	0.40 J	0.39 J	--	--	--	--	--	2
Cadmium	ND U	0.0020 J	--	--	--	--	--	0.005
Manganese	0.20 L	0.47 L	--	--	--	--	--	0.15
Zinc	0.040 J	ND U	--	--	--	--	--	5
<b>SPLP Metals (mg/L)</b>								
Manganese	0.35 L	0.31 L	--	--	--	--	--	0.15



# 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: 500-140697-4

Client Project/Site: IDOT - 176-001-WO039

For:

Ecology and Environment, Inc.  
33 West Monroe St.  
Suite 1410  
Chicago, Illinois 60603

Attn: Mr. Dean Tiebout



Authorized for release by:  
2/16/2018 4:12:25 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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-4

**Job ID: 500-140697-4**

**Laboratory: TestAmerica Chicago**

## Narrative

### Job Narrative 500-140697-4

#### Receipt

The samples were received on 2/8/2018 12:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.4° C and 3.1° C.

#### Receipt Exceptions

Sample 2459-11-B01 (0-5) was received but not listed on a chain of custody (COC): TestAmerica personnel added the sample to the chain of custody associated to the property ID and logged it in for analysis.

Sample ID for lab sample 12 was changed per communication with E&E on 2/13/18.

#### GC/MS VOA

Method(s) 8260B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 419779 recovered outside control limits for the following analytes: Chloromethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data 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

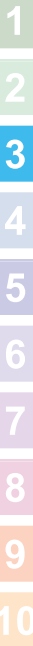
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### 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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-4

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**Client Sample ID: 2459-11-B01 (6-11)**

**Lab Sample ID: 500-140697-7**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	4.2		0.55	0.19	mg/Kg	1	*		6010B	Total/NA
Barium	25		0.55	0.063	mg/Kg	1	*		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-4

## Client Sample ID: 2459-11-B01 (6-11) (Continued)

## Lab Sample ID: 500-140697-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Beryllium	0.27		0.22	0.052	mg/Kg	1	☼	6010B	Total/NA
Boron	4.8		2.8	0.26	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.081	J B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Calcium	110000	B	110	19	mg/Kg	10	☼	6010B	Total/NA
Chromium	8.1		0.55	0.27	mg/Kg	1	☼	6010B	Total/NA
Cobalt	5.7		0.28	0.073	mg/Kg	1	☼	6010B	Total/NA
Copper	10	B	0.55	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	10000		11	5.8	mg/Kg	1	☼	6010B	Total/NA
Lead	5.4		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	35000		5.5	2.8	mg/Kg	1	☼	6010B	Total/NA
Manganese	300		0.55	0.080	mg/Kg	1	☼	6010B	Total/NA
Nickel	13		0.55	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	800		28	9.8	mg/Kg	1	☼	6010B	Total/NA
Sodium	150		55	8.2	mg/Kg	1	☼	6010B	Total/NA
Vanadium	16		0.28	0.065	mg/Kg	1	☼	6010B	Total/NA
Zinc	31		1.1	0.49	mg/Kg	1	☼	6010B	Total/NA
Barium	0.39	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.080	J B	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0020	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Manganese	0.47		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.010	J B	0.025	0.010	mg/L	1		6010B	TCLP
Manganese	0.31		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.0083	J	0.017	0.0057	mg/Kg	1	☼	7471B	Total/NA
pH	8.2		0.20	0.20	SU	1		9045D	Total/NA

## Client Sample ID: 2459-11-B01 (0-6)

## Lab Sample ID: 500-140697-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.016	J	0.038	0.0059	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.0071	J	0.077	0.0070	mg/Kg	1	☼	8270D	Total/NA
Acenaphthylene	0.018	J	0.038	0.0050	mg/Kg	1	☼	8270D	Total/NA
Acenaphthene	0.052		0.038	0.0069	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.070		0.038	0.0054	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	1.0		0.038	0.0053	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.11		0.038	0.0064	mg/Kg	1	☼	8270D	Total/NA
Carbazole	0.12	J	0.19	0.095	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	2.1		0.038	0.0071	mg/Kg	1	☼	8270D	Total/NA
Pyrene	1.4		0.038	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.69		0.038	0.0051	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.91		0.038	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	1.4		0.038	0.0082	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.39		0.038	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.86		0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.50		0.038	0.0099	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.11		0.038	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.50		0.038	0.012	mg/Kg	1	☼	8270D	Total/NA
Arsenic	5.6		0.55	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	50		0.55	0.063	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.45		0.22	0.052	mg/Kg	1	☼	6010B	Total/NA
Boron	3.7		2.8	0.26	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-4

**Client Sample ID: 2459-11-B01 (0-6) (Continued)**

**Lab Sample ID: 500-140697-12**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.13	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Calcium	17000	B	11	1.9	mg/Kg	1	☼	6010B	Total/NA
Chromium	15		0.55	0.27	mg/Kg	1	☼	6010B	Total/NA
Cobalt	8.5		0.28	0.072	mg/Kg	1	☼	6010B	Total/NA
Copper	15	B	0.55	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	15000		11	5.7	mg/Kg	1	☼	6010B	Total/NA
Lead	25		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	11000		5.5	2.7	mg/Kg	1	☼	6010B	Total/NA
Manganese	400		0.55	0.080	mg/Kg	1	☼	6010B	Total/NA
Nickel	17		0.55	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	1100		28	9.8	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.58		0.55	0.32	mg/Kg	1	☼	6010B	Total/NA
Sodium	100		55	8.2	mg/Kg	1	☼	6010B	Total/NA
Vanadium	25		0.28	0.065	mg/Kg	1	☼	6010B	Total/NA
Zinc	58		1.1	0.48	mg/Kg	1	☼	6010B	Total/NA
Barium	0.40	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.070	J B	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.20		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.040	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.35		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.029		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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-140697-7	2459-11-B01 (6-11)	Solid	02/07/18 14:30	02/08/18 12:30
500-140697-12	2459-11-B01 (0-6)	Solid	02/07/18 14:25	02/08/18 12:30

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# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-4

**Client Sample ID: 2459-11-B01 (6-11)**

**Lab Sample ID: 500-140697-7**

Date Collected: 02/07/18 14:30

Matrix: Solid

Date Received: 02/08/18 12:30

Percent Solids: 89.1

## 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	☼	02/08/18 16:02	02/12/18 16:19	1
Benzene	<0.0016		0.0016	0.00040	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Bromodichloromethane	<0.0016		0.0016	0.00032	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Bromoform	<0.0016		0.0016	0.00046	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Bromomethane	<0.0040		0.0040	0.0015	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
2-Butanone (MEK)	<0.0040		0.0040	0.0018	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Carbon disulfide	<0.0040		0.0040	0.00083	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Carbon tetrachloride	<0.0016		0.0016	0.00046	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Chlorobenzene	<0.0016		0.0016	0.00059	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Chloroethane	<0.0040		0.0040	0.0012	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Chloroform	<0.0016		0.0016	0.00055	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Chloromethane	<0.0040	*	0.0040	0.0016	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
cis-1,2-Dichloroethene	<0.0016		0.0016	0.00044	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
cis-1,3-Dichloropropene	<0.0016		0.0016	0.00048	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Dibromochloromethane	<0.0016		0.0016	0.00052	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
1,1-Dichloroethane	<0.0016		0.0016	0.00054	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
1,2-Dichloroethane	<0.0040		0.0040	0.0012	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
1,1-Dichloroethene	<0.0016		0.0016	0.00055	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
1,2-Dichloropropane	<0.0016		0.0016	0.00041	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
1,3-Dichloropropane, Total	<0.0016		0.0016	0.00056	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Ethylbenzene	<0.0016		0.0016	0.00076	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
2-Hexanone	<0.0040		0.0040	0.0012	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Methylene Chloride	<0.0040		0.0040	0.0016	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
4-Methyl-2-pentanone (MIBK)	<0.0040		0.0040	0.0012	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Methyl tert-butyl ether	<0.0016		0.0016	0.00047	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Styrene	<0.0016		0.0016	0.00048	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
1,1,2,2-Tetrachloroethane	<0.0016		0.0016	0.00051	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Tetrachloroethene	<0.0016		0.0016	0.00054	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Toluene	<0.0016		0.0016	0.00040	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
trans-1,2-Dichloroethene	<0.0016		0.0016	0.00070	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
trans-1,3-Dichloropropene	<0.0016		0.0016	0.00056	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
1,1,1-Trichloroethane	<0.0016		0.0016	0.00053	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
1,1,2-Trichloroethane	<0.0016		0.0016	0.00068	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Trichloroethene	<0.0016		0.0016	0.00054	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Vinyl acetate	<0.0040		0.0040	0.0014	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Vinyl chloride	<0.0016		0.0016	0.00070	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1
Xylenes, Total	<0.0032		0.0032	0.00051	mg/Kg	☼	02/08/18 16:02	02/12/18 16:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		75 - 131	02/08/18 16:02	02/12/18 16:19	1
Dibromofluoromethane	106		75 - 126	02/08/18 16:02	02/12/18 16:19	1
1,2-Dichloroethane-d4 (Surr)	93		70 - 134	02/08/18 16:02	02/12/18 16:19	1
Toluene-d8 (Surr)	86		75 - 124	02/08/18 16:02	02/12/18 16:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.19		0.19	0.082	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.055	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
1,4-Dichlorobenzene	<0.19		0.19	0.047	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1

TestAmerica Chicago



# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-4

**Client Sample ID: 2459-11-B01 (6-11)**

**Lab Sample ID: 500-140697-7**

**Date Collected: 02/07/18 14:30**

**Matrix: Solid**

**Date Received: 02/08/18 12:30**

**Percent Solids: 89.1**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.19		0.19	0.044	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
2-Methylphenol	<0.19		0.19	0.059	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Hexachloroethane	<0.19		0.19	0.056	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
2-Chlorophenol	<0.19		0.19	0.063	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Nitrobenzene	<0.037		0.037	0.0092	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Isophorone	<0.19		0.19	0.041	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Hexachlorobutadiene	<0.19		0.19	0.058	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Naphthalene	<0.037		0.037	0.0057	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
2,4-Dichlorophenol	<0.37		0.37	0.088	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
2,4,5-Trichlorophenol	<0.37		0.37	0.084	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
2-Methylnaphthalene	<0.074		0.074	0.0068	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
2,6-Dinitrotoluene	<0.19		0.19	0.073	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
2-Nitrophenol	<0.37		0.37	0.087	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
3-Nitroaniline	<0.37		0.37	0.11	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Dimethyl phthalate	<0.19		0.19	0.048	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
2,4-Dinitrophenol	<0.74		0.74	0.65	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Acenaphthene	<0.037		0.037	0.0066	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Dibenzofuran	<0.19		0.19	0.043	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Fluorene	<0.037		0.037	0.0052	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
4-Nitroaniline	<0.37		0.37	0.15	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Hexachlorobenzene	<0.074		0.074	0.0086	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.043	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.30	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Phenanthrene	<0.037		0.037	0.0051	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Anthracene	<0.037		0.037	0.0062	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Carbazole	<0.19		0.19	0.092	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Di-n-butyl phthalate	<0.19		0.19	0.056	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Fluoranthene	<0.037		0.037	0.0068	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Pyrene	<0.037		0.037	0.0073	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Butyl benzyl phthalate	<0.19		0.19	0.070	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Benzo[a]anthracene	<0.037		0.037	0.0050	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-4

**Client Sample ID: 2459-11-B01 (6-11)**

**Lab Sample ID: 500-140697-7**

**Date Collected: 02/07/18 14:30**

**Matrix: Solid**

**Date Received: 02/08/18 12:30**

**Percent Solids: 89.1**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	<0.037		0.037	0.010	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.067	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Di-n-octyl phthalate	<0.19		0.19	0.060	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Benzo[b]fluoranthene	<0.037		0.037	0.0080	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Benzo[k]fluoranthene	<0.037		0.037	0.011	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Benzo[a]pyrene	<0.037		0.037	0.0071	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Indeno[1,2,3-cd]pyrene	<0.037		0.037	0.0096	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0071	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
Benzo[g,h,i]perylene	<0.037		0.037	0.012	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/12/18 17:31	02/13/18 10:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	87		46 - 133	02/12/18 17:31	02/13/18 10:44	1
Phenol-d5	76		46 - 125	02/12/18 17:31	02/13/18 10:44	1
Nitrobenzene-d5	79		41 - 120	02/12/18 17:31	02/13/18 10:44	1
2-Fluorobiphenyl	78		44 - 121	02/12/18 17:31	02/13/18 10:44	1
2,4,6-Tribromophenol	100		25 - 139	02/12/18 17:31	02/13/18 10:44	1
Terphenyl-d14	78		35 - 160	02/12/18 17:31	02/13/18 10:44	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	☼	02/10/18 10:47	02/11/18 19:20	1
<b>Arsenic</b>	<b>4.2</b>		0.55	0.19	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1
<b>Barium</b>	<b>25</b>		0.55	0.063	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1
<b>Beryllium</b>	<b>0.27</b>		0.22	0.052	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1
<b>Boron</b>	<b>4.8</b>		2.8	0.26	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1
<b>Cadmium</b>	<b>0.081</b>	<b>J B</b>	0.11	0.020	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1
<b>Calcium</b>	<b>110000</b>	<b>B</b>	110	19	mg/Kg	☼	02/10/18 10:47	02/12/18 18:00	10
<b>Chromium</b>	<b>8.1</b>		0.55	0.27	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1
<b>Cobalt</b>	<b>5.7</b>		0.28	0.073	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1
<b>Copper</b>	<b>10</b>	<b>B</b>	0.55	0.16	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1
<b>Iron</b>	<b>10000</b>		11	5.8	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1
<b>Lead</b>	<b>5.4</b>		0.28	0.13	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1
<b>Magnesium</b>	<b>35000</b>		5.5	2.8	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1
<b>Manganese</b>	<b>300</b>		0.55	0.080	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1
<b>Nickel</b>	<b>13</b>		0.55	0.16	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1
<b>Potassium</b>	<b>800</b>		28	9.8	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1
Selenium	<0.55		0.55	0.33	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1
Silver	<0.28		0.28	0.072	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1
<b>Sodium</b>	<b>150</b>		55	8.2	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1
Thallium	<0.55		0.55	0.28	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1
<b>Vanadium</b>	<b>16</b>		0.28	0.065	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1
<b>Zinc</b>	<b>31</b>		1.1	0.49	mg/Kg	☼	02/10/18 10:47	02/11/18 19:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.39</b>	<b>J</b>	0.50	0.050	mg/L		02/12/18 08:40	02/12/18 16:59	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/12/18 08:40	02/12/18 16:59	1
<b>Boron</b>	<b>0.080</b>	<b>J B</b>	0.50	0.050	mg/L		02/12/18 08:40	02/12/18 16:59	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-4

**Client Sample ID: 2459-11-B01 (6-11)**

**Lab Sample ID: 500-140697-7**

Date Collected: 02/07/18 14:30

Matrix: Solid

Date Received: 02/08/18 12:30

Percent Solids: 89.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cadmium</b>	<b>0.0020</b>	<b>J</b>	0.0050	0.0020	mg/L	-	02/12/18 08:40	02/12/18 16:59	1
Chromium	<0.025		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:59	1
Cobalt	<0.025		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:59	1
Iron	<0.40		0.40	0.20	mg/L	-	02/12/18 08:40	02/12/18 16:59	1
Lead	<0.0075		0.0075	0.0075	mg/L	-	02/12/18 08:40	02/12/18 16:59	1
<b>Manganese</b>	<b>0.47</b>		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:59	1
<b>Nickel</b>	<b>0.010</b>	<b>J B</b>	0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:59	1
Selenium	<0.050		0.050	0.020	mg/L	-	02/12/18 08:40	02/12/18 16:59	1
Silver	<0.025		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 16:59	1
Zinc	<0.50		0.50	0.020	mg/L	-	02/12/18 08:40	02/12/18 16:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.31</b>		0.025	0.010	mg/L	-	02/13/18 06:45	02/13/18 18:39	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	-	02/12/18 08:40	02/13/18 12:28	1
Thallium	<0.0020		0.0020	0.0020	mg/L	-	02/12/18 08:40	02/13/18 12:28	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	-	02/12/18 11:40	02/13/18 10:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.0083</b>	<b>J</b>	0.017	0.0057	mg/Kg	☼	02/12/18 14:50	02/13/18 10:34	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>pH</b>	<b>8.2</b>		0.20	0.20	SU	-		02/15/18 14:27	1

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-4

**Client Sample ID: 2459-11-B01 (0-6)**

**Lab Sample ID: 500-140697-12**

Date Collected: 02/07/18 14:25

Matrix: Solid

Date Received: 02/08/18 12:30

Percent Solids: 84.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.016		0.016	0.0070	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Benzene	<0.0016		0.0016	0.00041	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Bromodichloromethane	<0.0016		0.0016	0.00033	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Bromoform	<0.0016		0.0016	0.00047	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Bromomethane	<0.0040		0.0040	0.0015	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
2-Butanone (MEK)	<0.0040		0.0040	0.0018	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Carbon disulfide	<0.0040		0.0040	0.00084	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Carbon tetrachloride	<0.0016		0.0016	0.00047	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Chlorobenzene	<0.0016		0.0016	0.00060	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Chloroethane	<0.0040		0.0040	0.0012	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Chloroform	<0.0016		0.0016	0.00056	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Chloromethane	<0.0040	*	0.0040	0.0016	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
cis-1,2-Dichloroethene	<0.0016		0.0016	0.00045	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
cis-1,3-Dichloropropene	<0.0016		0.0016	0.00049	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Dibromochloromethane	<0.0016		0.0016	0.00053	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
1,1-Dichloroethane	<0.0016		0.0016	0.00055	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
1,2-Dichloroethane	<0.0040		0.0040	0.0013	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
1,1-Dichloroethene	<0.0016		0.0016	0.00055	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
1,2-Dichloropropane	<0.0016		0.0016	0.00042	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
1,3-Dichloropropane, Total	<0.0016		0.0016	0.00057	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Ethylbenzene	<0.0016		0.0016	0.00077	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
2-Hexanone	<0.0040		0.0040	0.0013	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Methylene Chloride	<0.0040		0.0040	0.0016	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
4-Methyl-2-pentanone (MIBK)	<0.0040		0.0040	0.0012	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Methyl tert-butyl ether	<0.0016		0.0016	0.00047	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Styrene	<0.0016		0.0016	0.00049	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
1,1,2,2-Tetrachloroethane	<0.0016		0.0016	0.00052	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Tetrachloroethene	<0.0016		0.0016	0.00055	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Toluene	<0.0016		0.0016	0.00041	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
trans-1,2-Dichloroethene	<0.0016		0.0016	0.00071	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
trans-1,3-Dichloropropene	<0.0016		0.0016	0.00057	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
1,1,1-Trichloroethane	<0.0016		0.0016	0.00054	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
1,1,2-Trichloroethane	<0.0016		0.0016	0.00069	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Trichloroethene	<0.0016		0.0016	0.00055	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Vinyl acetate	<0.0040		0.0040	0.0014	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Vinyl chloride	<0.0016		0.0016	0.00071	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1
Xylenes, Total	<0.0032		0.0032	0.00052	mg/Kg	☼	02/08/18 16:02	02/12/18 18:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		75 - 131	02/08/18 16:02	02/12/18 18:24	1
Dibromofluoromethane	94		75 - 126	02/08/18 16:02	02/12/18 18:24	1
1,2-Dichloroethane-d4 (Surr)	86		70 - 134	02/08/18 16:02	02/12/18 18:24	1
Toluene-d8 (Surr)	89		75 - 124	02/08/18 16:02	02/12/18 18:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.19		0.19	0.085	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.057	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
1,3-Dichlorobenzene	<0.19		0.19	0.043	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
1,4-Dichlorobenzene	<0.19		0.19	0.049	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-4

**Client Sample ID: 2459-11-B01 (0-6)**

**Lab Sample ID: 500-140697-12**

**Date Collected: 02/07/18 14:25**

**Matrix: Solid**

**Date Received: 02/08/18 12:30**

**Percent Solids: 84.9**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.19		0.19	0.046	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
2-Methylphenol	<0.19		0.19	0.061	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.044	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
N-Nitrosodi-n-propylamine	<0.077		0.077	0.047	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
Hexachloroethane	<0.19		0.19	0.058	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
2-Chlorophenol	<0.19		0.19	0.065	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
Nitrobenzene	<0.038		0.038	0.0095	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.039	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.041	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
Isophorone	<0.19		0.19	0.043	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
2,4-Dimethylphenol	<0.38		0.38	0.14	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
Hexachlorobutadiene	<0.19		0.19	0.060	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
<b>Naphthalene</b>	<b>0.016</b>	<b>J</b>	0.038	0.0059	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
2,4-Dichlorophenol	<0.38		0.38	0.091	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
4-Chloroaniline	<0.77		0.77	0.18	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
2,4,6-Trichlorophenol	<0.38		0.38	0.13	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
2,4,5-Trichlorophenol	<0.38		0.38	0.087	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
Hexachlorocyclopentadiene	<0.77		0.77	0.22	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
<b>2-Methylnaphthalene</b>	<b>0.0071</b>	<b>J</b>	0.077	0.0070	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
2-Nitroaniline	<0.19		0.19	0.051	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
2-Chloronaphthalene	<0.19		0.19	0.042	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
4-Chloro-3-methylphenol	<0.38		0.38	0.13	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
2,6-Dinitrotoluene	<0.19		0.19	0.075	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
2-Nitrophenol	<0.38		0.38	0.090	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
3-Nitroaniline	<0.38		0.38	0.12	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
Dimethyl phthalate	<0.19		0.19	0.050	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
2,4-Dinitrophenol	<0.77		0.77	0.67	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
<b>Acenaphthylene</b>	<b>0.018</b>	<b>J</b>	0.038	0.0050	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
2,4-Dinitrotoluene	<0.19		0.19	0.061	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
<b>Acenaphthene</b>	<b>0.052</b>		0.038	0.0069	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
Dibenzofuran	<0.19		0.19	0.045	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
4-Nitrophenol	<0.77		0.77	0.36	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
<b>Fluorene</b>	<b>0.070</b>		0.038	0.0054	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
4-Nitroaniline	<0.38		0.38	0.16	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.050	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
Hexachlorobenzene	<0.077		0.077	0.0088	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
Diethyl phthalate	<0.19		0.19	0.065	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.045	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
Pentachlorophenol	<0.77		0.77	0.61	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
N-Nitrosodiphenylamine	<0.19		0.19	0.045	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
4,6-Dinitro-2-methylphenol	<0.77		0.77	0.31	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
<b>Phenanthrene</b>	<b>1.0</b>		0.038	0.0053	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
<b>Anthracene</b>	<b>0.11</b>		0.038	0.0064	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
<b>Carbazole</b>	<b>0.12</b>	<b>J</b>	0.19	0.095	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
Di-n-butyl phthalate	<0.19		0.19	0.058	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
<b>Fluoranthene</b>	<b>2.1</b>		0.038	0.0071	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
<b>Pyrene</b>	<b>1.4</b>		0.038	0.0076	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
Butyl benzyl phthalate	<0.19		0.19	0.073	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
<b>Benzo[a]anthracene</b>	<b>0.69</b>		0.038	0.0051	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-4

**Client Sample ID: 2459-11-B01 (0-6)**

**Lab Sample ID: 500-140697-12**

Date Collected: 02/07/18 14:25

Matrix: Solid

Date Received: 02/08/18 12:30

Percent Solids: 84.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chrysene</b>	<b>0.91</b>		0.038	0.010	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.070	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
Di-n-octyl phthalate	<0.19		0.19	0.062	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
<b>Benzo[b]fluoranthene</b>	<b>1.4</b>		0.038	0.0082	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
<b>Benzo[k]fluoranthene</b>	<b>0.39</b>		0.038	0.011	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
<b>Benzo[a]pyrene</b>	<b>0.86</b>		0.038	0.0074	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.50</b>		0.038	0.0099	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
<b>Dibenz(a,h)anthracene</b>	<b>0.11</b>		0.038	0.0074	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
<b>Benzo[g,h,i]perylene</b>	<b>0.50</b>		0.038	0.012	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1
3 & 4 Methylphenol	<0.19		0.19	0.064	mg/Kg	☼	02/12/18 17:31	02/13/18 16:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	79		46 - 133	02/12/18 17:31	02/13/18 16:29	1
Phenol-d5	78		46 - 125	02/12/18 17:31	02/13/18 16:29	1
Nitrobenzene-d5	72		41 - 120	02/12/18 17:31	02/13/18 16:29	1
2-Fluorobiphenyl	81		44 - 121	02/12/18 17:31	02/13/18 16:29	1
2,4,6-Tribromophenol	63		25 - 139	02/12/18 17:31	02/13/18 16:29	1
Terphenyl-d14	66		35 - 160	02/12/18 17:31	02/13/18 16:29	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	☼	02/10/18 10:47	02/11/18 19:51	1
<b>Arsenic</b>	<b>5.6</b>		0.55	0.19	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
<b>Barium</b>	<b>50</b>		0.55	0.063	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
<b>Beryllium</b>	<b>0.45</b>		0.22	0.052	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
<b>Boron</b>	<b>3.7</b>		2.8	0.26	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
<b>Cadmium</b>	<b>0.13</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
<b>Calcium</b>	<b>17000</b>	<b>B</b>	11	1.9	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
<b>Chromium</b>	<b>15</b>		0.55	0.27	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
<b>Cobalt</b>	<b>8.5</b>		0.28	0.072	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
<b>Copper</b>	<b>15</b>	<b>B</b>	0.55	0.15	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
<b>Iron</b>	<b>15000</b>		11	5.7	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
<b>Lead</b>	<b>25</b>		0.28	0.13	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
<b>Magnesium</b>	<b>11000</b>		5.5	2.7	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
<b>Manganese</b>	<b>400</b>		0.55	0.080	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
<b>Nickel</b>	<b>17</b>		0.55	0.16	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
<b>Potassium</b>	<b>1100</b>		28	9.8	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
<b>Selenium</b>	<b>0.58</b>		0.55	0.32	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
Silver	<0.28		0.28	0.071	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
<b>Sodium</b>	<b>100</b>		55	8.2	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
Thallium	<0.55		0.55	0.28	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
<b>Vanadium</b>	<b>25</b>		0.28	0.065	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1
<b>Zinc</b>	<b>58</b>		1.1	0.48	mg/Kg	☼	02/10/18 10:47	02/11/18 19:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.40</b>	<b>J</b>	0.50	0.050	mg/L		02/12/18 08:40	02/12/18 17:28	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/12/18 08:40	02/12/18 17:28	1
<b>Boron</b>	<b>0.070</b>	<b>J B</b>	0.50	0.050	mg/L		02/12/18 08:40	02/12/18 17:28	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-4

**Client Sample ID: 2459-11-B01 (0-6)**

**Lab Sample ID: 500-140697-12**

Date Collected: 02/07/18 14:25

Matrix: Solid

Date Received: 02/08/18 12:30

Percent Solids: 84.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		02/12/18 08:40	02/12/18 17:28	1
Chromium	<0.025		0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:28	1
Cobalt	<0.025		0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:28	1
Iron	<0.40		0.40	0.20	mg/L		02/12/18 08:40	02/12/18 17:28	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/12/18 08:40	02/12/18 17:28	1
<b>Manganese</b>	<b>0.20</b>		0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:28	1
Nickel	<0.025		0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:28	1
Selenium	<0.050		0.050	0.020	mg/L		02/12/18 08:40	02/12/18 17:28	1
Silver	<0.025		0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:28	1
<b>Zinc</b>	<b>0.040</b>	<b>J</b>	0.50	0.020	mg/L		02/12/18 08:40	02/12/18 17:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.35</b>		0.025	0.010	mg/L		02/13/18 06:45	02/14/18 13:56	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		02/12/18 08:40	02/13/18 12:35	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/12/18 08:40	02/13/18 12:35	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		02/12/18 11:40	02/13/18 10:37	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	0.0063	mg/Kg	☼	02/12/18 14:50	02/13/18 10:45	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>pH</b>	<b>7.8</b>		0.20	0.20	SU			02/15/18 14:42	1

# Definitions/Glossary

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-4

## 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.

### 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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-4

## 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: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

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

## Chain of Custody Record

Lab Job #: 500-140697  
 Chain of Custody Number: EE93902  
 Page \_\_\_\_\_ of \_\_\_\_\_  
 Temperature °C of Cooler: \_\_\_\_\_

Client		Client Project #		Preservative		Parameter													
EE		1009341.0039.02																	
Project Name		Project Location/State		Lab Project #															
FAP 355 (IL Route 176)		Lake, McHenry / State																	
Sampler		Lab PM																	
E. Bender		D. Wright																	
Lab ID	MIS/MSD	Sample ID	Date	Time	# of Containers	Matrix	Vac	BAC	PH	Total Metal	SPLP/TCRP								
6		2459-11-B02(0-3)	2/7/18	1400	2	S	T	T	X	X	X								
7		2459-11-B03(6-11)	2/7/18	1430	2	S	X	X	X	X	X								
12		2459-11-B01(0-5)	2/7/18	1425			X	X	X	X	X							Added 02/08/18 JB	

- 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)  
 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>EE</u> Date: <u>2/7/18</u> Time: <u>1530</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>2/6/18</u> Time: <u>1530</u>	Lab Courier: _____
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>2/8/18</u> Time: <u>1230</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>02/08/18</u> Time: <u>1230</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: \_\_\_\_\_  
 Lab Comments: \_\_\_\_\_

# Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-140697-4

**Login Number: 140697**

**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	
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.	False	Received extra sample not listed on COC.
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 355 (IL Route 176) Office Phone Number, if available: \_\_\_\_\_

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

106 E. State Road (ISGS #2459V-20)

City: Island Lake State: IL Zip Code: 60042

County: Cook Township: Wauconda

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

Latitude: 42.27252 Longitude: -88.19813

(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: 60196-1096 Phone: 847-705-4122

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Tyler Petersen

Contact: Tyler Petersen

Email, if available: tyler.petersen@illinois.gov

Email, if available: tyler.petersen@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 355 (IL Route 176)

Latitude: 42.27252 Longitude: -88.19813

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)]:

Location 2459-19-B01 was sampled within the construction zone adjacent to ISGS #2459V-20 (Mixed-use Building). Refer to PSI Report for ISGS #2459V-20 (Mixed-use Building) including Table 4-3, and Figures 4-1 and 4-2.

- 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]:

See attached data summary table and associated laboratory data package J140697-5.

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

I, Neil J. Brown (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: Ecology and Environment, Inc.  
 Street Address: 33 West Monroe Street  
 City: Chicago State: IL Zip Code: 60603  
 Phone: 312-578-9243

Neil J. Brown

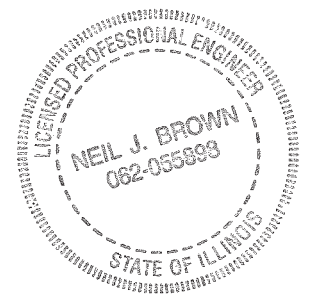
Printed Name:



3/14/18

Date:

Licensed Professional Engineer or  
Licensed Professional Geologist Signature:



P.E. or L.P.G. Seal:



## Analytical Data Summary

**PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-705-09; WorkOrder #39**

### Key to Data Tables

- MAC = Maximum Allowable Concentration of Chemical Constituent in  
Uncontaminated Soil Used as Fill Material At Regulated Fill Operations
- mg/kg = Milligrams per kilogram.
- mg/L = Milligrams per liter.
- MSA = Metropolitan Statistical Area
- TACO = Tiered Approach to Corrective Action Objectives
- TCLP = Toxicity Characteristic Leaching Procedure.
- GCGIER = Groundwater Component of the Groundwater Ingestion Exposure Route
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed or not applicable.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.
- PID = Photoionization detector.
- = No PID readings detected above background (within instrument margin of error).

### Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
-  = Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
-  = Concentration exceeds applicable comparison criteria.

## CONTAMINANTS OF CONCERN

SITE	ISGS #2459V-20 (Mixed-use Building)		Comparison Criteria						
	2459-19-B01		MACs			TACO			
BORING	2459-19-B01		Most Stringent	Within an MSA	Within Chicago	Residential	Construction Worker	SCGIER	
SAMPLE	2459-19-B01 (0-6)	2459-19-B01 (6-11)							
MATRIX	Soil	Soil							
DEPTH (feet)	0-6	6-11							
pH	8.1	7.5							
PID > Bkgd.	--	--							
<b>VOCs (None Detected)</b>									
<b>SVOCs (mg/kg)</b>									
Anthracene	0.016 J	ND U	12,000	--	--	23,000	610,000	--	
Benzo(a)anthracene	0.13	0.023 J	0.9	1.8	1.1	1.8	170	--	
Benzo(a)pyrene	0.16 †	0.029 J	0.09	2.1	1.3	2.1	17	--	
Benzo(b)fluoranthene	0.25	0.056	0.9	2.1	1.5	2.1	170	--	
Benzo(g,h,i)perylene	0.067	0.021 J	--	--	--	--	--	--	
Benzo(k)fluoranthene	0.086	0.014 J	9	--	--	9	1,700	--	
Chrysene	0.17	0.026 J	88	--	--	88	17,000	--	
Dibenz(a,h)anthracene	0.032 J	ND U	0.09	0.42	0.2	0.42	17	--	
Fluoranthene	0.34	0.047	3,100	--	--	3,100	82,000	--	
Indeno(1,2,3-cd)pyrene	0.12	0.020 J	0.9	1.6	0.9	1.6	170	--	
Phenanthrene	0.11	0.011 J	--	--	--	--	--	--	
Pyrene	0.26	0.036 J	2,300	--	--	2,300	61,000	--	
<b>Inorganics (mg/kg)</b>									
Arsenic	2.5	4.3	11.3	13	--	13	61	--	
Barium	23	28	1,500	--	--	5,500	14,000	--	
Beryllium	0.16 J	0.23	22	--	--	160	410	--	
Boron	2.9	2.7 J	40	--	--	16,000	41,000	--	
Calcium	88,000	62,000	--	--	--	--	--	--	
Chromium	5.7	6.8	21	--	--	230	690	--	
Cobalt	3.0	4.0	20	--	--	4,700	12,000	--	
Copper	8.4	11	2,900	--	--	2,900	8,200	--	
Iron	6,600	9,800	15,000	15,900	--	--	--	--	
Lead	6.0	7.6	107	--	--	400	700	--	
Magnesium	25,000	22,000	325,000	--	--	--	730,000	--	
Manganese	240	350	630	636	--	1,600	4,100	--	
Mercury	0.016	0.015 J	0.89	--	--	10	0.1	--	
Nickel	6.9	11	100	--	--	1,600	4,100	--	
Potassium	460	490	--	--	--	--	--	--	
Selenium	ND U	0.36 J	1.3	--	--	390	1,000	--	
Sodium	120	240	--	--	--	--	--	--	
Vanadium	10	14	550	--	--	550	1,400	--	
Zinc	27	38	5,100	--	--	23,000	61,000	--	
<b>TCLP Metals (mg/L)</b>									
Barium	0.38 J	0.43 J	--	--	--	--	--	2	
Boron	ND U	1.7	--	--	--	--	--	2	
Cadmium	ND U	0.0020 J	--	--	--	--	--	0.005	
Iron	ND U	0.21 J	--	--	--	--	--	5	
Manganese	0.42 L	0.45 L	--	--	--	--	--	0.15	
Zinc	0.047 J	0.099 J	--	--	--	--	--	5	
<b>SPLP Metals (mg/L)</b>									
Manganese	0.28 L	0.36 L	--	--	--	--	--	0.15	

# 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: 500-140697-5

Client Project/Site: IDOT - 176-001-WO039

For:

Ecology and Environment, Inc.  
33 West Monroe St.  
Suite 1410  
Chicago, Illinois 60603

Attn: Mr. Dean Tiebout



Authorized for release by:  
2/16/2018 4:12:44 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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-5

**Job ID: 500-140697-5**

**Laboratory: TestAmerica Chicago**

## Narrative

### Job Narrative 500-140697-5

#### Receipt

The samples were received on 2/8/2018 12:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.4° C and 3.1° C.

#### Receipt Exceptions

Sample ID for lab sample 8 was changed per communication with E&E on 2/13/18.

#### GC/MS VOA

Method(s) 8260B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 419779 recovered outside control limits for the following analytes: Chloromethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data 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

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. (500-140697-E-8-H MS) and (500-140697-E-8-I MSD)

No additional analytical or quality issues were noted, other than those described above or 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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-5

**Client Sample ID: 2459-19-B01 (0-6)**

**Lab Sample ID: 500-140697-8**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.11		0.035	0.0049	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.016	J	0.035	0.0058	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.34		0.035	0.0065	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.26		0.035	0.0070	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.13		0.035	0.0047	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.17		0.035	0.0095	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.25		0.035	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.086		0.035	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.16		0.035	0.0068	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.12		0.035	0.0091	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.032	J	0.035	0.0068	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.067		0.035	0.011	mg/Kg	1	☼	8270D	Total/NA
Arsenic	2.5		0.52	0.18	mg/Kg	1	☼	6010B	Total/NA
Barium	23		0.52	0.059	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.16	J	0.21	0.048	mg/Kg	1	☼	6010B	Total/NA
Boron	2.9		2.6	0.24	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.11	B	0.10	0.019	mg/Kg	1	☼	6010B	Total/NA
Calcium	88000	B	100	18	mg/Kg	10	☼	6010B	Total/NA
Chromium	5.7		0.52	0.26	mg/Kg	1	☼	6010B	Total/NA
Cobalt	3.0		0.26	0.068	mg/Kg	1	☼	6010B	Total/NA
Copper	8.4	B	0.52	0.14	mg/Kg	1	☼	6010B	Total/NA
Iron	6600		10	5.4	mg/Kg	1	☼	6010B	Total/NA
Lead	6.0		0.26	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	25000		5.2	2.6	mg/Kg	1	☼	6010B	Total/NA
Manganese	240		0.52	0.075	mg/Kg	1	☼	6010B	Total/NA
Nickel	6.9		0.52	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	460		26	9.2	mg/Kg	1	☼	6010B	Total/NA
Sodium	120		52	7.7	mg/Kg	1	☼	6010B	Total/NA
Vanadium	10		0.26	0.061	mg/Kg	1	☼	6010B	Total/NA
Zinc	27		1.0	0.45	mg/Kg	1	☼	6010B	Total/NA
Barium	0.38	J	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.42		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.047	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.28		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.016		0.016	0.0054	mg/Kg	1	☼	7471B	Total/NA
pH	8.1		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2459-19-B01 (6-11)**

**Lab Sample ID: 500-140697-9**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.011	J	0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.047		0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.036	J	0.037	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.023	J	0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.026	J	0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.056		0.037	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.014	J	0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.029	J	0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.020	J	0.037	0.0097	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.021	J	0.037	0.012	mg/Kg	1	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Ecology and Environment, Inc.  
 Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-5

**Client Sample ID: 2459-19-B01 (6-11) (Continued)**

**Lab Sample ID: 500-140697-9**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	4.3		0.56	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	28		0.56	0.064	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.23		0.22	0.052	mg/Kg	1	☼	6010B	Total/NA
Boron	2.7	J	2.8	0.26	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.090	J B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Calcium	62000	B	110	19	mg/Kg	10	☼	6010B	Total/NA
Chromium	6.8		0.56	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.0		0.28	0.073	mg/Kg	1	☼	6010B	Total/NA
Copper	11	B	0.56	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	9800		11	5.8	mg/Kg	1	☼	6010B	Total/NA
Lead	7.6		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	22000		5.6	2.8	mg/Kg	1	☼	6010B	Total/NA
Manganese	350		0.56	0.081	mg/Kg	1	☼	6010B	Total/NA
Nickel	11		0.56	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	490		28	9.9	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.36	J	0.56	0.33	mg/Kg	1	☼	6010B	Total/NA
Sodium	240		56	8.3	mg/Kg	1	☼	6010B	Total/NA
Vanadium	14		0.28	0.066	mg/Kg	1	☼	6010B	Total/NA
Zinc	38		1.1	0.49	mg/Kg	1	☼	6010B	Total/NA
Barium	0.43	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	1.7	B	0.50	0.050	mg/L	1		6010B	TCLP
Cadmium	0.0020	J	0.0050	0.0020	mg/L	1		6010B	TCLP
Iron	0.21	J	0.40	0.20	mg/L	1		6010B	TCLP
Manganese	0.45		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.012	J B	0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.099	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.36		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.015	J	0.017	0.0058	mg/Kg	1	☼	7471B	Total/NA
pH	7.5		0.20	0.20	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Sample Summary

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-5

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-140697-8	2459-19-B01 (0-6)	Solid	02/07/18 13:35	02/08/18 12:30
500-140697-9	2459-19-B01 (6-11)	Solid	02/07/18 13:45	02/08/18 12:30

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# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-5

**Client Sample ID: 2459-19-B01 (0-6)**

**Lab Sample ID: 500-140697-8**

Date Collected: 02/07/18 13:35

Matrix: Solid

Date Received: 02/08/18 12:30

Percent Solids: 92.9

## 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	☼	02/08/18 16:02	02/12/18 16:44	1
Benzene	<0.0020		0.0020	0.00051	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Bromodichloromethane	<0.0020		0.0020	0.00041	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Bromoform	<0.0020		0.0020	0.00059	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Bromomethane	<0.0050		0.0050	0.0019	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
2-Butanone (MEK)	<0.0050		0.0050	0.0022	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Carbon disulfide	<0.0050		0.0050	0.0010	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Carbon tetrachloride	<0.0020		0.0020	0.00058	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Chlorobenzene	<0.0020		0.0020	0.00074	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Chloroethane	<0.0050		0.0050	0.0015	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Chloroform	<0.0020		0.0020	0.00070	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Chloromethane	<0.0050	*	0.0050	0.0020	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
cis-1,2-Dichloroethene	<0.0020		0.0020	0.00056	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
cis-1,3-Dichloropropene	<0.0020		0.0020	0.00061	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Dibromochloromethane	<0.0020		0.0020	0.00066	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
1,1-Dichloroethane	<0.0020		0.0020	0.00069	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
1,2-Dichloroethane	<0.0050		0.0050	0.0016	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
1,1-Dichloroethene	<0.0020		0.0020	0.00069	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
1,2-Dichloropropane	<0.0020		0.0020	0.00052	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
1,3-Dichloropropane, Total	<0.0020		0.0020	0.00071	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Ethylbenzene	<0.0020		0.0020	0.00096	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
2-Hexanone	<0.0050		0.0050	0.0016	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Methylene Chloride	<0.0050		0.0050	0.0020	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
4-Methyl-2-pentanone (MIBK)	<0.0050		0.0050	0.0015	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Methyl tert-butyl ether	<0.0020		0.0020	0.00059	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Styrene	<0.0020		0.0020	0.00061	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
1,1,2,2-Tetrachloroethane	<0.0020		0.0020	0.00064	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Tetrachloroethene	<0.0020		0.0020	0.00069	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Toluene	<0.0020		0.0020	0.00051	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
trans-1,2-Dichloroethene	<0.0020		0.0020	0.00089	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
trans-1,3-Dichloropropene	<0.0020		0.0020	0.00071	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
1,1,1-Trichloroethane	<0.0020		0.0020	0.00068	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
1,1,2-Trichloroethane	<0.0020		0.0020	0.00086	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Trichloroethene	<0.0020		0.0020	0.00068	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Vinyl acetate	<0.0050		0.0050	0.0018	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Vinyl chloride	<0.0020		0.0020	0.00089	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1
Xylenes, Total	<0.0040		0.0040	0.00064	mg/Kg	☼	02/08/18 16:02	02/12/18 16:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		75 - 131	02/08/18 16:02	02/12/18 16:44	1
Dibromofluoromethane	106		75 - 126	02/08/18 16:02	02/12/18 16:44	1
1,2-Dichloroethane-d4 (Surr)	92		70 - 134	02/08/18 16:02	02/12/18 16:44	1
Toluene-d8 (Surr)	90		75 - 124	02/08/18 16:02	02/12/18 16:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.18		0.18	0.078	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.052	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
1,3-Dichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
1,4-Dichlorobenzene	<0.18		0.18	0.045	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-5

**Client Sample ID: 2459-19-B01 (0-6)**

**Lab Sample ID: 500-140697-8**

**Date Collected: 02/07/18 13:35**

**Matrix: Solid**

**Date Received: 02/08/18 12:30**

**Percent Solids: 92.9**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.18		0.18	0.042	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
2-Methylphenol	<0.18		0.18	0.056	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.041	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
N-Nitrosodi-n-propylamine	<0.071		0.071	0.043	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Hexachloroethane	<0.18		0.18	0.053	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
2-Chlorophenol	<0.18		0.18	0.060	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Nitrobenzene	<0.035		0.035	0.0087	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.036	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.038	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Isophorone	<0.18		0.18	0.039	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
2,4-Dimethylphenol	<0.35		0.35	0.13	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Hexachlorobutadiene	<0.18		0.18	0.055	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Naphthalene	<0.035		0.035	0.0054	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
2,4-Dichlorophenol	<0.35		0.35	0.083	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
4-Chloroaniline	<0.71		0.71	0.16	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
2,4,6-Trichlorophenol	<0.35		0.35	0.12	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
2,4,5-Trichlorophenol	<0.35		0.35	0.080	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Hexachlorocyclopentadiene	<0.71		0.71	0.20	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
2-Methylnaphthalene	<0.071		0.071	0.0064	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
2-Nitroaniline	<0.18		0.18	0.047	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
2-Chloronaphthalene	<0.18		0.18	0.039	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
4-Chloro-3-methylphenol	<0.35		0.35	0.12	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
2,6-Dinitrotoluene	<0.18		0.18	0.069	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
2-Nitrophenol	<0.35		0.35	0.083	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
3-Nitroaniline	<0.35		0.35	0.11	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Dimethyl phthalate	<0.18		0.18	0.046	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
2,4-Dinitrophenol	<0.71	F1	0.71	0.62	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Acenaphthylene	<0.035		0.035	0.0046	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
2,4-Dinitrotoluene	<0.18		0.18	0.056	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Acenaphthene	<0.035		0.035	0.0063	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Dibenzofuran	<0.18		0.18	0.041	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
4-Nitrophenol	<0.71		0.71	0.33	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Fluorene	<0.035		0.035	0.0049	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
4-Nitroaniline	<0.35	F1	0.35	0.15	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.046	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Hexachlorobenzene	<0.071		0.071	0.0081	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Diethyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.041	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Pentachlorophenol	<0.71	F2	0.71	0.56	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
N-Nitrosodiphenylamine	<0.18		0.18	0.041	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
4,6-Dinitro-2-methylphenol	<0.71	F2	0.71	0.28	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
<b>Phenanthrene</b>	<b>0.11</b>		0.035	0.0049	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
<b>Anthracene</b>	<b>0.016</b>	J	0.035	0.0058	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Carbazole	<0.18		0.18	0.087	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Di-n-butyl phthalate	<0.18		0.18	0.053	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
<b>Fluoranthene</b>	<b>0.34</b>		0.035	0.0065	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
<b>Pyrene</b>	<b>0.26</b>		0.035	0.0070	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Butyl benzyl phthalate	<0.18		0.18	0.067	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
<b>Benzo[a]anthracene</b>	<b>0.13</b>		0.035	0.0047	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-5

**Client Sample ID: 2459-19-B01 (0-6)**

**Lab Sample ID: 500-140697-8**

Date Collected: 02/07/18 13:35

Matrix: Solid

Date Received: 02/08/18 12:30

Percent Solids: 92.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chrysene</b>	<b>0.17</b>		0.035	0.0095	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
3,3'-Dichlorobenzidine	<0.18	F1	0.18	0.049	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.064	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
Di-n-octyl phthalate	<0.18		0.18	0.057	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
<b>Benzo[b]fluoranthene</b>	<b>0.25</b>		0.035	0.0076	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
<b>Benzo[k]fluoranthene</b>	<b>0.086</b>		0.035	0.010	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
<b>Benzo[a]pyrene</b>	<b>0.16</b>		0.035	0.0068	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.12</b>		0.035	0.0091	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
<b>Dibenz(a,h)anthracene</b>	<b>0.032</b>	J	0.035	0.0068	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
<b>Benzo[g,h,i]perylene</b>	<b>0.067</b>		0.035	0.011	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
3 & 4 Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	02/12/18 17:31	02/13/18 12:57	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorophenol	82		46 - 133				02/12/18 17:31	02/13/18 12:57	1
Phenol-d5	81		46 - 125				02/12/18 17:31	02/13/18 12:57	1
Nitrobenzene-d5	72		41 - 120				02/12/18 17:31	02/13/18 12:57	1
2-Fluorobiphenyl	72		44 - 121				02/12/18 17:31	02/13/18 12:57	1
2,4,6-Tribromophenol	74		25 - 139				02/12/18 17:31	02/13/18 12:57	1
Terphenyl-d14	70		35 - 160				02/12/18 17:31	02/13/18 12:57	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	☼	02/10/18 10:47	02/11/18 19:24	1
<b>Arsenic</b>	<b>2.5</b>		0.52	0.18	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1
<b>Barium</b>	<b>23</b>		0.52	0.059	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1
<b>Beryllium</b>	<b>0.16</b>	J	0.21	0.048	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1
<b>Boron</b>	<b>2.9</b>		2.6	0.24	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1
<b>Cadmium</b>	<b>0.11</b>	B	0.10	0.019	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1
<b>Calcium</b>	<b>88000</b>	B	100	18	mg/Kg	☼	02/10/18 10:47	02/12/18 18:04	10
<b>Chromium</b>	<b>5.7</b>		0.52	0.26	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1
<b>Cobalt</b>	<b>3.0</b>		0.26	0.068	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1
<b>Copper</b>	<b>8.4</b>	B	0.52	0.14	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1
<b>Iron</b>	<b>6600</b>		10	5.4	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1
<b>Lead</b>	<b>6.0</b>		0.26	0.12	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1
<b>Magnesium</b>	<b>25000</b>		5.2	2.6	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1
<b>Manganese</b>	<b>240</b>		0.52	0.075	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1
<b>Nickel</b>	<b>6.9</b>		0.52	0.15	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1
<b>Potassium</b>	<b>460</b>		26	9.2	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1
Selenium	<0.52		0.52	0.30	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1
Silver	<0.26		0.26	0.067	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1
<b>Sodium</b>	<b>120</b>		52	7.7	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1
Thallium	<0.52		0.52	0.26	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1
<b>Vanadium</b>	<b>10</b>		0.26	0.061	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1
<b>Zinc</b>	<b>27</b>		1.0	0.45	mg/Kg	☼	02/10/18 10:47	02/11/18 19:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.38</b>	J	0.50	0.050	mg/L		02/12/18 08:40	02/12/18 17:11	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/12/18 08:40	02/12/18 17:11	1
Boron	<0.50		0.50	0.050	mg/L		02/12/18 08:40	02/12/18 17:11	1

TestAmerica Chicago



# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-5

**Client Sample ID: 2459-19-B01 (0-6)**

**Lab Sample ID: 500-140697-8**

**Date Collected: 02/07/18 13:35**

**Matrix: Solid**

**Date Received: 02/08/18 12:30**

**Percent Solids: 92.9**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		02/12/18 08:40	02/12/18 17:11	1
Chromium	<0.025		0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:11	1
Cobalt	<0.025		0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:11	1
Iron	<0.40		0.40	0.20	mg/L		02/12/18 08:40	02/12/18 17:11	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/12/18 08:40	02/12/18 17:11	1
<b>Manganese</b>	<b>0.42</b>		0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:11	1
Nickel	<0.025		0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:11	1
Selenium	<0.050		0.050	0.020	mg/L		02/12/18 08:40	02/12/18 17:11	1
Silver	<0.025		0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:11	1
<b>Zinc</b>	<b>0.047</b>	<b>J</b>	0.50	0.020	mg/L		02/12/18 08:40	02/12/18 17:11	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		02/13/18 06:45	02/13/18 18:43	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		02/12/18 08:40	02/13/18 12:29	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/12/18 08:40	02/13/18 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		02/12/18 11:40	02/13/18 10:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.016</b>		0.016	0.0054	mg/Kg	☼	02/12/18 14:50	02/13/18 10:36	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>pH</b>	<b>8.1</b>		0.20	0.20	SU			02/15/18 14:30	1

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-5

**Client Sample ID: 2459-19-B01 (6-11)**

**Lab Sample ID: 500-140697-9**

Date Collected: 02/07/18 13:45

Matrix: Solid

Date Received: 02/08/18 12:30

Percent Solids: 86.5

## 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	☼	02/08/18 16:02	02/12/18 17:09	1
Benzene	<0.0020		0.0020	0.00051	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Bromodichloromethane	<0.0020		0.0020	0.00041	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Bromoform	<0.0020		0.0020	0.00058	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Bromomethane	<0.0050		0.0050	0.0019	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
2-Butanone (MEK)	<0.0050		0.0050	0.0022	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Carbon disulfide	<0.0050		0.0050	0.0010	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Carbon tetrachloride	<0.0020		0.0020	0.00058	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Chlorobenzene	<0.0020		0.0020	0.00074	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Chloroethane	<0.0050		0.0050	0.0015	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Chloroform	<0.0020		0.0020	0.00069	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Chloromethane	<0.0050	*	0.0050	0.0020	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
cis-1,2-Dichloroethene	<0.0020		0.0020	0.00056	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
cis-1,3-Dichloropropene	<0.0020		0.0020	0.00060	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Dibromochloromethane	<0.0020		0.0020	0.00065	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
1,1-Dichloroethane	<0.0020		0.0020	0.00069	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
1,2-Dichloroethane	<0.0050		0.0050	0.0016	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
1,1-Dichloroethene	<0.0020		0.0020	0.00069	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
1,2-Dichloropropane	<0.0020		0.0020	0.00052	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
1,3-Dichloropropane, Total	<0.0020		0.0020	0.00070	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Ethylbenzene	<0.0020		0.0020	0.00096	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
2-Hexanone	<0.0050		0.0050	0.0016	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Methylene Chloride	<0.0050		0.0050	0.0020	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
4-Methyl-2-pentanone (MIBK)	<0.0050		0.0050	0.0015	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Methyl tert-butyl ether	<0.0020		0.0020	0.00059	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Styrene	<0.0020		0.0020	0.00060	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
1,1,2,2-Tetrachloroethane	<0.0020		0.0020	0.00064	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Tetrachloroethene	<0.0020		0.0020	0.00068	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Toluene	<0.0020		0.0020	0.00051	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
trans-1,2-Dichloroethene	<0.0020		0.0020	0.00089	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
trans-1,3-Dichloropropene	<0.0020		0.0020	0.00070	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
1,1,1-Trichloroethane	<0.0020		0.0020	0.00067	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
1,1,2-Trichloroethane	<0.0020		0.0020	0.00086	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Trichloroethene	<0.0020		0.0020	0.00068	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Vinyl acetate	<0.0050		0.0050	0.0017	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Vinyl chloride	<0.0020		0.0020	0.00089	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1
Xylenes, Total	<0.0040		0.0040	0.00064	mg/Kg	☼	02/08/18 16:02	02/12/18 17:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		75 - 131	02/08/18 16:02	02/12/18 17:09	1
Dibromofluoromethane	112		75 - 126	02/08/18 16:02	02/12/18 17:09	1
1,2-Dichloroethane-d4 (Surr)	94		70 - 134	02/08/18 16:02	02/12/18 17:09	1
Toluene-d8 (Surr)	87		75 - 124	02/08/18 16:02	02/12/18 17:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.19		0.19	0.083	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-5

**Client Sample ID: 2459-19-B01 (6-11)**

**Lab Sample ID: 500-140697-9**

**Date Collected: 02/07/18 13:45**

**Matrix: Solid**

**Date Received: 02/08/18 12:30**

**Percent Solids: 86.5**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Naphthalene	<0.037		0.037	0.0058	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
2-Methylnaphthalene	<0.076		0.076	0.0069	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
2,4-Dinitrophenol	<0.76		0.76	0.66	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Hexachlorobenzene	<0.076		0.076	0.0087	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Pentachlorophenol	<0.76		0.76	0.60	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
<b>Phenanthrene</b>	<b>0.011</b>	<b>J</b>	0.037	0.0052	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Anthracene	<0.037		0.037	0.0063	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
<b>Fluoranthene</b>	<b>0.047</b>		0.037	0.0069	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
<b>Pyrene</b>	<b>0.036</b>	<b>J</b>	0.037	0.0074	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
<b>Benzo[a]anthracene</b>	<b>0.023</b>	<b>J</b>	0.037	0.0050	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-5

**Client Sample ID: 2459-19-B01 (6-11)**

**Lab Sample ID: 500-140697-9**

Date Collected: 02/07/18 13:45

Matrix: Solid

Date Received: 02/08/18 12:30

Percent Solids: 86.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chrysene</b>	<b>0.026</b>	<b>J</b>	0.037	0.010	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
<b>Benzo[b]fluoranthene</b>	<b>0.056</b>		0.037	0.0081	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
<b>Benzo[k]fluoranthene</b>	<b>0.014</b>	<b>J</b>	0.037	0.011	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
<b>Benzo[a]pyrene</b>	<b>0.029</b>	<b>J</b>	0.037	0.0072	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.020</b>	<b>J</b>	0.037	0.0097	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
<b>Benzo[g,h,i]perylene</b>	<b>0.021</b>	<b>J</b>	0.037	0.012	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/12/18 17:31	02/13/18 11:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	87		46 - 133	02/12/18 17:31	02/13/18 11:10	1
Phenol-d5	74		46 - 125	02/12/18 17:31	02/13/18 11:10	1
Nitrobenzene-d5	77		41 - 120	02/12/18 17:31	02/13/18 11:10	1
2-Fluorobiphenyl	79		44 - 121	02/12/18 17:31	02/13/18 11:10	1
2,4,6-Tribromophenol	72		25 - 139	02/12/18 17:31	02/13/18 11:10	1
Terphenyl-d14	75		35 - 160	02/12/18 17:31	02/13/18 11:10	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	☼	02/10/18 10:47	02/11/18 19:37	1
<b>Arsenic</b>	<b>4.3</b>		0.56	0.19	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1
<b>Barium</b>	<b>28</b>		0.56	0.064	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1
<b>Beryllium</b>	<b>0.23</b>		0.22	0.052	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1
<b>Boron</b>	<b>2.7</b>	<b>J</b>	2.8	0.26	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1
<b>Cadmium</b>	<b>0.090</b>	<b>J B</b>	0.11	0.020	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1
<b>Calcium</b>	<b>62000</b>	<b>B</b>	110	19	mg/Kg	☼	02/10/18 10:47	02/12/18 18:08	10
<b>Chromium</b>	<b>6.8</b>		0.56	0.28	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1
<b>Cobalt</b>	<b>4.0</b>		0.28	0.073	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1
<b>Copper</b>	<b>11</b>	<b>B</b>	0.56	0.16	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1
<b>Iron</b>	<b>9800</b>		11	5.8	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1
<b>Lead</b>	<b>7.6</b>		0.28	0.13	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1
<b>Magnesium</b>	<b>22000</b>		5.6	2.8	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1
<b>Manganese</b>	<b>350</b>		0.56	0.081	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1
<b>Nickel</b>	<b>11</b>		0.56	0.16	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1
<b>Potassium</b>	<b>490</b>		28	9.9	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1
<b>Selenium</b>	<b>0.36</b>	<b>J</b>	0.56	0.33	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1
Silver	<0.28		0.28	0.072	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1
<b>Sodium</b>	<b>240</b>		56	8.3	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1
<b>Vanadium</b>	<b>14</b>		0.28	0.066	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1
<b>Zinc</b>	<b>38</b>		1.1	0.49	mg/Kg	☼	02/10/18 10:47	02/11/18 19:37	1

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

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		02/12/18 08:40	02/12/18 17:16	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/12/18 08:40	02/12/18 17:16	1
<b>Boron</b>	<b>1.7</b>	<b>B</b>	0.50	0.050	mg/L		02/12/18 08:40	02/12/18 17:16	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-5

**Client Sample ID: 2459-19-B01 (6-11)**

**Lab Sample ID: 500-140697-9**

Date Collected: 02/07/18 13:45

Matrix: Solid

Date Received: 02/08/18 12:30

Percent Solids: 86.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Cadmium</b>	<b>0.0020</b>	<b>J</b>	0.0050	0.0020	mg/L	-	02/12/18 08:40	02/12/18 17:16	1
Chromium	<0.025		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 17:16	1
Cobalt	<0.025		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 17:16	1
<b>Iron</b>	<b>0.21</b>	<b>J</b>	0.40	0.20	mg/L	-	02/12/18 08:40	02/12/18 17:16	1
Lead	<0.0075		0.0075	0.0075	mg/L	-	02/12/18 08:40	02/12/18 17:16	1
<b>Manganese</b>	<b>0.45</b>		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 17:16	1
<b>Nickel</b>	<b>0.012</b>	<b>J B</b>	0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 17:16	1
Selenium	<0.050		0.050	0.020	mg/L	-	02/12/18 08:40	02/12/18 17:16	1
Silver	<0.025		0.025	0.010	mg/L	-	02/12/18 08:40	02/12/18 17:16	1
<b>Zinc</b>	<b>0.099</b>	<b>J</b>	0.50	0.020	mg/L	-	02/12/18 08:40	02/12/18 17:16	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	-	02/13/18 06:45	02/13/18 18:48	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	-	02/12/18 08:40	02/13/18 12:32	1
Thallium	<0.0020		0.0020	0.0020	mg/L	-	02/12/18 08:40	02/13/18 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	-	02/12/18 11:40	02/13/18 10:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.015</b>	<b>J</b>	0.017	0.0058	mg/Kg	☼	02/12/18 14:50	02/13/18 10:38	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>pH</b>	<b>7.5</b>		0.20	0.20	SU	-		02/15/18 14:33	1

# Definitions/Glossary

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-5

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

### GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
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.

### 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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-5

## 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: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

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

## Chain of Custody Record

Lab Job #: 500-140697  
 Chain of Custody Number: EE3903  
 Page \_\_\_\_\_ of \_\_\_\_\_  
 Temperature °C of Cooler: \_\_\_\_\_

Client		Client Project #		Preservative		Parameter														
EE		100934.0039.02																		
Project Name		Project Location/State		Lab Project #		Sampler		Lab PM												
FAP355 (IL Route 176)																				
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix	Voc	SVOC	PH	TCLP/ SPLP	Total Metal									
			Date	Time																
		<del>2454-19</del>																		
8		2454-19-B01(0-5)	2/7/18	1335	2	S	X	X	X	X	X									
9		2454-19-B01(E-11)	2/7/18	1345	2	S	X	X	X	X	X									
<i>CR</i>																				

- 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 as...)

Relinquished By: <i>[Signature]</i>	Company: EE	Date: 2/7/18	Time: 1330	Received By: <i>[Signature]</i>	Company: TA	Date: 2/7/18	Time: 1530
Relinquished By: <i>[Signature]</i>	Company: TA	Date: 2/8/18	Time: 1230	Received By: <i>[Signature]</i>	Company: TA	Date: 02/08/18	Time: 1230

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



# Login Sample Receipt Checklist

Client: Ecology and Environment, Inc.

Job Number: 500-140697-5

**Login Number: 140697**

**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	
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.	False	Received extra sample not listed on COC.
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 355 (IL Route 176) Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):  
103 E. State Road (ISGS #2459V-28)

City: Island Lake State: IL Zip Code: 60042

County: Cook Township: Wauconda

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

Latitude: 42.27195 Longitude: -88.19811

(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: 60196-1096 Phone: 847-705-4122

Zip Code: 60196-1096 Phone: 847-705-4122

Contact: Tyler Petersen

Contact: Tyler Petersen

Email, if available: tyler.petersen@illinois.gov

Email, if available: tyler.petersen@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 355 (IL Route 176)

Latitude: 42.27195 Longitude: -88.19811

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)]:

Location 2459-26-B01 was sampled within the construction zone adjacent to ISGS #2459V-28 (Island Lake Liquors). Refer to PSI Report for ISGS #2459V-28 (Island Lake Liquors) including Table 4-3, and Figures 4-1 and 4-2.

- 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]:

See attached data summary table and associated laboratory data package J140697-6.

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

I, Neil J. Brown (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: Ecology and Environment, Inc.

Street Address: 33 West Monroe Street

City: Chicago State: IL Zip Code: 60603

Phone: 312-578-9243

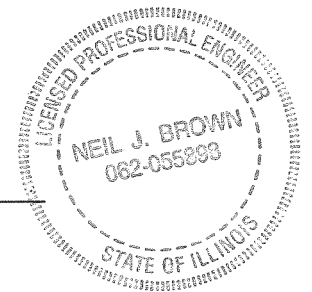
Neil J. Brown  
Printed Name:

*Neil J. Brown*

3/14/8

Licensed Professional Engineer or  
Licensed Professional Geologist Signature:

Date:





## Analytical Data Summary

**PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-705-09; WorkOrder #39**

### Key to Data Tables

- MAC = Maximum Allowable Concentration of Chemical Constituent in  
Uncontaminated Soil Used as Fill Material At Regulated Fill Operations
- mg/kg = Milligrams per kilogram.
- mg/L = Milligrams per liter.
- MSA = Metropolitan Statistical Area
- TACO = Tiered Approach to Corrective Action Objectives
- TCLP = Toxicity Characteristic Leaching Procedure.
- GCGIER = Groundwater Component of the Groundwater Ingestion Exposure Route
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed or not applicable.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.
- PID = Photoionization detector.
- = No PID readings detected above background (within instrument margin of error).

### Criteria Qualifiers and Shading

- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
-  = Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
-  = Concentration exceeds applicable comparison criteria.

## PTB #176-001; IDOT Job #D-91-339-15; Project #P-91-705-09; WorkOrder #39

## CONTAMINANTS OF CONCERN

SITE	ISGS #2459V-28 (Island Lake Liquors)		Comparison Criteria							
			MACs			TACO				
BORING	2459-26-B01		Most Stringent	Within an MSA	Within Chicago	Residential	Construction Worker	SCGIER		
SAMPLE	2459-26-B01 (0-6)	2459-26-B01 (6-11)								
MATRIX	Soil	Soil								
DEPTH (feet)	0-6	6-11								
pH	7.4	8.0								
PID > Bkgd.	--	--								
<b>VOCs (None Detected)</b>										
<b>SVOCs (mg/kg)</b>										
Anthracene	0.022	J	ND	U	12,000	--	--	23,000	610,000	--
Benzo(a)anthracene	0.19		ND	U	0.9	1.8	1.1	1.8	170	--
Benzo(a)pyrene	0.26	†	ND	U	0.09	2.1	1.3	2.1	17	--
Benzo(b)fluoranthene	0.39		ND	U	0.9	2.1	1.5	2.1	170	--
Benzo(g,h,i)perylene	0.21		ND	U	--	--	--	--	--	--
Benzo(k)fluoranthene	0.13		ND	U	9	--	--	9	1,700	--
Chrysene	0.25		ND	U	88	--	--	88	17,000	--
Dibenz(a,h)anthracene	0.040		ND	U	0.09	0.42	0.2	0.42	17	--
Fluoranthene	0.43		ND	U	3,100	--	--	3,100	82,000	--
Fluorene	0.0066	J	ND	U	560	--	--	3,100	82,000	--
Indeno(1,2,3-cd)pyrene	0.19		ND	U	0.9	1.6	0.9	1.6	170	--
Phenanthrene	0.13		ND	U	--	--	--	--	--	--
Pyrene	0.33		ND	U	2,300	--	--	2,300	61,000	--
<b>Inorganics (mg/kg)</b>										
Antimony	ND	U	0.33	J	5	--	--	31	82	--
Arsenic	6.0		3.8		11.3	13	--	13	61	--
Barium	65		22		1,500	--	--	5,500	14,000	--
Beryllium	0.53		0.30		22	--	--	160	410	--
Boron	3.8		4.7		40	--	--	16,000	41,000	--
Calcium	21,000		100,000		--	--	--	--	--	--
Chromium	18		8.9		21	--	--	230	690	--
Cobalt	10		4.8		20	--	--	4,700	12,000	--
Copper	21		12		2,900	--	--	2,900	8,200	--
Iron	17,000	†m	10,000		15,000	15,900	--	--	--	--
Lead	22		5.1		107	--	--	400	700	--
Magnesium	8,700		30,000		325,000	--	--	--	730,000	--
Manganese	470		230		630	636	--	1,600	4,100	--
Mercury	0.045		0.0084	J	0.89	--	--	10	0.1	--
Nickel	22		13		100	--	--	1,600	4,100	--
Potassium	1,300		920		--	--	--	--	--	--
Selenium	0.73		ND	U	1.3	--	--	390	1,000	--
Sodium	77		140		--	--	--	--	--	--
Vanadium	23		14		550	--	--	550	1,400	--
Zinc	72		30		5,100	--	--	23,000	61,000	--
<b>TCLP Metals (mg/L)</b>										
Barium	0.59		0.26	J	--	--	--	--	--	2
Boron	1.9		ND	U	--	--	--	--	--	2
Iron	0.24	J	ND	U	--	--	--	--	--	5
Manganese	0.17	L	0.49	L	--	--	--	--	--	0.15
Zinc	0.13	J	ND	U	--	--	--	--	--	5
<b>SPLP Metals (mg/L)</b>										
Manganese	0.23	L	0.041		--	--	--	--	--	0.15

# 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: 500-140697-6

Client Project/Site: IDOT - 176-001-WO039

For:

Ecology and Environment, Inc.  
33 West Monroe St.  
Suite 1410  
Chicago, Illinois 60603

Attn: Mr. Dean Tiebout



Authorized for release by:  
2/16/2018 4:13:07 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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-6

**Job ID: 500-140697-6**

**Laboratory: TestAmerica Chicago**

## Narrative

### Job Narrative 500-140697-6

#### Receipt

The samples were received on 2/8/2018 12:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.4° C and 3.1° C.

#### Receipt Exceptions

Sample ID's for lab sample 10 was changed per communication with E&E on 2/13/18.

#### GC/MS VOA

Method(s) 8260B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for 419779 recovered outside control limits for the following analytes: Chloromethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data 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

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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-6

**Client Sample ID: 2459-26-B01 (0-6)**

**Lab Sample ID: 500-140697-10**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluorene	0.0066	J	0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.13		0.039	0.0054	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.022	J	0.039	0.0065	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.43		0.039	0.0072	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.33		0.039	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.19		0.039	0.0053	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.25		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.39		0.039	0.0084	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.13		0.039	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.26		0.039	0.0076	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.19		0.039	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.040		0.039	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.21		0.039	0.013	mg/Kg	1	☼	8270D	Total/NA
Arsenic	6.0		0.56	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	65		0.56	0.064	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.53		0.22	0.053	mg/Kg	1	☼	6010B	Total/NA
Boron	3.8		2.8	0.26	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.13	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Calcium	21000	B	11	1.9	mg/Kg	1	☼	6010B	Total/NA
Chromium	18		0.56	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	10		0.28	0.074	mg/Kg	1	☼	6010B	Total/NA
Copper	21	B	0.56	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	17000		11	5.8	mg/Kg	1	☼	6010B	Total/NA
Lead	22		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	8700		5.6	2.8	mg/Kg	1	☼	6010B	Total/NA
Manganese	470		0.56	0.082	mg/Kg	1	☼	6010B	Total/NA
Nickel	22		0.56	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	1300		28	9.9	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.73		0.56	0.33	mg/Kg	1	☼	6010B	Total/NA
Sodium	77		56	8.3	mg/Kg	1	☼	6010B	Total/NA
Vanadium	23		0.28	0.066	mg/Kg	1	☼	6010B	Total/NA
Zinc	72		1.1	0.49	mg/Kg	1	☼	6010B	Total/NA
Barium	0.59		0.50	0.050	mg/L	1		6010B	TCLP
Boron	1.9	B	0.50	0.050	mg/L	1		6010B	TCLP
Iron	0.24	J	0.40	0.20	mg/L	1		6010B	TCLP
Manganese	0.17		0.025	0.010	mg/L	1		6010B	TCLP
Zinc	0.13	J	0.50	0.020	mg/L	1		6010B	TCLP
Manganese	0.23		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.045		0.019	0.0062	mg/Kg	1	☼	7471B	Total/NA
pH	7.4		0.20	0.20	SU	1		9045D	Total/NA

**Client Sample ID: 2459-26-B01 (6-11)**

**Lab Sample ID: 500-140697-11**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.33	J	1.0	0.20	mg/Kg	1	☼	6010B	Total/NA
Arsenic	3.8		0.52	0.18	mg/Kg	1	☼	6010B	Total/NA
Barium	22		0.52	0.059	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.30		0.21	0.049	mg/Kg	1	☼	6010B	Total/NA
Boron	4.7		2.6	0.24	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.082	J B	0.10	0.019	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Detection Summary

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-6

**Client Sample ID: 2459-26-B01 (6-11) (Continued)**

**Lab Sample ID: 500-140697-11**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	100000	B	100	18	mg/Kg	10	☼	6010B	Total/NA
Chromium	8.9		0.52	0.26	mg/Kg	1	☼	6010B	Total/NA
Cobalt	4.8		0.26	0.068	mg/Kg	1	☼	6010B	Total/NA
Copper	12	B	0.52	0.15	mg/Kg	1	☼	6010B	Total/NA
Iron	10000		10	5.4	mg/Kg	1	☼	6010B	Total/NA
Lead	5.1		0.26	0.12	mg/Kg	1	☼	6010B	Total/NA
Magnesium	30000		5.2	2.6	mg/Kg	1	☼	6010B	Total/NA
Manganese	230		0.52	0.075	mg/Kg	1	☼	6010B	Total/NA
Nickel	13		0.52	0.15	mg/Kg	1	☼	6010B	Total/NA
Potassium	920		26	9.2	mg/Kg	1	☼	6010B	Total/NA
Sodium	140		52	7.7	mg/Kg	1	☼	6010B	Total/NA
Vanadium	14		0.26	0.061	mg/Kg	1	☼	6010B	Total/NA
Zinc	30		1.0	0.46	mg/Kg	1	☼	6010B	Total/NA
Barium	0.26	J	0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.080	J B	0.50	0.050	mg/L	1		6010B	TCLP
Manganese	0.49		0.025	0.010	mg/L	1		6010B	TCLP
Nickel	0.012	J B	0.025	0.010	mg/L	1		6010B	TCLP
Manganese	0.041		0.025	0.010	mg/L	1		6010B	SPLP East
Mercury	0.0084	J	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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-6

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-140697-10	2459-26-B01 (0-6)	Solid	02/07/18 10:10	02/08/18 12:30
500-140697-11	2459-26-B01 (6-11)	Solid	02/07/18 10:15	02/08/18 12:30

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# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-6

**Client Sample ID: 2459-26-B01 (0-6)**

**Lab Sample ID: 500-140697-10**

Date Collected: 02/07/18 10:10

Matrix: Solid

Date Received: 02/08/18 12:30

Percent Solids: 82.9

## 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	☼	02/08/18 16:02	02/12/18 17:34	1
Benzene	<0.0016		0.0016	0.00040	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Bromodichloromethane	<0.0016		0.0016	0.00032	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Bromoform	<0.0016		0.0016	0.00046	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Bromomethane	<0.0040		0.0040	0.0015	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
2-Butanone (MEK)	<0.0040		0.0040	0.0018	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Carbon disulfide	<0.0040		0.0040	0.00082	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Carbon tetrachloride	<0.0016		0.0016	0.00046	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Chlorobenzene	<0.0016		0.0016	0.00058	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Chloroethane	<0.0040		0.0040	0.0012	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Chloroform	<0.0016		0.0016	0.00055	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Chloromethane	<0.0040	*	0.0040	0.0016	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
cis-1,2-Dichloroethene	<0.0016		0.0016	0.00044	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
cis-1,3-Dichloropropene	<0.0016		0.0016	0.00048	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Dibromochloromethane	<0.0016		0.0016	0.00052	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
1,1-Dichloroethane	<0.0016		0.0016	0.00054	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
1,2-Dichloroethane	<0.0040		0.0040	0.0012	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
1,1-Dichloroethene	<0.0016		0.0016	0.00055	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
1,2-Dichloropropane	<0.0016		0.0016	0.00041	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
1,3-Dichloropropane, Total	<0.0016		0.0016	0.00056	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Ethylbenzene	<0.0016		0.0016	0.00076	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
2-Hexanone	<0.0040		0.0040	0.0012	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Methylene Chloride	<0.0040		0.0040	0.0016	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
4-Methyl-2-pentanone (MIBK)	<0.0040		0.0040	0.0012	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Methyl tert-butyl ether	<0.0016		0.0016	0.00047	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Styrene	<0.0016		0.0016	0.00048	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
1,1,2,2-Tetrachloroethane	<0.0016		0.0016	0.00051	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Tetrachloroethene	<0.0016		0.0016	0.00054	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Toluene	<0.0016		0.0016	0.00040	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
trans-1,2-Dichloroethene	<0.0016		0.0016	0.00070	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
trans-1,3-Dichloropropene	<0.0016		0.0016	0.00056	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
1,1,1-Trichloroethane	<0.0016		0.0016	0.00053	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
1,1,2-Trichloroethane	<0.0016		0.0016	0.00068	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Trichloroethene	<0.0016		0.0016	0.00054	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Vinyl acetate	<0.0040		0.0040	0.0014	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Vinyl chloride	<0.0016		0.0016	0.00070	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1
Xylenes, Total	<0.0032		0.0032	0.00051	mg/Kg	☼	02/08/18 16:02	02/12/18 17:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	93		75 - 131	02/08/18 16:02	02/12/18 17:34	1
Dibromofluoromethane	120		75 - 126	02/08/18 16:02	02/12/18 17:34	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 134	02/08/18 16:02	02/12/18 17:34	1
Toluene-d8 (Surr)	85		75 - 124	02/08/18 16:02	02/12/18 17:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.087	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
1,4-Dichlorobenzene	<0.20		0.20	0.050	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-6

**Client Sample ID: 2459-26-B01 (0-6)**

**Lab Sample ID: 500-140697-10**

**Date Collected: 02/07/18 10:10**

**Matrix: Solid**

**Date Received: 02/08/18 12:30**

**Percent Solids: 82.9**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.20		0.20	0.047	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.045	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
N-Nitrosodi-n-propylamine	<0.079		0.079	0.048	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Hexachloroethane	<0.20		0.20	0.059	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Nitrobenzene	<0.039		0.039	0.0098	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.042	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Hexachlorobutadiene	<0.20		0.20	0.061	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Naphthalene	<0.039		0.039	0.0060	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
2,4-Dichlorophenol	<0.39		0.39	0.093	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
4-Chloroaniline	<0.79		0.79	0.18	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
2,4,6-Trichlorophenol	<0.39		0.39	0.13	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
2,4,5-Trichlorophenol	<0.39		0.39	0.089	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Hexachlorocyclopentadiene	<0.79		0.79	0.22	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
2-Methylnaphthalene	<0.079		0.079	0.0072	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
2-Chloronaphthalene	<0.20		0.20	0.043	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
2,6-Dinitrotoluene	<0.20		0.20	0.077	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
2-Nitrophenol	<0.39		0.39	0.092	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Dimethyl phthalate	<0.20		0.20	0.051	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
2,4-Dinitrophenol	<0.79		0.79	0.69	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Acenaphthylene	<0.039		0.039	0.0052	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
2,4-Dinitrotoluene	<0.20		0.20	0.062	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Acenaphthene	<0.039		0.039	0.0070	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
4-Nitrophenol	<0.79		0.79	0.37	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
<b>Fluorene</b>	<b>0.0066</b>	<b>J</b>	0.039	0.0055	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
4-Nitroaniline	<0.39		0.39	0.16	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Hexachlorobenzene	<0.079		0.079	0.0091	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Diethyl phthalate	<0.20		0.20	0.066	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Pentachlorophenol	<0.79		0.79	0.63	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
N-Nitrosodiphenylamine	<0.20		0.20	0.046	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
4,6-Dinitro-2-methylphenol	<0.79		0.79	0.31	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
<b>Phenanthrene</b>	<b>0.13</b>		0.039	0.0054	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
<b>Anthracene</b>	<b>0.022</b>	<b>J</b>	0.039	0.0065	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Carbazole	<0.20		0.20	0.098	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
<b>Fluoranthene</b>	<b>0.43</b>		0.039	0.0072	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
<b>Pyrene</b>	<b>0.33</b>		0.039	0.0078	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Butyl benzyl phthalate	<0.20		0.20	0.074	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
<b>Benzo[a]anthracene</b>	<b>0.19</b>		0.039	0.0053	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-6

**Client Sample ID: 2459-26-B01 (0-6)**

**Lab Sample ID: 500-140697-10**

Date Collected: 02/07/18 10:10

Matrix: Solid

Date Received: 02/08/18 12:30

Percent Solids: 82.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chrysene</b>	<b>0.25</b>		0.039	0.011	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.071	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
<b>Benzo[b]fluoranthene</b>	<b>0.39</b>		0.039	0.0084	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
<b>Benzo[k]fluoranthene</b>	<b>0.13</b>		0.039	0.012	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
<b>Benzo[a]pyrene</b>	<b>0.26</b>		0.039	0.0076	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.19</b>		0.039	0.010	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
<b>Dibenz(a,h)anthracene</b>	<b>0.040</b>		0.039	0.0076	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
<b>Benzo[g,h,i]perylene</b>	<b>0.21</b>		0.039	0.013	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1
3 & 4 Methylphenol	<0.20		0.20	0.065	mg/Kg	☼	02/12/18 17:31	02/13/18 14:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	80		46 - 133	02/12/18 17:31	02/13/18 14:43	1
Phenol-d5	75		46 - 125	02/12/18 17:31	02/13/18 14:43	1
Nitrobenzene-d5	70		41 - 120	02/12/18 17:31	02/13/18 14:43	1
2-Fluorobiphenyl	76		44 - 121	02/12/18 17:31	02/13/18 14:43	1
2,4,6-Tribromophenol	62		25 - 139	02/12/18 17:31	02/13/18 14:43	1
Terphenyl-d14	69		35 - 160	02/12/18 17:31	02/13/18 14:43	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	☼	02/10/18 10:47	02/11/18 19:42	1
<b>Arsenic</b>	<b>6.0</b>		0.56	0.19	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
<b>Barium</b>	<b>65</b>		0.56	0.064	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
<b>Beryllium</b>	<b>0.53</b>		0.22	0.053	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
<b>Boron</b>	<b>3.8</b>		2.8	0.26	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
<b>Cadmium</b>	<b>0.13</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
<b>Calcium</b>	<b>21000</b>	<b>B</b>	11	1.9	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
<b>Chromium</b>	<b>18</b>		0.56	0.28	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
<b>Cobalt</b>	<b>10</b>		0.28	0.074	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
<b>Copper</b>	<b>21</b>	<b>B</b>	0.56	0.16	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
<b>Iron</b>	<b>17000</b>		11	5.8	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
<b>Lead</b>	<b>22</b>		0.28	0.13	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
<b>Magnesium</b>	<b>8700</b>		5.6	2.8	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
<b>Manganese</b>	<b>470</b>		0.56	0.082	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
<b>Nickel</b>	<b>22</b>		0.56	0.16	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
<b>Potassium</b>	<b>1300</b>		28	9.9	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
<b>Selenium</b>	<b>0.73</b>		0.56	0.33	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
Silver	<0.28		0.28	0.073	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
<b>Sodium</b>	<b>77</b>		56	8.3	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
Thallium	<0.56		0.56	0.28	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
<b>Vanadium</b>	<b>23</b>		0.28	0.066	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1
<b>Zinc</b>	<b>72</b>		1.1	0.49	mg/Kg	☼	02/10/18 10:47	02/11/18 19:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.59</b>		0.50	0.050	mg/L		02/12/18 08:40	02/12/18 17:20	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/12/18 08:40	02/12/18 17:20	1
<b>Boron</b>	<b>1.9</b>	<b>B</b>	0.50	0.050	mg/L		02/12/18 08:40	02/12/18 17:20	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-6

**Client Sample ID: 2459-26-B01 (0-6)**

**Lab Sample ID: 500-140697-10**

**Date Collected: 02/07/18 10:10**

**Matrix: Solid**

**Date Received: 02/08/18 12:30**

**Percent Solids: 82.9**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		02/12/18 08:40	02/12/18 17:20	1
Chromium	<0.025		0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:20	1
Cobalt	<0.025		0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:20	1
<b>Iron</b>	<b>0.24</b>	<b>J</b>	0.40	0.20	mg/L		02/12/18 08:40	02/12/18 17:20	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/12/18 08:40	02/12/18 17:20	1
<b>Manganese</b>	<b>0.17</b>		0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:20	1
Nickel	<0.025		0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:20	1
Selenium	<0.050		0.050	0.020	mg/L		02/12/18 08:40	02/12/18 17:20	1
Silver	<0.025		0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:20	1
<b>Zinc</b>	<b>0.13</b>	<b>J</b>	0.50	0.020	mg/L		02/12/18 08:40	02/12/18 17:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.23</b>		0.025	0.010	mg/L		02/13/18 06:45	02/13/18 18:52	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		02/12/18 08:40	02/13/18 12:33	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/12/18 08:40	02/13/18 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		02/12/18 11:40	02/13/18 10:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.045</b>		0.019	0.0062	mg/Kg	☼	02/12/18 14:50	02/13/18 10:41	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>pH</b>	<b>7.4</b>		0.20	0.20	SU			02/15/18 14:36	1

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-6

**Client Sample ID: 2459-26-B01 (6-11)**

**Lab Sample ID: 500-140697-11**

Date Collected: 02/07/18 10:15

Matrix: Solid

Date Received: 02/08/18 12:30

Percent Solids: 89.9

## 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	☼	02/08/18 16:02	02/12/18 17:59	1
Benzene	<0.0016		0.0016	0.00042	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Bromodichloromethane	<0.0016		0.0016	0.00033	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Bromoform	<0.0016		0.0016	0.00048	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Bromomethane	<0.0041		0.0041	0.0015	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
2-Butanone (MEK)	<0.0041		0.0041	0.0018	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Carbon disulfide	<0.0041		0.0041	0.00085	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Carbon tetrachloride	<0.0016		0.0016	0.00047	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Chlorobenzene	<0.0016		0.0016	0.00060	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Chloroethane	<0.0041		0.0041	0.0012	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Chloroform	<0.0016		0.0016	0.00056	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Chloromethane	<0.0041	*	0.0041	0.0016	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
cis-1,2-Dichloroethene	<0.0016		0.0016	0.00046	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
cis-1,3-Dichloropropene	<0.0016		0.0016	0.00049	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Dibromochloromethane	<0.0016		0.0016	0.00053	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
1,1-Dichloroethane	<0.0016		0.0016	0.00056	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
1,2-Dichloroethane	<0.0041		0.0041	0.0013	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
1,1-Dichloroethene	<0.0016		0.0016	0.00056	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
1,2-Dichloropropane	<0.0016		0.0016	0.00042	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
1,3-Dichloropropane, Total	<0.0016		0.0016	0.00057	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Ethylbenzene	<0.0016		0.0016	0.00078	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
2-Hexanone	<0.0041		0.0041	0.0013	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Methylene Chloride	<0.0041		0.0041	0.0016	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
4-Methyl-2-pentanone (MIBK)	<0.0041		0.0041	0.0012	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Methyl tert-butyl ether	<0.0016		0.0016	0.00048	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Styrene	<0.0016		0.0016	0.00049	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
1,1,2,2-Tetrachloroethane	<0.0016		0.0016	0.00052	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Tetrachloroethene	<0.0016		0.0016	0.00055	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Toluene	<0.0016		0.0016	0.00041	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
trans-1,2-Dichloroethene	<0.0016		0.0016	0.00072	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
trans-1,3-Dichloropropene	<0.0016		0.0016	0.00057	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
1,1,1-Trichloroethane	<0.0016		0.0016	0.00055	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
1,1,2-Trichloroethane	<0.0016		0.0016	0.00070	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Trichloroethene	<0.0016		0.0016	0.00055	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Vinyl acetate	<0.0041		0.0041	0.0014	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Vinyl chloride	<0.0016		0.0016	0.00072	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1
Xylenes, Total	<0.0033		0.0033	0.00052	mg/Kg	☼	02/08/18 16:02	02/12/18 17:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		75 - 131	02/08/18 16:02	02/12/18 17:59	1
Dibromofluoromethane	89		75 - 126	02/08/18 16:02	02/12/18 17:59	1
1,2-Dichloroethane-d4 (Surr)	75		70 - 134	02/08/18 16:02	02/12/18 17:59	1
Toluene-d8 (Surr)	85		75 - 124	02/08/18 16:02	02/12/18 17:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.18		0.18	0.080	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.054	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
1,3-Dichlorobenzene	<0.18		0.18	0.040	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
1,4-Dichlorobenzene	<0.18		0.18	0.046	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1

TestAmerica Chicago



# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-6

**Client Sample ID: 2459-26-B01 (6-11)**

**Lab Sample ID: 500-140697-11**

**Date Collected: 02/07/18 10:15**

**Matrix: Solid**

**Date Received: 02/08/18 12:30**

**Percent Solids: 89.9**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.18		0.18	0.043	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
2-Methylphenol	<0.18		0.18	0.058	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
N-Nitrosodi-n-propylamine	<0.072		0.072	0.044	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Hexachloroethane	<0.18		0.18	0.055	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
2-Chlorophenol	<0.18		0.18	0.061	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Nitrobenzene	<0.036		0.036	0.0090	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Isophorone	<0.18		0.18	0.040	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Hexachlorobutadiene	<0.18		0.18	0.056	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Naphthalene	<0.036		0.036	0.0055	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
2,4-Dichlorophenol	<0.36		0.36	0.085	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
4-Chloroaniline	<0.72		0.72	0.17	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
2,4,6-Trichlorophenol	<0.36		0.36	0.12	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
2,4,5-Trichlorophenol	<0.36		0.36	0.082	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Hexachlorocyclopentadiene	<0.72		0.72	0.21	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
2-Methylnaphthalene	<0.072		0.072	0.0066	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
2-Nitroaniline	<0.18		0.18	0.048	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
2,6-Dinitrotoluene	<0.18		0.18	0.071	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
2-Nitrophenol	<0.36		0.36	0.085	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Dimethyl phthalate	<0.18		0.18	0.047	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
2,4-Dinitrophenol	<0.72		0.72	0.63	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Acenaphthylene	<0.036		0.036	0.0047	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
2,4-Dinitrotoluene	<0.18		0.18	0.057	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Acenaphthene	<0.036		0.036	0.0064	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Dibenzofuran	<0.18		0.18	0.042	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
4-Nitrophenol	<0.72		0.72	0.34	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Fluorene	<0.036		0.036	0.0050	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.047	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Hexachlorobenzene	<0.072		0.072	0.0083	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Diethyl phthalate	<0.18		0.18	0.061	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.042	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Pentachlorophenol	<0.72		0.72	0.58	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
N-Nitrosodiphenylamine	<0.18		0.18	0.042	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
4,6-Dinitro-2-methylphenol	<0.72		0.72	0.29	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Phenanthrene	<0.036		0.036	0.0050	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Anthracene	<0.036		0.036	0.0060	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Carbazole	<0.18		0.18	0.090	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Di-n-butyl phthalate	<0.18		0.18	0.055	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Fluoranthene	<0.036		0.036	0.0067	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Pyrene	<0.036		0.036	0.0071	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Butyl benzyl phthalate	<0.18		0.18	0.068	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Benzo[a]anthracene	<0.036		0.036	0.0048	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-6

**Client Sample ID: 2459-26-B01 (6-11)**

**Lab Sample ID: 500-140697-11**

**Date Collected: 02/07/18 10:15**

**Matrix: Solid**

**Date Received: 02/08/18 12:30**

**Percent Solids: 89.9**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	<0.036		0.036	0.0098	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.050	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.066	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Di-n-octyl phthalate	<0.18		0.18	0.059	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Benzo[b]fluoranthene	<0.036		0.036	0.0077	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Benzo[k]fluoranthene	<0.036		0.036	0.011	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Benzo[a]pyrene	<0.036		0.036	0.0069	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Indeno[1,2,3-cd]pyrene	<0.036		0.036	0.0093	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0069	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
Benzo[g,h,i]perylene	<0.036		0.036	0.012	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1
3 & 4 Methylphenol	<0.18		0.18	0.060	mg/Kg	☼	02/12/18 17:31	02/13/18 11:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	85		46 - 133	02/12/18 17:31	02/13/18 11:37	1
Phenol-d5	67		46 - 125	02/12/18 17:31	02/13/18 11:37	1
Nitrobenzene-d5	76		41 - 120	02/12/18 17:31	02/13/18 11:37	1
2-Fluorobiphenyl	77		44 - 121	02/12/18 17:31	02/13/18 11:37	1
2,4,6-Tribromophenol	89		25 - 139	02/12/18 17:31	02/13/18 11:37	1
Terphenyl-d14	74		35 - 160	02/12/18 17:31	02/13/18 11:37	1

## Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.33	J	1.0	0.20	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Arsenic	3.8		0.52	0.18	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Barium	22		0.52	0.059	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Beryllium	0.30		0.21	0.049	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Boron	4.7		2.6	0.24	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Cadmium	0.082	J B	0.10	0.019	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Calcium	100000	B	100	18	mg/Kg	☼	02/10/18 10:47	02/12/18 18:13	10
Chromium	8.9		0.52	0.26	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Cobalt	4.8		0.26	0.068	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Copper	12	B	0.52	0.15	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Iron	10000		10	5.4	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Lead	5.1		0.26	0.12	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Magnesium	30000		5.2	2.6	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Manganese	230		0.52	0.075	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Nickel	13		0.52	0.15	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Potassium	920		26	9.2	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Selenium	<0.52		0.52	0.31	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Silver	<0.26		0.26	0.067	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Sodium	140		52	7.7	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Thallium	<0.52		0.52	0.26	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Vanadium	14		0.26	0.061	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1
Zinc	30		1.0	0.46	mg/Kg	☼	02/10/18 10:47	02/11/18 19:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.26	J	0.50	0.050	mg/L		02/12/18 08:40	02/12/18 17:24	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		02/12/18 08:40	02/12/18 17:24	1
Boron	0.080	J B	0.50	0.050	mg/L		02/12/18 08:40	02/12/18 17:24	1

TestAmerica Chicago

# Client Sample Results

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-6

**Client Sample ID: 2459-26-B01 (6-11)**

**Lab Sample ID: 500-140697-11**

**Date Collected: 02/07/18 10:15**

**Matrix: Solid**

**Date Received: 02/08/18 12:30**

**Percent Solids: 89.9**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		02/12/18 08:40	02/12/18 17:24	1
Chromium	<0.025		0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:24	1
Cobalt	<0.025		0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:24	1
Iron	<0.40		0.40	0.20	mg/L		02/12/18 08:40	02/12/18 17:24	1
Lead	<0.0075		0.0075	0.0075	mg/L		02/12/18 08:40	02/12/18 17:24	1
<b>Manganese</b>	<b>0.49</b>		0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:24	1
<b>Nickel</b>	<b>0.012</b>	<b>J B</b>	0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:24	1
Selenium	<0.050		0.050	0.020	mg/L		02/12/18 08:40	02/12/18 17:24	1
Silver	<0.025		0.025	0.010	mg/L		02/12/18 08:40	02/12/18 17:24	1
Zinc	<0.50		0.50	0.020	mg/L		02/12/18 08:40	02/12/18 17:24	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Manganese</b>	<b>0.041</b>		0.025	0.010	mg/L		02/13/18 06:45	02/14/18 13:52	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		02/12/18 08:40	02/13/18 12:34	1
Thallium	<0.0020		0.0020	0.0020	mg/L		02/12/18 08:40	02/13/18 12:34	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		02/12/18 11:40	02/13/18 10:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.0084</b>	<b>J</b>	0.018	0.0059	mg/Kg	☼	02/12/18 14:50	02/13/18 10:43	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>pH</b>	<b>8.0</b>		0.20	0.20	SU			02/15/18 14:39	1

# Definitions/Glossary

Client: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-6

## 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.

## 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: Ecology and Environment, Inc.  
Project/Site: IDOT - 176-001-WO039

TestAmerica Job ID: 500-140697-6

## 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: \_\_\_\_\_  
 Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

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

## Chain of Custody Record

Lab Job #: 500-140697  
 Chain of Custody Number: EE13504  
 Page \_\_\_\_\_ of \_\_\_\_\_  
 Temperature °C of Cooler: \_\_\_\_\_

Client		Client Project #		Preservative							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 #		Parameter														
Project Location/State		Lab Project #		Parameter														
Sampler		Lab PM		Parameter														
Lab ID	MS/MSD	Sample ID	Sampling		# of Containers	Matrix						Comments						
			Date	Time														
10		2459-26-Bol (e-5)	2/7/18	1616	2	S	VOL											
11		2459-26-Bol (6-11)	2/7/18	1015	2	S	SVOL											
							TCLP											
							SRP											
							PH											
							Total Metaly											

Elmhurst



503325

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>EE</u> Company: <u>EE</u> Date: <u>2/7/18</u> Time: <u>1530</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>2/7/18</u> Time: <u>1530</u>
Relinquished By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>2/15/18</u> Time: <u>1730</u>	Received By: <u>[Signature]</u> Company: <u>TA</u> Date: <u>02/08/18</u> Time: <u>1230</u>
Relinquished By: _____ Company: _____ Date: _____ Time: _____	Received By: _____ Company: _____ Date: _____ Time: _____

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: Ecology and Environment, Inc.

Job Number: 500-140697-6

**Login Number: 140697**

**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	
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.	False	Received extra sample not listed on COC.
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	

